STRENGTHENING EVIDENCED-BASED VACCINE COMMUNICATION THROUGH KNOWLEDGE MOBILIZATION: COVID-19 AS AN EXEMPLAR

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A thesis submitted in partial fulfillment of the requirements for the
Doctorate in Philosophy degree in Nursing.

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Preface

The approval to conduct this research project was obtained through the University of Ottawa ethics review board (REB) as a component of the African, Caribbean, and Black vaccination acceptance (AVA) project by the Collaborative Critical Research for Equity and Transformation in Health (CO-CREATH) Lab, led by Dr. Josephine Etowa (referred to in this thesis as "Dr. Etowa's Lab"), as such all data used in the study was provided by AVA. The ethics application was completed by Itunu Taiwo and me, with Dr. Joesphine Etowa's oversight. In addition, recruitment and interviews were performed by Sylvia Sangwa, Dr. Josephine Etowa, and me. The proposal for this study and any additional data collection were done by me, with the overview of Dr. Josephine Etowa and the audio files from the interviews were transcribed professionally. The final thesis was written with the guidance of my supervisor Dr. Michelle Lalonde, co-supervisor Dr. Josephine Etowa, and my thesis advisory committee members Dr. Luc Bonneville and Dr. Idrissa Beogo.

Legend

ACB	African, Caribbean, and Black
AVA	ACB Vaccination Acceptance
COVID	Coronavirus disease of 2019 (COVID-19)
ID	Interpretive description
IDI	In-depth interview
PENs	Peer Equity Navigators
PHAC	Public Health Agency of Canada
SDOH	Social determinants of health
VPD	Vaccine preventable disease

Glossary of Terms

These terms were defined in this study's context using the interpretive description methodology. Some terms may be considered controversial and/or offensive to some people, the intention of their use in this study is to reflect the voices of the participants and to further thoughtful discussions about how productive cultural communications related to vaccinations can be made.

African, Caribbean, and Black (ACB): Refers to people who identify as being from Africa and/or the Caribbean and/or Black communities. This was acceptable terminology at the time of writing this thesis. Given that race is a social construct, the acceptance of these terms may change over time. (Other commonly used socially constructed terms denoting race used in this study include people of color, White, and Black; at this time, they are socially acceptable, but this may change over time).

ACB communities: Represents people who share commonalities such as where they live, life experiences, home country, demographics etc. who have been racialized based on being identified as ACB. ACB people are heterogenous and every ACB person is an individual with unique intersecting experiences and characteristics.

Afrocentric: Approach centered around the importance of the culture and history of Africa and people from Africa.

Ambassadors/Peer Equity Navigators (PENs): Are titles given to ACB community members who were trained and worked with organizations to help increase vaccine uptake in their communities. PENs training is a component of the AVA project.

Bias: Preconceived ideas, rather than facts based on the current situation.

Client: Broadly refers to recipients of health-related services, such as vaccinations. Patients are clients who receive medical treatment related to illness or a disorder. Clients also encompass those who are close to the patient, such as family members.

Colonialism: Subjugation that often includes culture, language, and cultural values.

Communication: A process of exchanging information through symbols, signs, or behaviors. This process includes a "sender" and "receiver" of the information through a selected medium.

COVID-19: A term for the Coronavirus disease and its vaccine, also known as COVID.

Culture: Institutions, social behaviours, and norms in society that influence habits, knowledge, beliefs, customs, arts, capabilities, and laws.

Culturalism: Defining culture narrowly to explain why some people experience particular social and health issues; a form of stereotyping.

Disinformation: False information that is intended to manipulate.

Diversity: People from various racial, cultural, ethnic, socioeconomic, demographic, etc. backgrounds.

Empowerment: The process of gaining agency and being more confident to take control.

Ethnicity: People who share a common ancestry and cultural background, including cultural characteristics such as language, religion, beliefs, practices, etc.

Eurocentric: A focus on European culture and history, often considered to the exclusion of wider world views.

Hard-to-reach populations: Those who are difficult to vaccinate, for reasons such as mis/distrust, beliefs (such as faith based), lack of access to vaccines and evidence-based information, discriminations, and implications of the SDOH.

Inequities: Lack of fairness of judgement resulting in disadvantages.

Infrastructure (public health): It is the foundation for the services public health provides including vaccinations. It is comprised of agencies that assess and respond to public health needs, a qualified and capable workforce, up-to-date data and information systems, and involves collaborations with various organizations. Strong public health infrastructure is essential for creating equitable health outcomes.

Microaggression: A subtle, indirect, or unintentional action, statement, or incident of discrimination.

Misinformation: False, misleading or incorrect information. Its spread can result in confusion and impede informed decision-making. While intentionally spreading false information can be specifically referred to as disinformation, intentions may be unknown, therefor in this study the spread of false information is broadly referred to as misinformation.

Misbeliefs: A false belief, which can result from the misunderstanding or incorrect interpretation of the information, or through receiving mis/disinformation.

Non-ACB: People who do not identify as being part of ACB communities.

Race: A social construct of dividing people into categories based on real or perceived physical characteristics.

Racialized: Categorization or division based on race.

Racism: Prejudice and discrimination based on the belief that different races have distinct abilities and characteristics. It may be over or covert i.e., obvious or hidden.

Stereotype: A fixed, oversimplified, general view of a categorized group of people.

Stigma: Negative and unfair beliefs about a group of people or society.

Vaccine hesitancy: A refusal or reluctance to be vaccinated.

Vaccine uptake: Those who have become vaccinated; its level refers to the percentage of the population that have received a particular vaccine.

Abstract

The COVID-19 pandemic was a public health threat that brought societal, community, and individual challenges to the forefront. Despite African, Caribbean and Black (ACB) communities being highly impacted by COVID-19, they had low rates of vaccine uptake. This pragmatic qualitative study has explored service providers' experiences as vaccinators and vaccination promoters, including how they mobilized evidence-based vaccination communication to improve vaccine uptake within the most affected groups, such as in ACB communities. The theoretical framework of intersectionality guided the research process and Thorne's (2016) interpretive description methodology with Braun & Clark's (2006) thematic analysis were used to guide data analysis derived from the 22 in-depth individual interviews (IDIs) of service providers, which were obtained from purposeful and snowball sampling techniques. Analysis resulted in three main themes: 1) Mistrust and empowerment, which provided insight into reasons for low vaccine uptake within the communities; 2) Active listening and education, which detailed ways the communities were informed of vaccinations; and 3) Optimizing knowledge mobilization, which focused on the process of vaccination communications. These findings address the knowledge gap pertaining to effective vaccination communication to reach the most affected communities, including creating supportive and sustainable infrastructure, contextualizing vaccination campaigns to local community needs, and improving interpersonal skills to meet the unique needs of clients. Effective vaccination communication is pivotal to vaccine uptake, as it provides a means to make informed barrier free vaccination decisions.

Acknowledgements

I would like to sincerely thank my supervisor Dr. Michelle Lalonde for providing me with inspiration through her kindness, expertise, and professionalism. I would also like to show my appreciation for my co-supervisor Dr. Josephine Etowa who taught me the value of my work, Dr. Luc Bonneville for his guidance, and Dr. Amanda Vandyk for the opportunities she provided me. I would also like to thank the participants of this study for sharing their invaluable insights.

Prologue

I would like to acknowledge the relationship between this current doctoral study and the larger program of research related to the African, Caribbean, and Black vaccination acceptance (AVA) project by the Collaborative Critical Research for Equity and Transformation in Health (CO-CREATH) Lab led by Dr. Josephine Etowa. Through my work as a research assistant in the larger project and CO-CREATH Lab, I have contributed to several publications emerging from the larger study.

This thesis answers one objective of the 2-year PHAC funded AVA project to optimize vaccine uptake in ACB communities, as such there was a coordinated effort to create a research design for this study that was consistent with the larger funded project, which was the intention of gathering insight into service providers' experiences as vaccinators and vaccine promotors. Several publications emerged from the larger project that are directly relevant to this current doctoral thesis.

Furthermore, the ideas presented in this study are also informed by ongoing collaborative projects with the CO-CREATH lab, some of which have not yet been published. While full methodological and contextual details are provided in the publications listed below, this study builds on findings and theoretical foundations established in earlier collaborations; rather than reiterate those arguments here, this thesis extends the conversation by focusing on the exploration of service providers' experiences as vaccinators and vaccination promoters, including how they mobilized evidence-based vaccination communication to improve vaccine uptake within one of the most affected groups, ACB communities. It is important to note that whenever possible, the same content found within other publications was not repeated, however, there is some overlap.

For further context, a report on AVA and the preliminary findings of this study can be found here:

Etowa, J., Jacques, A., **Beauchamp, S**., Sangwa, S., Roelofs, S., Etowa, E., Dabone, C. & Ghose, B. (2023). African, Caribbean, and Black Vaccine Acceptance Project: Community Report. Ottawa: CO-CREATH Lab 66f1b22dae8d9fac14641376_AVAproject_Report.pdf

A preliminary literature review was performed to refine the research purpose and objectives but did not include an exhaustive literature search to avoid bias in exploring the phenomenon, which is aligned with qualitative research design (LoBiondo-Wood & Cameron, 2013). It provided a useful overview of factors influencing vaccine uptake and communication, particularly in African, Caribbean, and Black (ACB) communities, which helped to inform the development of in-depth interview questions (see Appendix E).

Since this current doctoral study has been informed by previous works, including the disproportionate needs of ACB communities, ways to build service providers' capacity, and scoping the depth and breadth of concepts and their interconnectivity related to low vaccine uptake. Rather than repeat that material in this thesis, the literature review takes a different perspective, one that has emerged through ongoing reflection and engagement with that earlier research and the need to further inform vaccination communication strategies with a focus on ACB communities. Therefor, there is an assumption that the reader is familiar with the publications listed below:

Etowa, J., Demeke, J., Abrha, G., Worku, F., Ajiboye, W., **Beauchamp, S.**, Taiwo, I., Pascal, D., and Ghose, B. (2022). Social Determinants of the Disproportionately Higher Rates of Covid-19 Infection among African Caribbean and Black (ACB) Population: A Systematic Review Protocol. *Journal of Public Health Research.11*(2). doi:10.4081/jphr.2021.2274

Etowa, J., Jacques, A., **Beauchamp, S**., Sangwa, S., Roelofs, S., Etowa, E., Dabone, C. & Ghose, B. (2023). African, Caribbean, and Black Vaccine Acceptance Project: Community Report. Ottawa: CO-CREATH Lab 66f1b22dae8d9fac14641376_AVAproject_Report.pdf

Etowa, J., **Beauchamp, S.**, Fseifes, M., Osandatuwa, G., Brenneman, P., Salam-Alada, K., Sulaiman, R., Okolie, E., Dinneh, I., Julmisse, S. & Cole, V. (2024). Understanding Low Vaccine Uptake in the Context of Public Health in High-Income Countries: A Scoping Review. *Vaccines (Basel)2*(3), 269. doi: 10.3390/vaccines12030269.

Etowa, J. & **Beauchamp, S.** (2022). Addressing health equity through peer equity navigation (PEN) and community-based participatory research (CBPR), *Am J Biomed Sci & Res*. DOI 10.34297/AJBSR.2022.16.002289

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Chapter 1: Introduction

COVID-19 resulted in the most deaths from a pandemic in over a hundred years (Piret & Boivin, 2021; Rothan & Byrareddy, 2020). Due to the spread of the COVID-19 virus, the World Health Organization (WHO) declared a Public Health Emergency of International Concern (PHEIC) on January 30, 2020, and by March 11, 2020, they had declared a pandemic, with the virus having spread to 192 countries by March 25, 2020 (Infection Prevention and Control Canada [IPAC], 2023; WHO, 2020a). As the virus continued to spread, global health communities were hopeful that vaccines would be an effective and prominent solution to the public health problems associated with the pandemic (Dhama et al., 2021). Historically, vaccines have reduced disease-specific mortality rates including smallpox, rabies, polio, the plague, typhoid, etc., and have significantly decreased infant mortality rates globally, with an estimated global prevention of child deaths of over three million children each year (Harrison & Wu, 2020; Oku et al., 2016). However, despite the benefits of vaccinations, waning vaccine confidence prior to the pandemic had already contributed to a global decline in vaccine uptake over the past several decades; in 2020, an estimated 23 million children under one did not receive basic vaccines, the highest amount since 2009, and the number of completely unvaccinated children had increased by 3.4 million (Harrison & Wu, 2020; WHO, 2021; United Nations International Children's Emergency Fund [UNICEF], 2021).

Despite the first person to receive the COVID-19 vaccine in the world and Canada's approval of the COVID-19 vaccine both occurring in December 2020, vaccine hesitancy remained problematic (The Guardian, 2020; Statistics Canada, 2021a; Mayo Clinic, 2021). Vaccine hesitancy was particularly high in some populations, such as the African, Caribbean, and Black (ACB) populations, which were reported as having the highest vaccine hesitancy rates

in Canada (Statistics Canada, 2021a; Statistics Canada, 2021b). A Canadian national survey collected between September to December 2020 found that 56.4% of people who identified as ACB were somewhat or very willing to receive the COVID-19 vaccine, which was lower compared to non-visible minorities (77.7%), visible minorities (74.8%), non-permanent residents (74.6%) and the Canadian population average (76.9%) (Statistics Canada, 2021b). By 2021, the willingness to be vaccinated improved, yet those who identified as ACB Canadians still had the lowest level of vaccine acceptance at 63% (Statistics Canada, 2021b). Despite the vaccination rates increasing, concerns about the COVID-19 vaccination remained high (Guntuku et al., 2021).

The WHO (2019) defined vaccine hesitancy as the refusal or reluctance to become vaccinated despite available vaccines, due to complacency, inconvenience, and lack of confidence. Vaccine attitudes are also considered on a continuum from acceptance to refusal, and they can differ from one vaccine to another; vaccine hesitancy may result in delayed vaccination or uncertainty in the vaccine even after its administration (Strategic Advisory Group of Experts (SAGE), 2014). It is a behavior, resultant from a decision, that is influenced by a multitude of factors including, health systems and institutions, socioeconomic and cultural factors, leadership, religion, personal beliefs and knowledge, historical and environmental issues, politics, and family (SAGE, 2014). The term hesitant was first applied in 1994 to describe physicians who were reluctant to prescribe vaccines (Bedford et al., 2018) and then began to be used in journal articles to represent the dichotomy of pro and anti-vaccine attitudes (Quinn et al., 2016). The term vaccine hesitancy is controversial, as some believe that it does not reflect the vaccination status of the individual, it conflates a psychological state for that of a behavior while it fails to reflect issues related to the pragmatics and failures of services or policies, and it groups all

deviations and differentiations under the same insufficiently descript label (Bedford et al., 2018). Despite this controversy, the term vaccine hesitancy remains largely used in the literature, and thus, will continue to be used in this study, since the literature contributes to this study's foundation of inquiry into the topic of vaccine uptake. However, this study also takes the position that the use of the term vaccine hesitancy is not intended to place blame on individuals but indicates a need for effective nursing interventions at the micro (individual and interpersonal), meso (community and organizational), and macro (systems and societal) levels.

Effective health communication can be an intervention used by nurses and other service providers to help improve vaccine uptake; improving vaccine uptake is particularly prudent regarding vulnerable populations, which have been shown to be disproportionately adversely impacted by COVID-19 (Eissa et al., 2021). Health communication employs both science and art to improve the health and wellbeing of individuals and populations based on the application of evidence, theory, innovation, strategy, policies, and practices to inform and guide healthier choices (Society for Health Communication (SHC), 2017; The Community Guide, n.d.). People's behaviors and willingness to follow recommended measures are the most powerful tools against viral spread (WHO, 2020b). Effective communication strategies are also needed to raise awareness about the benefits of immunization and counter misinformation to increase vaccination rates (François et al., 2005; Jung, 2018; Oku et al., 2016).

Health communication strategies inform and influence decisions to enhance health, at both the individual and community levels; including, improving trust, mobilizing action, and building capacity (Health Communication Capacity Collaborative (HCCC), 2020; The Community Guide, n.d.). Effective communication is contingent on the skills of the message sender, the message type and complexity, the channels used, and the attributes of those receiving the message such as

their literacy levels, beliefs, attitudes, and the environments in which they work, live, and socialize (Cross et al., 2017).

1.1 Problem Statement

In Canada and internationally, vaccines significantly prevent and control infectious diseases, thus are a cornerstone of public health (Government of Canada, 2023). Although vaccination has been one of the most successful public health interventions in Canada, with the elimination and control of once common and even deadly infectious diseases, vigilance is required to maintain and increase vaccine coverage, especially in vulnerable populations (Shen & Dubey, 2019). Both vaccine hesitancy and weak primary healthcare have been listed as major threats to global health and to the success of vaccination campaigns; including for COVID-19, which was the largest vaccination campaign undertaken to date, both within Canada and globally (Koons, 2021; Mayo Clinic, 2021; WHO, 2019).

Vaccine hesitancy threatens vaccination programs which are reliant on high uptake levels by leading to decreased coverage and increased risk of vaccine preventable disease outbreaks (Dubé et al., 2013). This could also lead to an exacerbation of inequities, for example, the COVID-19 pandemic was not only one of the greatest public health threats of modern times, but it also brought societal, community, and individual challenges to the forefront (Kricorian & Turner, 2021). This was particularly obvious in terms of health inequities, in the context of the disproportionately impacted racialized communities, such as African, Caribbean, and Black (ACB) communities (Dabone et al., 2021; Etowa & Hyman; 2021 Kricorian & Turner, 2021; Tai et al., 2021). It reinforced the cycle of health inequities experienced by ACB communities, as they faced higher hospitalizations and a greater risk of mortality from infection (Alcendor, 2020; Bogart et al., 2021; Carson et al., 2021; Sina- Odunsi et al., 2021). Therefore, it was essential to

increase COVID-19 vaccine uptake to aid in reducing COVID-19 related disparities (Carson et al., 2021); not only for the individual but because hesitancy could allow for further spread of the virus within ACB communities (Kricorian & Turner, 2021). Furthermore, ACB communities already had high rates of transmission; the rate of occurrence also increased the risk of viral mutations, and the prevalence of new strains increased the potential need for reoccurring booster doses (Acharya et al., 2021; Matta et al., 2021; Savoia et al., 2021).

Ineffective communication is also a contributing factor to vaccine hesitancy; communication requires increased expertise and strengthening to improve vaccine uptake (SAGE, 2014). International organizations, industries and the media need to continue to discuss vaccine communication strategies to encourage the conduct of vaccine safety studies and the dissemination of results (François et al., 2005). COVID-19 also highlighted the need for investments in stronger health information systems, as global health systems were found to be inadequate (WHO, 2020b; WHO, 2020f).

Creating effective communication strategies and messaging could increase prevention of COVID-19 related cases and deaths (Nguyen et al., 2021; Shafiq et al., 2021). Furthermore, the importance of addressing vaccine hesitancy reaches beyond its implications for COVID-19, including both current and potential future outbreaks. The coronavirus alone has accounted for three pandemics within the last 20 years; namely COVID-19, severe acute respiratory syndrome (SARS) and Middle East respiratory syndrome (MERS) (Bhagavathula et al., 2020). It is probable that further viral outbreaks will occur and thus it is important to effectively use knowledge acquired from past experiences to aid in future resolve; currently several viruses are under surveillance as candidates for the next pandemic, some with higher mortality rates than COVID-19, such as hemorrhagic viruses (Ebola and Marburg with an 88% mortality rate) (Gavi,

2020; WHO, 2020b). The case fatality rate of COVID-19 in the early phase of the pandemic was an estimated 20% or more, but this has dramatically decreased over the past 2.5 years (Horita & Fukumoto, 2023). In addition to acquiring knowledge about pathogens that are a high risk for deadly infections, knowledge should be mobilized to guide public healthcare practices and preparedness for "Disease X"; a currently unknown pathogen that causes human disease (WHO, 2019).

People's behaviors and willingness to follow recommended measures was the most powerful weapon against the spread of the virus (WHO, 2020b). Further research is needed to determine why the ACB community had the lowest level of vaccine acceptance in Canada (Statistics Canada, 2021a) and how service providers can effectively mobilize information so that people can make informed decisions regarding vaccinations. Communication approaches need to evolve to meet the needs of clients including those with different literacy levels, socioeconomic disparities, and the influx of conflicting messages (often not scientifically based and often conveyed by online communities/social media), while valuing individual autonomy, engaging clients, and increasing public understanding (Institute of Medicine Committee on Review of Priorities in the National Vaccine Plan, 2010).

1.2 Purpose

The purpose of this study was to explore service providers' experiences as vaccinators and vaccination promoters, including how they mobilized evidence-based vaccination communication to improve vaccine uptake within one of the most affected groups, ACB communities. The objectives were: 1) To examine ways to build capacity of service providers to effectively educate communities with low vaccination rates; 2) to identify effective vaccine communication strategies to reach disadvantaged communities; 3) to provide insight to develop

best practice guidelines for vaccine uptake in disadvantage communities; and 4) to provide insight to create a knowledge mobilization tool for service providers to improve vaccine uptake.

1.3 Significance to Nursing

Vaccines must be administered to be effective, thus improving uptake is as important as the creation of the vaccine itself. Vaccine hesitancy is a salient public health concern that spans from global implications to those of the individual, it is also an ongoing and future issue as vaccines continue to be an effective method of controlling viral outbreaks (Ontario Agency for Health Protection and Promotion, 2023; WHO, 2019). Low vaccination rates in vulnerable populations, such as those found in ACB communities, may both be the result of health inequities, as well as further exacerbate them (Guay et al., 2022); vaccination inequities are one of them most significant social justice issues of this generation (Enria, 2021). The nursing profession has a long and enduring history of social justice responsibilities including nurses engaging in social actions and advocacy against conditions that cause illness and death (Abu & Moorley, 2023); COVID related inequities risk widening if public health officials fail to engage with vulnerable communities to create tailored and effective messaging to increase trust and provide evidenced-based information (Bogart et al., 2021).

Vaccination communication as a nursing intervention is complex, it requires targeted and skilled communications that result in a positive behavioral change (Lip et al., 2023). Public health must take responsibility for monitoring and evaluating the efficacy of communication strategies, as well as tailoring new strategies to meet public needs (Graham et al., 2006; Jung, 2018). Strengthening evidenced-based vaccination communication through innovative knowledge mobilization, and promoting reasoning and critical thinking, can aid in improving

learning and dispelling preconceived notions (Lima & Mauzard, 2021) which could improve the ability to make informed decisions and improve vaccine uptake (Thorpe et al., 2022).

This study's findings, regarding the factors that influenced vaccine uptake and effective communication strategies, can be used by nurses and other service providers to inform best practice guidelines and knowledge mobilization tools to help improve vaccine uptake in those groups that have been the most effected, such as ACB communities.

1.4 Philosophical Stance

The research questions and objectives of this study were addressed through a pragmatic lens. Pragmatism is neither a purist view of realism nor relativism and has a flexible form of social ontology; reality is not static, and the world is constantly changed through actions (Allmark & Katarzyna, 2018; Kaushik & Walsh, 2019; Pratt, 2016). Subsequently, these actions produce experiences and these experiences in turn guide decisions (Deering et al., 2021). Therefore, pragmatism also holds that people's actions cannot be separated from their past experiences and that their thoughts and beliefs are intrinsically linked to their actions (Kaushik & Walsh, 2019). Dewey (1896) stated that previous learning and experiences are brought forward to create expectations and understand current situations (Deering et al., 2021). This is consistent with the need to find the underlying factors that contribute to low vaccine uptake in those groups who have been the most affected, such as ACB communities.

Within the pragmatic paradigm there is one reality; however, there are multiple perspectives that are contingent on a dynamic system of experiences and beliefs, therefore all voices with varying beliefs have the right to be heard (Deering et al., 2021; Florczak, 2014). Importantly, pragmatism holds that an alternative to engaging in discussions about diverging views leads to intolerance and could give rise to oppressive behaviors, while language is seen as

a means to help to mediate and negotiate social reality (Deering et al., 2021; Hogan, 2017; Hothersall, 2019). Pragmatism also recognizes fallibility is part of pluralism; people make mistakes, and through tolerance and open-mindedness, new knowledge and experiences have the potential to shift pluralistic reality and change meaningfulness, thus emphasizing the evolving nature of people's beliefs, which are also open to the scrutiny of others in the changing world (Deering et al., 2021). This emphasizes the need for service providers and public health in general, to be open to listening to the needs of those who have not been vaccinated and to be open to change how they communicate in accordance.

Pragmatism's epistemology recognizes that there are often tensions surrounding those who possess expert knowledge; given the opportunity, there is potential for personal growth through communication, which is necessary to build understanding (Deering et al., 2021). It is thus through investigation and discussion that misconceptions, errors, and truths can be revealed (Deering et al., 2021). Pragmatism encourages reflection, dialogue, and evidence-based information to seek further understandings, the prioritization of problems, solutions, and encourage change (Dieleman et al., 2017; François et al., 2005; Hogan, 2017; Hothersall, 2019; Parker & Borwankar, 2012). The power of inquiry does not lie in the uncovering of absolute truths but in the ability of experiences to falsify beliefs and replace them with new ones to better explain a phenomenon (Humphrey, 2019). This is consistent with service providers providing evidence-based information in an effective manner, to educate and dispel any previous misbeliefs.

Pragmatism also accounts for readiness and hesitancy towards learning new information; it recognizes that beliefs are created over generations and are considered guides for action and can be regarded as truths (Ormerod, 2006). However, new information can be accommodated into

existing knowledge, based on evidence and action outcomes (Ormerod, 2006). When beliefs are challenged, or there is a sense of the unknown due to having no reference of experience, inquiry can be catalyzed and beliefs can be replaced with new ones that better explain the phenomena (Deering et al., 2020) i.e., this may be a prime opportunity for social learning; for example, the COVID-19 pandemic could have instigated inquiry, which may have potentiated further exposure to misinformation or reliable sources of information. In pragmatism, acquiring knowledge helps people flourish, encourages autonomy and accountability, as well as personal and professional development across many contexts (Hothersall, 2019). Pragmatism also encourages action-oriented, evidenced-based approaches that address problems through a practical perspective, and holistic interventions have been shown to have better outcomes than a single layer approach (Dennerlein et al., 2020; Hothersall, 2019; Kumar et al. 2012).

Pragmatism aims to decrease the social problems identified by human experiences while addressing the competing values of individual accountability and helping others, thus creating social hope through action (Deering et al., 2021; Schneiderhan, 2013); this is relevant to vaccination rates as an individual's decision to become vaccinated impacts those around them, including their social circle and communities. Pragmatism also encourages critically reflexive communication to obtain greater social inclusion; it is not a neutral conduit, but rather a process by which real-world issues can be changed (Craig, 2007). Through the recognition of multiple perspectives and listening to all voices of varying beliefs, attempts are made to find universally acceptable innovations for real issues; knowledge develops through problem solving with practical consequences (Florczak, 2014; Prasad, 2021). Pragmatism seeks practical approaches to health-related interventions, with a focus on what matters within the human condition as the defining criteria for knowledge priorities and practices (Hothersall, 2019). This perspective is

well aligned for inquiry within the healthcare system as its nature moves findings towards practical usefulness (Nowell, 2015).

1.5 Plan

This thesis is presented in six chapters. Chapter 1 contains the introduction to this study; Chapter 2 contains the literature review, which was used to develop the interview guide for the in-depth interviews; Chapter 3 describes the theoretical frameworks used in this study; Chapter 4 explains the methodology using interpretive description for data collection and analysis; Chapter 5 contains the results from the analyzed data using thematic analysis; and Chapter 6 contains the discussion which incorporates the results with current literature to address the purpose and objectives of this study.

Chapter 2: Literature Review

In 2021, when this literature review took place, ACB communities were shown to have low rates of vaccine uptake compared to the general population (Statistics Canada, 2021b), but little was known about why this had occurred or what could be done to rectify it. The ACB vaccine acceptance (AVA) project took up this challenge (refer to Information Letter Appendix A). As a portion of AVA, this study looked at how to improve vaccination communication services to improve vaccine uptake in the most affected groups, such as ACB communities. This literature review explored vaccination communication strategies up to and inclusive of 2021, when little was known about effective communication strategies related to the COVID-19 vaccine.

By October 2021, Canada was in the fourth wave of COVID-19, which was marked by increased hospitalizations primarily among unvaccinated populations (PHAC, 2021). Despite a strong campaign start, uptake had significantly slowed with pockets of vaccine hesitant remaining difficult to reach; therefor work was needed to engage with those who had not yet been vaccinated to reduce further morbidity and stress on health systems (PHAC, 2021).

This chapter will include a section on anti-racism legislation, COVID-19 and vaccine rollout timeline, concepts and relationships, and a preliminary literature review on vaccination communication.

2.1 Anti-Racism Legislation

Anti-Black racism in public health and health systems was identified as the most significant barrier to vaccine uptake amongst diverse Black communities (National Collaborating Centre for Determinants of Health (NCCDH), 2021). At the time of writing this the researcher is not aware of any specific anti-racism vaccination communication strategies in the literature; however, the Government of Canada has addressed racism in several legislations; for example,

Canada has been a party to the International Convention on the Elimination of All Forms of Racial Discrimination since 1966; composed the Canadian Race Relations Foundation Act (1991), which includes sharing knowledge and expertise to eliminate racism and racial discrimination; composed the Canadian Charter of Rights and Freedoms, whereby every individual is equal under the law; composed the Canadian Constitution which aims to reserve and enhance multicultural heritage; composed the Canadian Multiculturalism Act (1988) for equitable participation in shaping of Canadian society); composed the Canadian Human Rights Act (1985) for equality without discrimination; and has condemned acts of the past in the Japanese Canadian Redress Agreement (1988) (Government of Canada, 1982, 1985; Marsh, 2020; Minister of Justice, 2013; Minister of Supply and Services Canada, 1985).

The Government of Ontario also created the Anti-Racism Act (2017) which aims to eliminate systematic racism and advance racial equity through an anti-racism strategy while acknowledging that systemic racism is a persistent reality in Ontario; its framework aims for long-term change across systems with increased awareness and understanding, which has made some progress in addressing inequities at the policy level (Government of Ontario, 2017). In addition, the Anti-Racism Anti-Hate Grant Program was created (with funding starting in 2021) to raise awareness and educate the public about racism and hate through funding community led projects, including the Anti-Black Racism Strategy to help build system capacity and competency to identify and address the causes of anti-Black racism in institutions as well as to create long-term systemic change (Government of Ontario, n.d.).

2.2 COVID-19 and Vaccine Rollout Timeline

The first case of COVID-19 in Ottawa occurred on March 11, 2020, with no evidence of community spread (CBC News, 2020a). On March 25, 2020, the Ottawa mayor declared a state

of emergency, in alignment with the Ontario premier's announcement on March 23rd to expand the state of emergency and shut down non-essential services (City News, 2020). On December 10, 2020, COVID-19 vaccine rollout began in Ottawa (CBC News, 2020b). The Ottawa Hospital delivered the first COVID-19 vaccination in Ottawa on December 15, 2020, to a personal support worker (The Ottawa Hospital, n.d.). News reports on January 4, 2021, stated that Ottawa health officials had outlined their distribution plan on the Monday, and believed they could see half the city's population inoculated by July (Lord, 2021). Dependant on vaccine supply, the distribution plans as stated by the City of Ottawa (2021), were described in three phases. Phase 1 (December 2020 to March 2021) would include approximately 1.8 million high risk people who could receive the vaccine at hospital site clinics, mobile teams, site specific clinics and mass vaccination clinics. Phase 2 (April to July 2021) would include mass delivery to about 9 million people in congregated senior's homes, health care workers, adults in chronic care homes, adults over 80, adults 60 to 79 (in five-year increments), high-risk congregated settings (shelters, community living), those with high-risk chronic conditions and caregivers, workers who could not work from home, populations at risk, and Metis, First Nations, and Inuit adults. Immunization would occur at mass immunization clinics, pharmacies, site-specific clinics, primary care, and mobile sites. Phase 3 (August 2021 onward) would include adults 59 and under. Immunizations would occur at immunization clinics, pharmacies, primary care, site - specific clinics, health units' mobile teams and mobile sites. Furthermore, on February 25th, Ottawa Public Health announced that seven community clinics would open once there was the vaccine supply (Williston, 2021).

2.3 Concepts and Relationships

The key concepts of vaccination communication to improve vaccine uptake in the most affected groups, such as ACB communities will be described in this section. Vaccine uptake refers to those who have become vaccinated, such as within a population, public health unit, age group etc. (Public Health Ontario, 2021a). Vaccination uptake levels are an indicator of the success of a vaccination program, along with the reduced prevalence and incidence of a vaccine preventable disease (VPD) (Dubé et al., 2013). The expectation is that the vaccination directly protects the individual and indirectly reduces the risk to the overall community by slowing the disease's transmission, thus reducing the risk of infection to those who remain susceptible, which subsequently reduces the prevalence and incidence of the VPD (Dubé et al., 2013). A person's vaccination intention is contingent on their willingness to get vaccinated; it is important to determine the reasons behind these intentions, since it can be a predictor to vaccination hesitancy (Fernandes et al., 2021). Vaccine hesitancy (as described in chapter 1) is associated with vaccine attitudes which are on a continuum from acceptance to refusal and can differ from one vaccine to another; vaccine hesitancy may result in delayed vaccination or uncertainty in the vaccine even after its administration (SAGE, 2014). Moreover, it is a behavior, resultant from a decision, that is influenced by a multitude of factors including health systems and institutions, socioeconomic and cultural factors, leadership, religion, personal beliefs and knowledge, historical and environmental issues, politics, and family (SAGE, 2014). The "3 C model" further explains how confidence, complacency, and convenience impact vaccine hesitancy; namely, confidence refers to a person's trust in the effectiveness and safety of the vaccine, in the policy makers who decided the need for vaccinations, and in its delivery system, including professional and service competence and reliability; complacency occurs when the perceived risk of the VPD is low and

not considered a necessary preventable action; and convenience refers to the vaccine's physical availability, geographical accessibility, ability to understand (e.g., health literacy and language), willingness and affordability of costs, and appeal of vaccination services (e.g., quality, cultural context, comfort, time and space). The 3 Cs are related to healthcare access, which reflects the ability to obtain appropriate, needed, and affordable services in a timely manner; a person who is willing to get vaccinated may be hampered by access barriers, such as hours of operation, distance, immigration status, costs (Penchansky & Thomas, 1981). Low vaccine uptake may also be due to vaccine reluctance, a subset of vaccine hesitancy, which refers to a state of uncertainty, caution, or ambivalence toward receiving a vaccine which is often driven by mistrust, misinformation, and fear; it does not necessarily lead to refusal but reflects doubt or delay (MacDonald & SAGE Working Group on Vaccine Hesitancy, 2015). In disadvantaged communities, reluctance may be founded in low trust in healthcare and the government, historical abuses, and concerns of being the targets of experimentation (e.g., among Black or Indigenous populations) (MacDonald & SAGE Working Group on Vaccine Hesitancy, 2015).

Those from disadvantaged communities may be more susceptible to vaccine hesitancy, since structured obstacles and power dynamics can create unfavorable conditions both at the individual level (e.g., education, income, household structure, crime, and employment), and the community level (e.g., available services and distance form important centres) (Opačić, 2021). Therefore, when considering population health, the concepts of inequity, inequality, and disparity must be explored regarding why some people are healthy/unhealthy (Lee et al., 2020). For example, insights should be obtained regarding reasons why the ACB population had higher rates of COVID-19 infections with worse outcomes (Eissa et al., 2021). Health inequity relates to disparities resulted from avoidable socioeconomic and healthcare resources that are unjust,

health inequality refers to the distribution of health outcomes across populations, and health disparities relates to systemic differences of any measurable health outcomes due to the different distribution of social conditions across these populations (Lee et al., 2020). Health inequity and health disparities, however, are not adequately defined without also considering the concept of social disadvantage, which is the unfavorable social, political, and economic conditions systemically experienced in relation to their position in social hierarchies to restrict the ability to fully participate in society and enjoy its progress, including having less representation in higher levels of political office. This creates individuals that are considered to be of lower socioeconomic status, such as by having lower income and education (Armstrong et al., 2007; Braveman et al., 2011). Health disparities should move beyond health differences to the spirit of social justice from which the term derived, to refer to health differences that are relevant to social justice grounded in ethical and human rights principles, such as the right to non-discrimination and equality so that each person can achieve their optimal health status without distinction based on race (Braveman et al., 2011). Social justice is a matter of life and death; it impacts risks associated with illness and outcomes (WHO, 2008). Avoidable health inequities occur due to circumstances where people live, work, grow, etc. and the systems in place to manage these are shaped by socioeconomic and political forces (WHO, 2008). To reduce health inequities there is a need to take actions regarding the social determinants of health (SDOH), including improving the aforementioned circumstances to improve overall health and addressing major risks for infection; thus, indicating that society is moving in a positive direction to meet human needs (Marmot, 2005). The aim of identifying the SDOH in Canada was to promote improved policy making in support of health and to improve public understanding; it is defined as social systems and their components which control the allocation and distribution of health-

related social resources and hazards to impact health, for example, race is a social system with the negative consequences of racism (Hahn, 2021; Raphael, 2016). Race, poverty, etc. can be drivers of stigma and discrimination or negative attitudes and behaviors directed to individuals with group characteristics, which can reduce vaccination outreach effectiveness and discourage uptake; stigma is also linked to labelling, stereotyping, status loss, and discrimination (Link & Phelan, 2001). Racism must be identified as the root cause of racial health inequities, with consideration to the impacts of structural racism and the ways that society fosters and reinforces racial discriminations, including education, housing, earnings, and healthcare (Bailey et al, 2017). These practices and patterns reinforce discriminatory values, beliefs, and distribution of resources; therefore, a focus on structural racism would help to improve health equity and population health (Bailey et al, 2017). Structural racism including historical and contemporary mistreatment have contributed to the mis/distrust in ACB communities; it should also be considered that public trust in vaccinations has global health implications (Bernstein, 2021; Larson et al., 2016; Okorodudu & Okorodudu, 2021; Privor-Dumm & King, 2020). Another reason for low uptake in ACB communities is the cultural and language divide which create barriers to navigating Canada's healthcare system (Bernstein, 2021). The theoretical framework of intersectionality has been helpful in explaining and furthering understanding about how unique experiences of oppression and privilege are created through multiple social identities (such as race, gender etc.) (Crenshaw, 1991). Furthermore, an Afrocentric approach acknowledges how healthcare experienced by ACB people are impacted by historical and contemporary anti-Black racism, this approach in combination with communication frameworks could help to council ACB people who are vaccine hesitant (Eissa et al., 2021).

Public health is a societal approach intended to protect and promote health, to improve the wellbeing of communities (Kass, 2001). Health promotion involves health literacy, which is a composite term that describes a range of outcomes to communication activities and health education; it represents the social and cognitive skills needed for people to gain access to, understand, and use information to promote and maintain good health; access to health information and the capacity to effectively use it is critical to empowerment (Nutbeam, 2001). Health literacy can be further broken down into different progressive levels; namely, basic/functional literacy, which is effective for everyday situations; communication/interactive literacy which requires more advanced cognitive and literary skills and when combined with social skills helps to extract and derive meaning from different forms of communication so that it can be effectively applied to changing circumstances; and critical literacy whereby skills to critically analyze information can be used to help control situations (Nutbeam, 2000). These levels of progression allow for greater personal empowerment and autonomy including greater cognitive development and the exposure to different information/messages, which could impact personal responses to communications (Nutbeam, 2000). The intention of health education is to improve health literacy, which has an important role in addressing the SDOH by improving people's access to health information and their capacity to use it effectively, this is critical to empowerment (Nutbeam, 2000). Health literacy can also help to counter mis/disinformation (NASEM et al., 2020). Mis/disinformation has been referred to as information pollution with misinformation occurring when false information is shared without intended harm and disinformation occurs when false information is shared with the intention to cause harm, it is designed specifically to sow mistrust and confusion and to sharpen existing sociocultural

divisions, including using nationalistic, racial, ethnic, and religious tensions (Wardle & Derakhshan, 2017).

Risk communication can help counter misinformation since it aims to improved knowledge and understanding about a disease (such as COVID-19), including ensuring that accurate information is exchanged between service providers and authorities and between service providers and at-risk populations (Gonah, 2020; Slovic, 1987). It is characterized by how people evaluate hazardous activities and technologies; it is important for those who promote and regulate health to understand how people think about and respond to a risk because failure to do so could cause well-intended policies to fail (Gonah, 2020). It must be considered that health communications are a two-way process and that knowledge is only part of this process when promoting vaccine uptake and addressing vaccine hesitancy, emphasis also needs to be given to personal forms of communication and community-based educational outreach (Goldstein et al., 2015; Nutbeam, 2000). Community engagement brings those in a similar situation/circumstance together to work collaboratively on addressing issues that affect their health and well-being; collaborative work can promote health equity (Gonah, 2020; Page-Reeves, 2018). Community engagement can build vaccine confidence, and all types of healthcare providers must be able to recognize barriers to vaccination acceptance, it is hoped that through respect and understanding, culturally competent interventions will promote individual health choices and civic responsibility (Evans, 2021).

2.4 Vaccination Communication

MacDonald & the SAGE Working Group on Vaccine Hesitancy (2015) stated that although communication is not a determinant of vaccine hesitancy, like any poor-quality service, a tool that us used poorly or inadequately can undermine vaccine acceptance, contribute to

vaccine hesitancy, and negatively impact vaccine uptake. As such, a preliminary review of the literature was done to provide an overview of factors that influenced vaccination communication and vaccine uptake, with a focus on ACB communities. This review served to further define the search purpose and objectives, as well as inform the in-depth interview guide (see appendix E). It should be noted the intention of this literature review was to help refine points of inquiry and was not an extensive review of the literature.

To inform this literature review, a search for the keywords, communication, vaccination, and African Caribbean Black (ACB), was performed in Nursing Allied Health (CINAHL) and PubMed, followed by a manual search. Inclusion criteria were comprised of the article having full text available and it being in English; there were no restrictions to the type of vaccine, type of article, or date (up to 2021, when the literature review was performed). The resultant main concepts that emerged from the literature were then placed into the macro (systems and societal), meso (community and organizational), and micro (individual and interpersonal) levels of the Bronfenbrenner's (1979) socioeconomic model (SEM). The SEM was used to organize the concepts because it highlighted public health's need for communication interventions on multiple levels, it is also consistent with intersectionality's principle of multilevel analysis, which is the theoretical framework of this study (Bernhardt et al. 2014; Hankivsky, 2014); effective communication and understanding also needs to occur within and between the different socioeconomic levels (Schiavo et al., 2020). In addition, the SEM has been well established to guide public health practices, including during past infection outbreaks and pandemics (Golden & Earp, 2012; Schiavo et al., 2020); for example, Kumar et al. (2012) used the SEM to study the H1N1 2009 pandemic and found that when the levels were holistically viewed, a broad range of potential interventions could be implemented to increase impactful positive change.

This literature review described macro level vaccination communication related to agencies and industries, racism, and misinformation; meso level vaccination communication related to mistreatment and mistrust, messaging, community empowerment, trusted messengers, and the monitoring and evaluating of efforts; and micro level vaccination communication related to building trust as well as challenges and facilitators. Vaccination communication permeates several levels; these are interconnected and should not be viewed in isolation.

2.4.1 Macro Level (Systems and Societal)

Multiple agencies and industries were found to impact vaccination communication, which included, healthcare systems, the government, and academic and professional associations. In addition, historical and current racism were found to be societal influences of vaccination communication. Vaccination hesitancies where also shown to stem from misinformation (incorrect and misleading information) perpetuated on a global scale.

2.4.1.1 Agencies and Industries.

Vaccination related skepticism was focused more on the healthcare system than on the individual healthcare provider (Acharya et al., 2021). Indeed, ACB people were shown to have a greater degree of distrust of government entities than they had concern for their providers' competency levels (Savoia et al., 2021). To improve future vaccination communication, efforts should be made to target health and socioeconomic policies that maintain inequalities, including strengthening education, financial security, and improving structural determinants of health (Golden & Earp, 2012). Furthermore, to reduce vaccine hesitancy, government and health officials should provide honest, relevant, and reliable reports on the efficacy of vaccines to lay a foundation of truth (Sina- Odunsi et al., 2021). Public health should also create new and sustainable solutions that include the involvement of government agencies and ministries,

academia, non-government agencies and community-based organizations that aim to address barriers to vaccine uptake; allow for the introduction of new vaccines and technologies; increase program sustainability; and strengthen systems (Adrien et al., 2018). Moreover, ACB people have been under-represented within healthcare, including among experts that form regulation and distribution of vaccines, this may have contributed to vaccine hesitancy within ACB communities (Kricorian & Turner, 2021). The government and healthcare officials need to create strong and inclusive partnerships to optimize immunization initiatives, provide education and preventative care, advocate for health equity, assume institutional responsibilities for the health of defined populations, and conduct and apply vaccine research (Adrien et al., 2018; Amponsah-Dacosta et al., 2020). Moreover, a comprehensive exchange of necessary information is required to address behavioral, socioeconomic, programmatic, and policies with long-term commitments (Adrien et al., 2018; Jung, 2018).

Vaccine hesitancy has not only been influenced by political and social factors but has also been impacted by a lack of knowledge, misinformation, and low literacy; effective communication strategies can help to correct false beliefs, dispel rumors, and inform others, with the potential to increase vaccination rates (Oku et al., 2016). Vaccine literacy should be improved through continuous and consistent education starting in elementary schools, to improve the population's vaccine awareness and the importance of disease prevention (Jung, 2018). The scientific community should also establish concrete educational programs to invest in expert training and lifelong education, with consideration to licensing requirements; physicians who reject or prevent others from receiving vaccinations spread distrust that cannot be eradicated through verbal communications (Jung, 2018). Bernhardt et al. (2004) further stated that, although academic programs are being developed in public health communication, it is important for

disciplinary competencies to be developed and disseminated collectively, including with national organizational and federal agency's support.

Strategies to support vaccine acceptance must be customized to the needs of the ACB communities, not on the concerns of institutions (Privor-Dumm & King, 2020). Improving vaccine uptake is a joint responsibility and efforts must include the vaccine industry's engagement through partnerships at different levels, to address questions and concerns about vaccine safety and supply (François et al., 2005; Jung, 2018). The pharmaceutical companies should engage and recognize the public's needs, and partner with health authorities and expert groups to address vaccine related issues such as safety but also recognize that increasing understanding does not equate to support or trust (François et al., 2005). Communication strategies must go beyond the safety and effectiveness of the vaccine to trustworthiness of organizations (Savoia et al., 2021); trustworthiness must be shown before trust can ensue (Warren et al., 2020).

2.4.1.2 Racism.

Research on racial disparities and vaccination rates have identified risk factors including vaccine attitudes, social and cultural norms, and experiences of racism (Savoia et al., 2021). The extent to which historically unethical and discriminatory acts have had on current vaccine hesitancy was not well defined in the literature; however, in the study by Carson et al. (2021), an ACB focus group participant described having a "general unease". Medicine has a sorted history of unethical practices with the ACB population, two examples are the Dr. Sim's gynecological experiments on slave women and the denial of curative treatment in the Tuskegee syphilis experiment (Kricorian & Turner 2021; Nguyen et al., 2021; Thompson et al., 2021; Warren et al., 2020). The Tuskegee experiments alone violated the ethical principles of justice, respect for

persons and beneficence (McLernon, 2021); history of racism in medicine has affected the ACB communities' trust in healthcare related services (Carson et al., 2021). Communications must go beyond the implementation of policies, as ACB participants wanted acknowledgement, understanding, and empathy regarding historical and current events (Carson et al., 2021). It is the amalgamation of structural inequities that has created vulnerable populations; broadly embedded social and structural determinants of health that are present in all associated institutions, including where populations live, pray, learn, and work, yet are not fully explained by the actions of the individual (Airhihenbuwa et al., 2020). Indeed, public health communication initiatives need to target social, environmental, and physical changes rather than solely focusing on behaviors that directly affect morbidity and mortality (Bernhardt et al., 2004).

2.4.1.3 Misinformation.

ACB communities had an increased vulnerability to COVID-19 misinformation, as anti-vaccination groups exploited fears and promoted medical mistrust with anecdotes as proof (Nartey et al., 2021). Messaging included "malicious intent" theories based on the governments' intentions to harm ACB communities, medical system experiences on social media, and stories about historical discrimination (Bogart et al., 2021). Susceptibility to misinformation was increased due to the lack of evidence-based information, scarcity of trusted sources and messengers, and conflicting information in the news from leaders and on social media (Carson et al., 2021). In addition, social media propagated COVID-19 misinformation with a large breadth of audience, which could have negatively impacted current and future vaccination rates (Guntuku et al., 2021). Social media was effective for mass communication, with high access and two-way communications that could have positively enhance medical messaging and social support, but it may also have increased anxieties and caused excessive fears through access to

erroneous information (François et al., 2005; Jung, 2018). For example, many media sources stated vaccine side effects were more severe than empirical findings showed; perceived side effect severity was associated with lower vaccine acceptance (Kreps et al., 2021).

Conflicting messages were also found to be a deterrent to vaccination (Marsh et al., 2014). Changing COVID-19 related guidelines and the CDC not reporting current scientific evidence, may have stemmed mistrust in public health officials and agencies; those not confident in the information from public health agencies may have become more susceptible to misinformation as they sought out other sources, such as from social media, friends, and family (Shafiq et al., 2021). Misinformation was also often an unintentional result of confusion; consistent messaging was needed throughout all levels of government (McLernon, 2021). Moreover, politicizing COVID-19 information, in addition to unrealistic timelines and inaction, also increased mistrust (Harrison & Wu, 2020). Misinformation reduced the effectiveness of the pandemic response and could be mentally and physically harmful, including by threatening decreased health, increasing stigmatization, and decreasing the observance of public health recommendations (WHO, 2020c). Stigmatization also impeded the effectiveness of the pandemic response, including people hiding symptoms and the refusal to seek medical care and testing; furthermore, inaction also contributed to infection and death rates (WHO, 2020d).

Misinformation, inadequate information as well as overwhelming amounts of information all contributed to genuine uncertainty about the safety and effectiveness of vaccines (McLernon, 2021; Kricorian & Turner, 2021). This further emphasized the need to reinforce education and to implement a multidisciplinary and audience-centered approach to change perspectives and orientations associated with vaccinations (Bernhardt et al., 2004; Kreps et al., 2021). Furthermore, communication strategies to respond to these challenges should include providing a

balance between advocacy, evidence-based information, and lobby activity on a local and global scale to build reliable partners, counter vaccination fears, and address the antivaccination movement (François et al., 2005). Public health authorities also need to include creating culturally appropriate evidence-based messaging to counter misinformation and encourage preventative health behaviors, which could also help mitigate COVID-19 cases and deaths (Shafiq et al., 2021).

2.4.2 Meso Level (Organizational and Community)

Vaccine uptake and vaccination communication were influenced within organizations and communities by mistreatment and mistrust, such as suboptimal health services and mistrust of vaccines; messaging which was used to inform and address vaccine hesitancy; fostering community empowerment, such as through partnerships and community-based communication; supporting community messengers, such as faith leaders, hairstylists, barbers, and other racially concordant professionals; and monitoring and evaluating efforts to look internally at organizations and how improvements could be made.

2.4.2.1 Mistreatment and Mistrust.

In a US survey 49% of those that identified as a Black adult had a negative experience with a healthcare professional (such as making assumptions without asking, not respecting them, talking down to them, or not believing their statements), compared to 45% of those identified as a White adult; 19% of those identified as Black believed the negative experience was due to their race or ethnicity (Hamel et al., 2020). Past discrimination is a predictor for vaccine hesitancy, and this should inform COVID-19 communications so that it is sensitive to the individuals experiences and systemic inequities by institutions both inside and outside of healthcare (Savoia et al., 2021).

The COVID-19 racial inequities regarding disease and vaccinations in ACB communities are not new; public health disparities also occurred during the 2009 H1N1 pandemic (Shafiq et al., 2021) and there were high rates of vaccination mistrust for HPV, H1N1, and influenza (Acharya et al., 2021; Kricorian & Turner, 2021; Marsh et al., 2014; Olanipekun et al., 2020); the main reasons for declining the influenza vaccine were found to be fear that it caused sickness, and distrust in the pharmaceutical companies that produce the vaccine (Olanipekun et al., 2020). ACB people were less likely to believe in vaccine effectiveness (Kricorian & Turner, 2021) and conveyed a genuine uncertainty for the safety and effectiveness of the vaccine, particularly with an expedited process (Woko et al., 2020). ACB people were concerned that the vaccine was rushed and had the perception that trials were to benefit the pharmaceutical companies, rather than protect the community (Privor-Dumm & King, 2020). Other reasons for lack of trust were found to be a distrust for politics and the concern over the political influence of vaccine development and pharmaceutical motivations of profits, and fears that ACB communities were receiving different treatments compared to "White people" and the "rich and powerful" (Carson et al., 2021).

ACB people also had the highest rejection rate when asked to participate in COVID-19 vaccine clinical trials, suggesting a general suspicion of healthcare systems and professions, which also could have been associated with vaccine rejection despite their participation potentially providing reassurance to the efficacy of the vaccine (Bednarczyk, 2019; Thompson et al., 2021; Warren et al., 2020). Low ACB participation in vaccine trials could have threatened the validity and generalizability of results, since ACB people made up 13% of the US population and accounted for 21% of COVID-19 deaths, yet only 3% participated in vaccine trials (Warren et al., 2020). To encourage ACB people to participate in vaccine trials, presidents of Historically

Black Colleges and Universities wrote to their communities stating that they would be participating in a drug trial; this was received with mixed reactions, citing that trust had not been earned or enough evidence provided for ACB people to participate in trials (Bednarczyk, 2019).

Contemporary as well as historical health inequities may have contributed to mistrust (Nguyen et al., 2021). It is critical to acknowledge historical medical misconducts within ACB communities that have caused legitimate fears and justifiable vaccine hesitancy (Nguyen et al., 2021), without allowing it to be used to conceal current structural racism, which continues to perpetuate inequities (Corbie-Smith, 2021). Current structural racism has been impart founded on historical events that contribute to current mistrust (Nguyen et al., 2021). However, stating that there is a blanket mistrust solely due to these historical events can be used dismissively and even as an excuse to blame the individual or ACB communities over addressing the root structural issues (Corbie-Smith, 2021). It is a complexed issue (Gross et al, 2018) potentially comprised of both actual and perceived racism, that may be an affront to seeking healthcare (Cheatham et al., 2008); for example, due at least in part to the mistrust of healthcare systems and healthcare providers, ACB people are more likely to suffer from preventable infectious diseases or be diagnosed at a later stage of disease progression (Bednarczyk, 2019; Lama et al., 2021; Vines, 2021). Despite ACB communities being disproportionately impacted by COVID-19, they reported low intentions of getting vaccinated (Woko et al., 2020). Furthermore, Nguyen et al. (2021) found that hospitalized ACB patients who reported distrusting doctors or the healthcare system, did not believe that they were at a high risk for contracting COVID-19 or that their underlying illness would increase their risk of being sicker with COVID-19; they were also vaccine hesitant. In addition, Shafiq et al. (2020) found that those over 55 and with higher levels of education showed the highest level of COVID-19 knowledge, and that ACB people averaged

a lower score; lower scores were associated with being less likely to follow preventative measures and may have been due to a lack of culturally tailored and community-based information. In addition, it may have been due to the associations of lower socioeconomic status and lower education with low health literacy, inaccessibility of current and verified health information, and vaccine hesitancy; identifying the drivers of the disparities is required to propose equitable solutions (Bogart et al., 2021; Nartey et al., 2021; Shafiq et al., 2021). Furthermore, mistrust that leads to suboptimal healthcare behaviors and strategies must simultaneously include tailored interventions and a reduction in mistrust; multimodal client support and extensive vaccine information, to help counteract mistrust (Bogart et al., 2021; Kricorian & Turner, 2021).

2.4.2.2 Messaging.

An increase in COVID-19 knowledge and adherence to preventative health measures was associated with confidence in the reliability of the information source (Shafiq et al., 2021). Thoughtful targeted messaging can counter misinformation and improve trust (Malik et al., 2020). To combat misinformation, credible, accessible, and timely information must be provided through multiple sources including radio, social media, television, flyers, videos, and local community spaces that allow for bidirectional communication on a continuous basis; given that the internet can aggregate and intensify vaccine hesitancy with conflicting and confusing information, it is important to integrate more traditional media in communication strategies (Carson et al., 2021; Jung, 2018; McLernon, 2021). Disseminating information about COVID-19 across various sources, particularly television and through health providers and officials, was found to be effective in increasing knowledge and increasing infection preventative behaviors (Shafiq et al., 2021). The most used and trusted sources of information should also be

considered. For example, Cheatham et al. (2008) found that radio commercials, health-fairs, billboards, and positive provider-patient relationships to build healthcare awareness were effective modes of communication for ACB men. Galbraith-Gyan et al. (2021) found that ACB people in the US trusted television and religious organizations the most and Hamel et al. (2021) found that ACB adults received COVID-19 related information (listed from most to least often) from the news, friends and family, healthcare providers, and places of worship. Furthermore, in Marsh et al., (2014) ACB women stated that they trusted family and friends more than media and the medical community (Marsh et al., 2014). While Cheatham (2008) found that female family members were often seen as positive health messengers, whereas peers were believed to be more likely to give false information. Furthermore, an innovative campaign to reach individuals without access to social media, such as those who are homeless, presented rotating slides on a clinical building that displayed facts about the COVID-19 vaccine (McLernon, 2021).

Vaccine communication messaging should include statements that all vaccines have side effects, inform about the benefit-risk ratio, and state that they are scientifically tested for hypothetical safety problems (François et al., 2005). Lama et al. (2021) found that messaging that lacked pertinent information such as dosage and eligibility impeded people's ability to make informed decisions. Furthermore, Marsh et al., (2014) found that pregnant ACB women preferred tailored messaging to improve their decision making, including clear messaging about how vaccinations could affect an infant. ACB parents also stated that effective vaccine health messaging is multifactorial and must consider safety, mistrust, roles of healthcare providers, transparency of side effects, consistency with prior literature, and have visuals and narrative elements related to cultural diversity (Lama et al., 2021; Marsh et al., 2014). In addition, ACB clients were found to be more responsive to positively framed messaging about the benefits of

getting vaccinated, rather than the negative aspects of not getting vaccinated (Lama et al., 2020; Marsh et al., 2014; Nan et al., 2019).

A lack of awareness is a main contributor to lack of vaccine acceptance and low uptake programs (Amponsah-Dacosta et al., 2020). A successful vaccination program is contingent on having access to appropriate information, knowledge, awareness, and the acceptance to become vaccinated (Kaufman et al., 2018). Public education should correct misinformation and provide evidence-based information about the vaccine's effectiveness for protecting high risk populations from severe infections and mortality, to help increase vaccine uptake (Yan et al., 2021). Interventions must include strengthening evidenced-based vaccination communication through innovative knowledge translation and promoting reasoning and critical thinking to aid in improving learning and dispelling preconceived notions (Lima & Mauzard, 2021). There were also several ways to provide education, address concerns, and answer questions; including, pre-recorded videos with opt-in live question and answer sessions, hotlines, community workshops, town halls, and in-person meetings (Carson et al., 2021; Kaufman et al., 2018; Nartey et al., 2021).

Healthcare provider engagements should also include providing easy to understand printed material that clients can take with them and corroborate with other sources of information to increase their trust (Clark et al., 2014). Clark et al. (2014) also found that participants wanted to receive vaccination communication in community forums, printed material, clinical settings, and through factual stories about the experiences of others. In addition, Lama et al. (2021) found that messaging would foster trust and credibility in ACB communities if they highlighted healthcare providers as culturally competent credible sources for ACB clients' health communications.

Messaging should also be tested on the target audience to ensure that it is salient and reflective of their values and attitudes (Marsh et al., 2014).

Intervention strategies should focus on promoting positive norms, healthy relationships, problem-solving, skills, knowledge, and beliefs (Golden & Earp, 2012). Furthermore, communications must relay timely critical information, with empathetical bidirectional discussions, promote altruism, have culturally congruent messaging, have transparency, and provide logistical support and data on diverse populations (Carson et al., 2021). Vaccination programs should focus on health information, education, community partnerships, continued surveillance, and data collection; evaluations must also be completed to ensure communities feel heard and are engaging (Amponsah-Dacosta et al., 2020; Privor-Dumm & King, 2020). Continued surveillance helps to inform the most relevant strategies to engage those who are hesitant, including for reasons that go beyond the vaccine's effectiveness and safety (Larson et al., 2015; Savoia et al., 2021). The designing of vaccine communication messaging must go beyond the provisions of high-quality information to the designing and delivery of health services that meet the needs of healthcare consumers, including diverse communities; as such, interventions developed with communities helped to address health inequities through increased effectiveness and accessibility (Carnegie et al., 2017). In addition, information should be presented in a salient tone that is personally relevant to the client (Marsh et al., 2014). Salient messaging also requires understanding of cultural nuances and targeted messaging; therefore, information should be conveyed in languages the communities understand and can relate to, that are accessible, in their preferred formats and channels, and through sources they trust (Guntuku et al., 2021; WHO, 2020b). In addition, culturally congruent messaging can be tailored to cultural practices and beliefs, as well as communal issues, such as safety of loved ones, reducing

anxiety, and resuming cultural and societal norms (Carson et al., 2021). However, while messaging should focus on those most susceptible to illness and reflect susceptible communities, it must not be stigmatizing (Lama et al., 2021).

Research and evaluation both need to incorporate alternative perspectives regarding the culture of policy and the political influence on messaging and communication strategies; democratizing research and involving communities to advance solutions and improve their own wellbeing (Airhihenbuwa et al., 2020). Furthermore, it is important that communication relays culturally appropriate information that allows clients to make informed decisions (Amponsah-Dacosta et al., 2020). Adrien et al. (2018) found that campaigns to raise awareness of the benefits of vaccines must be community based to reach rural and marginalized communities; be targeted, especially towards vulnerable groups; have partnerships with those who have influence to help promote vaccines and change social norms; have a designated committee on communication to elaborate on internal communication plans and publishing press articles; obtain surveillance data to remain apprised of attitudes, knowledge, and practice challenges; increase interpersonal communication activities and engagements in areas with accessibility issues; and mobilize clinics and community health workers to extend community services.

2.4.2.3 Community Empowerment.

The CDC (2021) defined community as neighborhoods, workplaces and other areas of social gatherings. Therefore community-based communication interventions should be focused on improving the social environments of work and leisure (Golden & Earp, 2012). These interventions should empower disadvantaged groups and increase health services through partnerships with agencies, neighborhoods, and other mediating structures (Golden & Earp, 2012). For example, creating culturally sensitive messaging may increase ACB communities

trust in the information source and potentially change behaviors and attitudes to increase vaccine uptake (Corbie-Smith, 2021; Jung, 2018).

Health officials must consider the sociodemographic of ACB communities and engage with local organizations and community leaders to address COVID-19 knowledge gaps and ways to prevent widening health disparities (Shafiq et al., 2021). The best way to overcome misinformation is to engage repeatedly with those within the community (McLernon, 2021). Guidelines for interacting with communities was written by Chess et al. (1988), it stated that people are entitled to make decisions that directly influence their lives; community input can help agencies improve their decisions; involvement in the process improves understanding, the appropriateness of actions, and adds to the information for effective problem solving; co-operation adds credibility, and when community input is not considered there is a decrease in public confidence (Centers for Disease Control and Prevention (CDC), 1994).

Leveraging existing relationships with community leaders, community centers, and faith groups could help to improve collective vaccine perceptions (Acharya et al., 2021); deliberate and sustained community engagement is required to build trust (WHO, 2023). The level of engagement and clinical outcomes may be improved when service providers earn the trust of clients and communities; relationships can also reduce mistrust by endorsing healthcare campaigns and creating culturally sensitive messaging in a manner that does not worsen inequities (Acharya et al., 2021; Nguyen et al., 2021). Covid-19 messaging should center around culture to be effective, as culture may shape values and language; both of which are pivotal in effective communication in delivery and reception of the message (Airhihenbuwa et al., 2020). Communities are found partially on history and experience and can create a collective sense of consciousness that influences behaviors, perceptions, and power (Airhihenbuwa et al., 2020).

Messaging must be guided by the needs of specific communities to increase vaccine uptake (Carnegie et al., 2017). When communities that bear the heaviest burden engage, prevention and control messaging is more likely to be achieved; for example, community engagement solutions may improve response while allowing for the continuation of cultural aspects such as spiritual wellbeing (Airhihenbuwa et al., 2020). In a multipronged approach, trusted community leaders such as community organizers and mentors, schools, cultural leaders, and faith-based leaders could enhance efforts (Carson et al., 2021; Marcelin et al., 2021).

With heightened mistrust, equal partnerships with stakeholders and communities must be established to increase vaccine uptake; including authentic engagements and shifts in power, so that communities can identify issues and solutions (Bogart et al., 2021); these partnerships are essential to building trust and the implementation of culturally competent healthcare interventions (Nartey et al., 2021). Health equity partners mean having difficult conversations that maybe uncomfortable but are necessary to build trust (McLernon, 2021); failure to engage ACB communities should be regarded as a failure of the vaccination campaign, as this is an important step in improving ACB community outcomes (Acharya et al., 2021; Nartey et al., 2021). In addition, collaboration with community leaders and influencers should be used to further vaccine awareness efforts and to build capacity in interpersonal relationships (Sina-Odunsi et al., 2021). Although service providers play a vital role in promoting vaccines, by establishing community partnerships with shared power, responsibilities and the use of empathetic listening, community-based needs can be determined (Marcelin et al., 2021; Privor-Dumm & King, 2020). This could further aid in the dissemination of accurate and pertinent information within vulnerable populations (Galbraith-Gyan et al., 2021); for example, through community-partnerships Carson et al. (2021) was able to produce a guide based on the

communities most common questions and concerns, this was subsequently shared with the participants, community partners, policy makers, and public health officials. Furthermore, studies have suggested that community partnerships build trust and promote vaccinations with culturally and socially responsive strategies that acknowledge and address historical and contemporary disparities and racism of ACB populations (Thompson et al., 2021). In addition, in a community liaison study by Kelley et al. (2012) volunteers working with ACB communities were able to help foster vaccination information dissemination strategies; learn effective channels for information transfer, such as inspiring others to share messages; and found that the credibility of the message was as important as the race/ethnicity of the messenger.

Community engagement can help foster community empowerment and agency (Airhihenbuwa et al., 2020; Carnegie et al., 2017); for example, community partners can organize in-community vaccination venues (Acharya et al., 2021); community-based health centers' averages for clients receiving both dosages of COVID-19 was shown to be above the national average (Marcelin et al., 2021). In addition, community engagement can provide a facet of health promotion that addresses health inequalities and promotes personal empowerment, which could otherwise be undermined by discriminatory language and structural and cultural power distributions (Carnegie et al., 2017). Furthermore, initiatives to address inequities within societal infrastructures were strengthened by identifying and focusing on the strengths of the culture (Airhihenbuwa et al., 2020) and could aid in implementing programs to establish trust, such as comprehensive outreach (through social systems, phone, in-person, and online), increasing education, creating messaging, reducing structural barriers, and facilitating accesses (Carson et al., 2021; Sina- Odunsi et al., 2021). In addition, the willingness of community

members to share their experiences and willingness to be vaccinated helped to instill trust within the community (Marcelin et al., 2021).

Multiple areas within the community should be engaged to encourage collaboration and active participation, with personal and professional goals of accepting responsibility, being authentic, listening to new and opposing views, and building trust (CDC, 2016). Importantly, local community empowerment is needed, combined with both national leadership and antiracist policies, to bring awareness and action to overcome the root causes of mistrust in systemic racism (Bogart et al., 2021). Tailored strategies should also include community mobilization to discredit false information and educate the public about the importance of COVID-19 vaccination (Sina-Odunsi et al., 2021). In addition, a race-neutral tactic should not be adopted; culturally appropriate messaging can reduce collective risks through focusing on the cultural logic of decision making and rationale for effective community engagement in public health communication and pandemic responses (Airhihenbuwa et al., 2020; Sina- Odunsi et al., 2021).

Cultural empowerment includes how people construct their lived experiences; communication and messaging should focus on the positive aspects of the community and the people as well as their collective resilience, cultural logic, and common cultural values (Airhihenbuwa et al., 2020). Importantly ACB communities must continue to be prioritized and monitored, even after the immediate threat of COVID-19 has passed; pre-existing inequities within ACB communities led to contextual constraints that have limited individual choices (Acharya et al., 2021; Airhihenbuwa et al., 2020). Furthermore, vaccine hesitancy must be met with empathy; trust and social cohesion must be built with consideration to growing trends in pandemic fatigue and complacency due to the protracted nature of the pandemic (McLernon, 2021; WHO, 2020b).

The goals of risk communication are to understand the capacities and needs of the community and to increase the impact and efficiency of public health emergency response; including assessing social and behavioral drives to encourage change, providing evidenced-based information that is tailored to the audience in a timely manner that is relevant and actionable, encouraging and providing opportunities for community engagement, improving decision making and risk assessment through evidence from social research and community dialogue, advocating for communities' concerns and priorities and ensuring that those who are implementing the response are accountable (WHO, 2020b). In addition, the seven rules of risk communication, adapted from Covello & Allen (1988), include accepting and involving the public as a partner with the goal of informing; carefully planning and evaluating efforts with different audiences; listening to specific concerns; being frank, honest and open; working with credible sources; meeting the needs of the media; and speaking clearly and compassionately (CDC, 1994).

2.4.2.4 Trusted Community Messengers.

In general, physician endorsed vaccines often improved vaccine uptake (Acharya et al., 2021). Polling showed that ACB people trusted their own local healthcare provider by 72-85%, compared to pharmacies and clinics at 27% and drug companies at 19% (McLernon, 2021). ACB people were significantly more likely to find the racial/ethnicity of the medical professional endorsing the vaccine to be important (Kricorian & Turner, 2021). Furthermore, racially concordant healthcare providers were shown to improve trust (Nazione et al., 2019), yet only 5% of physicians in the US are ACB (Bogart et al., 2021); there is a need to support ACB people so that more enter the medical profession (Sina- Odunsi et al., 2021).

Ethnically diverse healthcare providers that engage with communities in a frequent and open dialogue to address questions could positively influence vaccine confidence (Marcelin et al., 2021). For example, it could be beneficial for Black pharmacists with specialized training in infectious disease to hold webinars to communicate within the Black community before mobile vaccine clinics (Abdul-Mutakabbir et al., 2021) or to have virtual classes with racially concordant physicians, to improve trust in messaging (Nartey et al., 2021). However, it should be noted that ACB professionals face inequities while also being asked to step-up and lead; these difficulties should be acknowledged and further supported (Bednarczyk, 2019).

With current concerns of racial injustices and a history of mistreatment, it is important to have trusted messengers such as Black pastors to help protect the ACB community from the disproportionate impact of COVID-19; pastors and other religious leaders can help to build trust and improve healthcare efforts by working with government officials and other institutions, as well as community members (Privor-Dumm & King, 2020). Faith and community leaders and other influential people in the community may be viewed as trusted messengers (Marcelin et al., 2021). Pastors excel at listening to people with different beliefs and can provide a framework to focus on core values and practices that are consistent with their faith (Privor-Dumm & King, 2020). In addition, faith-based programs that address health disparities have been an important and trusted institution in ACB communities, they have been influential to its congregants and the community on economic, social, and political welfare (Abdul-Mutakabbir et al., 2021; Gross et al., 2018). In a summit to empower faith on COVID-19, pastors coordinated vaccine information sessions within their congregation, followed by faith leaders helping members make appointments and register for vaccinations (to avoid technology barriers) and mobilize vaccine clinics onto church grounds (Marcelin et al., 2021).

Messaging about healthy behaviors by pastors is vital to health promotion campaigns that focus on ACB communities and are influential in encouraging members to support health programs (Gross et al., 2018). Trusted messengers should be an integral part of educating, engaging, and designing activities to increase vaccine uptake (Marcelin et al., 2021). Furthermore, hair salons, and barbershops have been working to improve the health messaging within the ACB community (Bogart et al., 2021). Hairstylists have been trained in other health models to help prevent and manage diseases such as diabetes (Nartey et al. 2021). Men in barbershops have inform public health officials about hesitancy in their ACB community, in an initiative to increase vaccine uptake in ACB communities with partnerships between Black barbershops and public health (McLernon, 2021); the outreach originally advocated for colorectal cancer screening and now mitigates the effects of COVID-19, including holding town halls and disseminating information (McLernon, 2021).

2.4.2.5 Monitoring and Evaluating Efforts.

In addition to public health organizations looking outwardly to communities, they must also look inwardly to make improvements within their own organizations, including monitoring and evaluating the efficacy of communications and tailoring new strategies to meet the communities' needs (Airhihenbuwa et al., 2020; Graham et al., 2006; Jung, 2018). Furthermore, strategies to communicate vaccine safety concerns must be prompt; delays could negatively impact vaccination campaigns and cause delays in vaccinations (François et al., 2005).

To build capacity in public health through communication requires understanding the public's desire for information; continuously monitoring the public's attitudes, perspectives, opinions, and knowledge with the goal of regaining trust; gathering facts; message testing;

addressing rumors; monitoring media; publishing content via the internet, print, and other media sources; and by developing visuals, speeches and talking points (Jung, 2018; Savoia et al., 2021).

2.4.3 Micro Level (Individual and Interpersonal)

Communication at the micro level described aspects of building trust through communication to improve vaccine uptake, which included building relationships and using tools such as decision aids to help clients make informed decisions. In addition, communication challenges and facilitators faced by service providers pertaining to vaccinations were described.

2.4.3.1 Building Trust.

Mistrust could lead to doubts, risky behaviors, healthcare avoidance and susceptibility, which can contribute to higher rates of morbidity and mortality as well as underestimating the value of vaccinations (Galbraith-Gyan et al., 2021; Nguyen et al., 2021). For example, those with a lack of trust were found to have less understanding of the increased risk of dying from COVID-19, despite having pre-existing comorbidities, suggesting either an underestimation of the virus' pathogenicity or the impact of their comorbidities on clinical outcomes (Nguyen et al, 2021). Service providers need to address mistrust to improve vaccine uptake, including using accessible language to answer questions and address concerns (Opel et al., 2021). Keeping an open dialogue is fundamental to building trust, as the public exercises their right to information and to make informed choices (Larson et al., 2015). The questions and concerns of individuals and communities should be acknowledged, with an opportunity to ask questions and receive answers within a dialogue (WHO, 2020e). Furthermore, ambivalence about vaccines should be addressed through nonjudgmental discussions (Marcelin et al., 2021). Service providers must listen to community concerns in a non-judgmental setting, to help ease anxieties, and acknowledge the present and past mistreatments in response to questions (Privor-Dumm & King, 2020). ACB

communities may also find developing a collaborative relationship with healthcare providers more feasible than government or external institutions that might be viewed with suspicion (Szilagyi et al., 2002). Healthcare providers need to create trusting relationships with their clients to significantly impact understanding, behaviours, and engagement (Nguyen et al., 2021). Engagement has been shown to be beneficial, as it allows knowledge gaps such as risks and benefits, misconceptions, and safety concerns to be addressed (Hughes et al., 2011; Lama et al., 2020).

Healthcare officials also need to develop public resources that answer questions and acknowledge concerns, they should be easy to understand, available in multiple learning styles and formats and be easily accessible (Marcelin et al., 2021). In addition, well trained school health teams and community health workers can play a key role in health promotion and the social mobilization of immunization programs (Amponsah-Dacosta et al., 2020). Furthermore, improving service providers communication skills could facilitate effective open debates on vaccine safety, which could allow for scientific evidence to be presented (François et al., 2005).

Although a defining characteristic of the COVID-19 pandemic was uncertainty, clearly acknowledging what was known and unknown could have helped to mitigate the potential for mistrust and stoking fears (WHO, 2020b). Transparency included conveying information about when adverse events occurred, measures taken to investigate the occurrence, the benefit over risk of being vaccinated, and recognizing knowledge gaps pertaining to the trajectory of COVID-19 and the vaccine (François et al., 2005; Marcelin et al., 2021). Transparency was increased by showing research outcomes to vulnerable individuals and communities; data should be accessible to all educational backgrounds with explanations of program gaps, ongoing vaccine related disparities, needed resources, and policy implications (Carson et al., 2021). Healthcare providers

and public health officials must also approach communication with transparency and open mindedness, with a focus on bidirectional learning and listening to bring about shared empathy and respect regarding cultural beliefs and norms (Marcelin et al., 2021).

2.4.3.2 Challenges and Facilitators.

Currently healthcare providers have no guidelines on how to discuss mistrust of COVID-19 vaccines with ACB people (Opel et al., 2021). Furthermore, although trust is important it was not the only factor when considering the lower vaccination uptake of ACB clients (Woko et al., 2020). Healthcare providers have expressed challenges in communicating with hesitant clients, although communication skills are a core competency, they have not been historically emphasized in education, such as within medical schools (Hughes et al., 2011). However, reinforcing the capacity of healthcare providers, through continued training and education about vaccinations, would help to provide them with up-to-date knowledge to make recommendations to their clients (Amponsah-Dacosta et al., 2020).

Healthcare providers need more support involving clients who are reluctant or refuse vaccinations, including ways to strengthen trust through the shared involvement, development, and recommendations of policymakers and health authorities (Paterson et al., 2016). Dybsand et al. (2020) found that prior to receiving communication training, providers indicated that they would avoid conversations about vaccinations with their clients and after training they had improved confidence in the effectiveness of their communications. They found that changing communication habits was challenging and that it was a gradual process that required persistent training and coaching. Findings showed that a presumptive interview approach was easier to follow because it provided a convenient script, as training continued providers indicated they had less stress and anxiety, and more confidence with vaccine hesitancy encounters. Providers were

found to prefer this approach with clients that were perceived to be minimally hesitant. The motivational interviews approach, however, was preferred as the amount of perceived hesitancy increased, since it was believed that it had a greater impact on their relationship with clients. Furthermore, clients reportedly rated the experience higher when motivational interviews over a presumptive approach was used. Motivational interviews have also allowed clients to address concerns in a manner that allows providers to be respectful and empathetic while providing medical information (Hughes et al., 2011). It can also provide an opportunity for openness and to demonstrate interest in clients' lived experiences, including those pertaining to structural injustices (Opel et al., 2021).

Communicating with people who have delayed their decision to get vaccinated requires discussions about previous experiences, information about scientific data, collaborations with trusted community messengers, and should be targeted to individuals' concerns; ACB people were significantly more likely to wait more than a year to receive the COVID-19 vaccine from the time of its availability (Kricorian & Turner, 2021; Marcelin et al., 2021; Savoia et al., 2021). In addition, narrative communication in which service providers share their experiences about receiving the COVID-19 vaccination, was shown to be a powerful tool when communicating with ACB people (Vines, 2021). It could also be helpful to create space and opportunities for ACB people to be heard, so that problems can be identified, and possible solutions can be created (Airhihenbuwa et al., 2020).

Communicating with clients that show resistance to vaccines with firmly held beliefs have a low likelihood of vaccine acceptance; some major concerns include the expedition of the vaccine's production and approval, feeling marginalized, doubting the legitimacy of COVID-19, and not considering vaccination a priority (Marcelin et al., 2021). Communication strategies

should convey the safety and monitoring at all stages of vaccine production, the availability of pooled scientific information, and the use of culturally competent tools with the help of trusted community messengers (Marcelin et al., 2021). Furthermore, empathy and sensitivity should be shown by acknowledging racism and mistreatments that may have led to medical and governmental mistrust, as well as sensitivity to hardships that may have been faced during the pandemic (Carson et al., 2021). Furthermore, empathetic listening is an important part of counselling, health promotion, and building trust; multiple visits, rather than a single discussion should be anticipated (Opel et al., 2021).

Communicating with clients that are misinformed and influenced by myths and falsehoods have trusted unreliable sources for their health information, such as social media or those with political bias; communication strategies should include using politically neutral facts, clarifying scientific data, and utilizing the internet and social media to disseminate accurate information (Marcelin et al., 2021). In addition, addressing misinformation and conspiracy theories with condescending or dismissive messaging was found to be ineffective and could negatively affect vaccination attitudes; rather, healthcare professionals must be empathetic, open to discussing past and ongoing injustices and provide reassurance based on scientific evidence (Marceline et al., 2021). Furthermore, communications to address the vaccination scares and antivaccination movements should be countered by creating relationships with the media and responding to safety concerns in a timely and appropriate way, including communicating in a reliable and trustworthy manner (François et al., 2005). It is important to understand the concerns underpinning clients' beliefs, which may have been compounded by factors such as restricted health resources due to lockdown or language barriers that contributed to misinformation (Acharya et al., 2021).

To improve knowledge and attitudes about vaccinations, providing educational material about vaccines was found to be beneficial (Lama et al., 2021). To help address misinformation, public health messaging must be consistent, clear, and transparent, as well as validate the importance of asking questions and addressing concerns (Carson et al., 2021; Shafiq et al., 2021). However, service providers should be aware that knowledge and education do not always lead to vaccine uptake, but that it aids in clients making inform decisions and builds confidence; having sufficient knowledge to make informed decisions has been shown to help build trust (Carnegie et al., 2017; Nan et al., 2019; Shourie et al., 2013). Furthermore, a study by Carnegie et al. (2017) found that despite clients acknowledging receiving information at the time of vaccination, they revealed minimal understanding; thus, highlighting the impacts of ineffective teaching interventions.

Like any other new situation, it is an appropriate response to weigh the pros and cons, including safety and efficacy of the vaccine (Carson et al., 2021). The willingness to become vaccinated is a calculation between the convenience and confidence of the vaccine and the perceived risk posed by the virus (Kreps et al., 2021); increases in cases of infection and risk of mortality were both found to increase willingness to get vaccinated (Baumgaertner et al., 2020). However, the perception of side effects was a significant barrier to vaccination, including perceived pain as well as misinformation (such as the vaccine causing the disease) (Acharya et al., 2021). In addition, a survey with ACB participants showed that they were significantly more likely to consider the vaccine to be dangerous, more harmful than COVID-19, and not worth the risk (Kricorian & Turner, 2021). It should be considered that risk perception has been shown to be the most common determinant of vaccine hesitancy (Caserotti et al., 2021) and the extent to which people's present behaviors would influence their future wellbeing impacted their

vaccination decisions more than educative messaging did (Nan et al., 2019). Fischhoff et al. (1981) stated that perceptions are contingent on the deemed magnitude of the risk: risks that are more accepted are those that are believed to be under the individual's control, have a clear benefit, are fairly distributed, are natural over manmade, are statistical over catastrophic, are generated by a trusted source, are familiar, and affect adults over children (CDC, 1994). Furthermore, it should also be recognized that previous immunizations, messaging, social norms, cultural acceptability, and vaccine misperceptions contributed to vaccination decisions (Acharya et al., 2021; Marsh et al., 2014). Decision aids have been found to be a beneficial tool to increase vaccine uptake and could help to increase trust (Shourie et al., 2013). Furthermore, in previous outbreaks decision aids have left parents feeling less conflicted when provided with detailed information about the risks and benefits of vaccinations (Shourie et al., 2013).

2.4.4 Discussion

Vaccine hesitancy not only threatens the health of the individual, but also the broader community and public health response efforts (Bogart et al., 2021); therefore, more work is required to mitigate its negative impacts through effective communication; including, addressing concerns and relaying information in a way that allows clients to make informed decisions about vaccination. Recommendations with a holistic system have been shown to have better outcomes than a single layer approach (Dennerlein et al., 2020; Kumar et al. 2012). The interconnectivity between the layers, as shown in the SEM, not only reflects the importance of interventions but also of communication and collaborations (Aguirre et al. 2019; Bernardo et al., 2021; Schiavo et al., 2020). Interventions also have the potential to achieve impact across multiple levels, while helping to understand determining behaviors related to vaccine uptake (CDC, 2021; Golden & Earp, 2012).

This literature review showed that professionals that promote and provide vaccination should consider how they serve the needs of their clients who are experiencing concerns about getting vaccinated, particularly those groups who have been most impacted by infections and low vaccination rates. It is important to look internally at vaccination related services, exploring service providers' experiences could provide additional information about what communication strategies they have found beneficial and what barriers and challenges they have faced in meeting their clients' needs. Further insight could also be gained about how evidence-based information is mobilized from the source to the client in the new and dynamic environment of the COVID pandemic, as well as how effectively these resources were in educating clients from the most affected groups, such as ACB communities. This includes gaining a deeper understanding of how concerns were addressed and what resources were used and available within a local context. These findings could serve to inform best practice guidelines for effectively tailoring communications related to vaccine hesitancy to meet clients' needs. Furthermore, service providers' experiences as vaccinators and vaccine promotors may shed light on the accessibility and effectiveness of knowledge mobilization tools. Service providers are part of the knowledge mobilization process, and their use of these tools impacts what information clients receive and how useful they are in helping their clients make informed decisions about vaccinations.

Chapter 3: Theoretical Framework

Intersectionality was used as the theoretical framework of this study, since it has repeatedly been identified as important in health research and as a social justice framework (Etherington et al., 2020). Within this study, intersectionality highlighted the complexities of vaccination communication and vaccine uptake to help address inequities and support social justice for the most affected groups, such as ACB communities. This included providing opportunities to make informed vaccination decisions, rather than those based on historical and contemporary barriers created by racism. Intersectionality has also been used extensively throughout other studies within the AVA project, to which this study is a part (see Information Letter Appendix A).

Intersectionality was valuable for considering how research practices and health policies influenced health differences (Hankivsky, 2012). It also provided theory related to health inequities and collective social identities (race/ethnicity, class (socioeconomic status), migrant status etc.) and how they are intersected by multiple interconnected power systems to create different oppressive and privilege systems, which act as axes for health inequities (Macgregor et al., 2023). The context of the intersecting axes of health inequities is dependent on historical and cultural systems and the composition of different populations (Macgregor et al., 2023). Moreover, this framework has advanced a more sophisticated and accurate understanding of the multidimensional realities of people's lives (Hankivsky, 2012).

3.1 Overview of Intersectionality

The conceptual underpinnings of intersectionality predate the term coined my Kimberlé Crenshaw (1989). There were many other contributors who conceptualized intersecting oppressions with foundations in Black feminist activism and scholarship; systems of inequities have also been described in centuries of writing, creative expression, and activism for and by

"African American women" (Lewis & Grzanka, 2016). Some contributors include Sojourner Truth (1797–1883) who was the first African American feminist to highlight marginalized black women in early feminist and civil rights movements, and campaigned for the equal rights of black women in the United States; Audre Lorde (1934–1992) who furthered knowledge about how civil rights and second wave feminist movements subordinated black American women; Angela Davis (1944–) and Bell Hooks (1952–2021) who described the continued devaluing of black womanhood; Patricia Hill Collins' (1948–) a black feminist and African American activist; and the aforementioned Kimberlé Crenshaw (1959–) whose intersectional theory-work was also rooted in Anna Julia Cooper's writings, such as her book "A Voice from the South: By a Black Woman in the South 1892" ; and the Combahee River Collective (1970s-80s) (Lewis & Grzank, 2016; Collins, 2000; Dawson, n.d.; Duvenage, 2024; Lewis & Grzanka, 2016).

Some key components of intersectionality include how "feminists of color" identified connections between the rigid structures of the law, which rationalized approaches that were narrow and mutually exclusive, to intersecting patterns of subordination and the single-axis framework related to antiracism and feminism which they were contesting (Cho et al., 2013). Crenshaw's (1989) landmark article described the unique position of Black women within the United States legal system and anti-discrimination law (Lewis & Grzanka, 2016). It also addressed weaknesses in critical race theory (CRT) and feminist legal studies in inadequately grasping how racism and sexism shaped Black women's experiences (Lewis & Grzanka, 2016). Intersectionality was introduced as a heuristic term to focus on the flawed dynamics of similarities and differences within antidiscrimination and social movement politics, including how single axis thinking undermined legal thinking, knowledge production and conflicts for social justice (Cho et al., 2013). Crenshaw's intersectionality should be viewed as a rejection of

positivist epistemologies and methodologies that dismiss the complexities of people's experiences and the role of subjectivity in claims of truth; it should also be viewed as an innovative means to inquire and critique scholarly endeavors to create a more accurate and fair portrayal of the empirical world (Lewis & Grzanka, 2016). Intersectionality has continued to evolve over the years, with its capacities clarified and its scope widened through intersectional scholarship and praxis, which has amplified its focus as an analytical tool to capture and contextualize power dynamics (Cho et al., 2013). Crenshaw (1991) outlined three different forms of intersectionality: structural intersectionality, which is the study of how people are marginalized by systemic, institutional and structural inequities; political intersectionality, which is the study of how single-axis approaches fail to capture the complexities of how political movements/activism can marginalize those with multiple intersecting identities, and representational intersectionality, which is the study of how the portrayal of people with intersecting identities reinforces marginalization and stereotypes. Collins (1999) described "outsider-within" identities as situational identities attached to a specific historical injustice, highlighting how social structures and power relations create this location. Patricia Hill Collin's (2000) book on Black feminist thought, detailed how oppression catalyzed resistance in various forms of activism, both inside and outside of academia; thus, activism and oppression were the foundations of intersectionality as a paradigm (Lewis & Grzanka, 2016). Collins also expanded upon other groups and contexts through her work on the matrix of domination (race, gender, class etc.), which highlighted the dynamic ways forms of oppression are organized to create and sustain inequalities; described how interlocking systems of power operate through social categories and how systems of oppression co-construct each other; and highlighted how the standpoint theory brought value to the marginalized perspectives in the production of knowledge

(Lewis & Grzanka, 2016). Additional expansions of intersectionality included Leslie McCall who helped to move concepts into research with three methodological approaches: namely anti-categorical (rejecting fixed categories), inter-categorical (strategic use of categories) and intra-categorical (examining complexity within categories) (McCall, 2005). Ange-Marie Hancock added a justice-oriented multi-level framework (Hancock, 2007). Nina Degel and Gabriele Winker expanded on multi-level intersectional analysis including defining macro, meso, and micro levels (Winker & Degel, 2011) and Olena Hankivsky added a social justice analytical framework to inform policy analysis, including those related to public health and education to create a robust methodological and analytical approach for research that seeks social transformation (Hankivsky, 2014). To come back to Kimberle Crenshaw, some expansions of her original concepts have not been in line with her position; she stated, "widespread adoption of intersectionality there has also been the tendency to erase the foundation of the concept whilst appropriating its articulation" (Crenshaw et al., 2024, p. 4). It is important to assert that the theoretical basis for the concept of intersectionality is to critically understand racism in society, therefore intersectionality must be grounded in race (Crenshaw, 2024). Crenshaw further stated that its origins in expressing the viewpoint of the oppressions faced by Black women is fundamental, its intention was "not engaging in oppression Olympics" or to compile different axes of oppression that a person may face to create a rare and fascinating standpoint (Crenshaw et al., 2024, p.5). Moreover, intersectionality, is also connected to critical racial theory (CRT) which highlights how racism is a permanent part of society, contrary to the classical liberal approach of perceiving it as being situated at the margins, rather race is socially constructed within the legal framework to create racism, racism therefore is the system and therefore intersectionality cannot be articulated without race (Crenshaw et al., 2024).

Intersectionality is a broad theoretical framework to conceptualize the role of power in health inequities; power can be an insidious concept with impacts often being more apparent to those who have less and therefore subsequently experience barriers; for example, there is unequal power in the service provider/client relationship (Macgregor et al., 2023). The use of intersectionality with its focus on historically oppressed populations, was a natural fit with public health and nursing's commitment to social justice (Abu & Moorley, 2023; Bowleg, 2012). It provided a critical unifying interpretive and analytical framework to reframe ways to address disparities and social inequities in health (Bowleg, 2012). Health inequities include the conceptualization of political and social determinants of health (SDOH) with downstream components such as behaviours, lifestyle, biological factors, etc. and upstream components such as policies that impact housing, education, healthcare regulations, and job security (Macgregor et al., 2023). Intersectionality is unique as it is not an additive approach to diversity, rather its focus is on how social locations and structural forces interact to shape people's experiences, recognizing and analyzing systems of dominance and hierarchies that throughout society have systematically controlled and exploited people (Hankivsky, 2012).

3.2 Application in Study

Intersectionality demonstrates the importance of understanding the foundations of a problem and how intersecting factors and power distributions within social, political, and historical contexts, create unique experiences that contribute to vulnerabilities and impact health (Etherington, 2020; Ontario Human Rights Commission (OHRC), 2001). Intersectionality was used within the interpretive description methodology described in Chapter 4. Combining intersectionality and interpretive description was consistent with the literature including Kassam (2024) article on discriminatory healthcare practices targeting marginalized communities;

Campbell et al., (2020) article on how geography and being disadvantaged shaped the public health nurse home-visit program; and McCall et al., (2023) article on intersectionality's epistemological roots of critical theory (CT) and interpretive description. Since methodological consistency is an important aspect of rigor, intersectionality is also compatible with this study's pragmatic stance; examples in the literature include Gregory (2022) article on the use of pragmatism to prevent intersectionality from falling into theoretical extremes that would hinder its practical application; and Collins et al. (2021) article about pragmatism bringing action and intersectionality bringing power awareness, with a broader discussion on intersectionality in nursing research and epistemology.

This study applied the intersectionality principles and tenets as laid out by Hankivsky (2014). The principles are: social justice, which challenges inequities at the source and questions social and power relations; equity, which is concerned with and considers multiple positions of privilege and oppression; intersecting categories, which involves social categories interacting with one another to create unique social locations that vary according to time and place; multi-level analysis, which involves processes of inequities across levels of structure, macro, meso, and micro; power, which operates to exclude some types of knowledge and experience, it is also shaped by experiences of privilege and penalty; reflexivity, which acknowledges the importance of power of the self, relationships with others, and those of society, and recognizes multiple truths and a diversity of perspectives; time and space, which describes how when and where we live interact to create different kinds of knowledge that is not static; diversity of knowledge, which highlights the relationship between power and knowledge production; and resistance and resilience, which although not a principle, are integral to the disruption of power and oppression. Furthermore, the tenets are: people's lives cannot be explained through the accounts of a single

category (racism, socioeconomic status etc.) but are shaped by the lived realities of different factors and social dynamics operating together; the importance of any category or construct must be discovered through investigation; power dynamics and relationships between processes such as racism, classism, and social location are linked, change over time, and are dependent on geographic setting; depending on the context and situation people can experience privilege and oppression at the same time; multi-level analysis is crucial to show how power relations are created and experienced as they link individual experiences to broader systems and structures; reflexivity is essential, as ones' own social position must be considered before setting priorities and direction of work (such as in research, activism etc.); and intersectionality is explicitly oriented towards building coalitions between different groups, transformation, and social justice.

This study highlights the need to understand the care and cultural systems that have led to the development of our socially constructed knowledge about health inequities related to vaccine uptake, and intersectionality provided a lens to view, understand, and interpret these complexities (Macgregor et al., 2023). These complexities included how the effectiveness of vaccination communication was influenced by social factors that did not act in isolation but rather intersected in a manner that enhance negative health outcomes, such as higher rates of COVID-19 infection in ACB populations (Etowa et al., 2021).

Within this study intersectionality provided logical and social justice related connections through intersecting oppressions (such as racism and classism) between concepts that allowed for movements away from binary thinking and towards multidimensional and dynamic designs that were based on the epistemological relevance of knowledge creation through lived experiences (Cho et al., 2013; Macgregor et al., 2023; Misra et al., 2021). Moreover, intersectionality supported the analysis of systems (e.g. cultural and political), ideologies, social capital, and

connections and how they influenced the capacity for health and wellbeing (Macgregor et al., 2023). It also helped to identify underlying factors that contributed to creating vulnerable populations and aided in determining targeted interventions through the description of intersecting complex factors that created inequalities through power relations, social locations and experiences; intersecting factors (such as race, socioeconomic status, health burdens, etc.) create unique forms of discrimination (Crenshaw, 1991; Hankivsky, 2014; Viswanath et al., 2021, Etowa et al., 2021). Furthermore, these factors were exacerbated by COVID-19 as ACB populations were both the least likely to become vaccinated and had the highest burden of negative impacts (Eissa et al., 2021). Through the experiences of service providers this study aimed to explore the contextual awareness of barriers related to vaccinations and conceptualizations of vaccine hesitancy; intersectionality helped to identify how health concepts are socially constructed and influenced by systems, politics, culture, and medical practices, and further aided in the understanding of how power domains within cultures, disciplines, systems, and interpersonally, cause people's lives to be disadvantaged or advantaged (Campbell et al., 2020; Macgregor et al., 2023). For example, Eurocentric culture dominates in healthcare of over other cultures, the literature shows that this can negatively impact clients as there is a need for more culturally relevant care (Gebremikael et al., 2022; Suárez-Baquero, 2024). When seeking to improve interventions, as this study aimed to do, intersectionality emphasizes that social problems require multilevel analysis that links individual experiences to systems of broader structures to determine power dynamics and relationships between processes, this illustrates that both risks and solutions have the potential to impact other levels; for example, effective communication tools have been shown to improve interpersonal relationships and improve social unity (CDC, 2021; Golden & Earp, 2012; Hankivsky, 2014; Joo & Teng, 2017). It can also be

used as a unifying framework in public health, as single system examinations impair the understanding of how overlapping and interlocking influences comprise systems of oppression and privilege (Bowleg, 2012). Furthermore, reflexivity is used to gain personal insight, therefor nurses and other service providers must become more aware of these social inequities to create interventions for social justice; healthcare equity occurs when no one is disadvantaged by their socially determined circumstances or position, and everyone can achieve their full potential (Campbell et al., 2020; Canadian Nurses Association (CNA), 2017; Hankivsky, 2014).

Chapter 4: Research Methodology

This qualitative study used Thorne's (2016) interpretive description research methodology. This chapter provides information on the context, the research design, rigor criteria, and ethics for this study. This study was a part of a larger project (AVA) led by Dr. Josephine Etowa.

4.1 Context of Study

This study was part of a two-year community-based participatory research study to optimize vaccine uptake in ACB communities in the Ottawa and the national capital region. Further details on the main study can be found in the Letter of Information (refer to Appendix A). Although the main study engaged knowledge users, this study focused on the perceptions, knowledge, and experiences of service providers who were vaccinators and vaccine promoters during the COVID-19 pandemic and had at least some clients who were from ACB communities.

4.2 Research Design

The research design was informed by this study's purpose to explore the personal experiences, behaviors, and interactive processes (Braun & Clarke, 2022) in relation to vaccination communication as described by the participants, to inform future efforts to improve the effectiveness of vaccination communication. A qualitative research design was chosen for this study because it allows for deeper insight into real-world problems through exploration (Tenny et al., 2022); this systematic, iterative, and subjective design also helps to give meaning to human experiences and helps the researcher to create an understanding of the phenomenon (Whitehead et al., 2016). The qualitative research design is also used to explain processes and patterns of behaviors gathered from the participants answers to the open-ended questions which are used to help them share their experiences and perceptions (Tenny et al., 2022).

Specifically interpretive description is the qualitative research methodology used in this study, first described by Thorne et al. (1997). It is an inductive, qualitative methodology that incorporates flexibility in interviews and is amenable to new and varying concepts (Burdine et al., 2020; Kolltveit et al., 2024). It also encourages borrowing any design technique if it seems appropriate to the nature of the research and moves beyond structured rules imposed by disciplinary standpoints that do not apply and replaces them with meaningful disciplinary logic (Thorne, 2025). It is a flexible methodology that is also open to a variety of theoretical frameworks (Burdine et al., 2020). Ocean et al. (2022, p.1) described interpretive description as:

> "We find that Interpretive Description offers guidance toward building the foundation, bringing your whole self to the research, remaining responsive to people, valuing people's expert perspective of their own experience, using power and privilege wisely, broadening contributors and consumers of research, embracing complications and variations, and enacting change."

Interpretive description is aligned with the naturalistic inquiry approach in understanding the social world within the societal and cultural context in which the researcher observes, interprets, and describes the actions and experiences of the participants (Armstrong, 2010; Hunt, 2009). Its premise is to understand the human experience and its complex interactions by discovering patterns or shared realities (Burdine et al., 2020). In addition, it aims to generate knowledge that can be applied within health-related disciplines through questions oriented towards practice (Hunt, 2009; Kolltveit et al., 2024). It has two critical elements to scaffold a study; namely, the literature review to determine the "state of science" related to the problem (refer to Chapter 2), and what the researcher brings to the research (Thorne, 2025), which in this case it the pragmatic view (refer to section 1.4).

The intention of interpretive description is to strengthen research by realigning it with its epistemological underpinnings; it is founded with consideration to ethnography's interviewing

guidance, grounded theory's coding techniques and phenomenology's data analysis, while encouraging the extraction of traditional methods and other research techniques (Thorne, 2013; Thorne, 2016). Furthermore, it acknowledges the contextual and constructed nature of the human experience, values the intellectual character of nursing philosophical thought, and is grounded in interpretive orientation over attempts to weave theory into the study; it seeks to discover patterns over commonalities and there is no limitation to alternative data sources that inform the nursing question (Burdine et al., 2020; Thorne, 2013).

Interpretive description also has a common set of assumptions about the nature and production of knowledge as it pertains to health services, these include: The conduction of studies in a naturalistic context that are respectful to ethics and comfort; subjective and experiential knowledge are fundamental sources of practical insight; the focus is not the time and context of the event but the time and context in which they are expressed; the focus is on human commonalities as well as individuals with a shared interest; socially constructed experiences cannot be meaningfully separated from its essential nature; there are multiple constructed realities within the world of human experience and some may be contradictory; and the inquirer and the object of the inquiry will influence each other and thus the final outcome of the study (Thorne, 2016).

A study's research design requires coherence and methodological integrity (Braun & Clarke, 2022). Importantly interpretive description not only aligns with the qualitative design, but it also aligns with this study's pragmatic philosophical stance and this study's purpose which seeks to explore service provider's experiences to strengthen and build capacities as well as to provide insight pertaining to their practice. Pragmatism and interpretive description can help to produce practical outcomes to address complex questions about how an intervention may be

useful within an actual healthcare setting based on experiences and which are not solely found through measurement or conventional theoretical approaches (Burdine et al., 2020; Holtrop & Glasglow, 2020; Thorne, 2016). Furthermore, interpretive description aims to develop comprehensive evidenced based knowledge, through a credible and transparent process, to advance health practices that are informed by experiences and perceptions of the participants of the study (Burdine et al., 2020). Similarly, pragmatism also allows for pluralism in evaluation methods to capture human complexities and multiple perceptions through research design (Long et al., 2018; Thorne 2013).

While interpretive description and pragmatism appreciate the different participants' perspectives, the intersectionality theoretical framework helps to explain the complexities in people's experiences and the impact of intersecting social factors (Collins & Bilge, 2020). Intersectionality also guides this study's purpose, as the experiences of the service provider's and the experiences of their clients are both multifaceted (Collins & Bilge, 2020), and this should be acknowledged when considering the way to effectively communicate about vaccinations. It should also be noted that the use of intersectionality in this study is consistent with the main study (refer to Appendix A) which combines the experiences of service providers with ACB community members' experiences to provide additional context to improving vaccine uptake in ACB communities.

There were several examples of other studies that combined interpretive description and intersectionality; for example, Kassam (2024) described how intersectionality provided the theoretical scaffolding to understand race, power, and the social identity of marginalized populations, which they described as a novel approach in identifying inequities in healthcare practices in marginalized communities. Campbell (2020) described how the methodology of

interpretive description guided study decisions and the data collection of nurse focus groups, with an intersectionality lens to explore the influence of geography on the delivery of the public health intervention of Nurse-Family Partnership. In addition, McCall et al. (2023) combined interpretive description with critical social theory, which aligns with intersectionality, as described in Collins (2019) book Interpretive Description as a Social Critical Theory. It further described the experiences and perspectives of staff (nurses, social workers, and peer support workers) at an injectable opiate assisted clinic to reveal how they provided care at the clinic; they explored how critical social theory and interpretive description enhanced the study.

There were also several examples of other studies that combined intersectionality and pragmatism. For example, Collins (2012) described how the pragmatist construct of community combined with intersectionality's social inequity, politics, and power could lead to new avenues of investigation. Gregory (2022) further described a need for additional theoretical and practical elements beyond intersectionality towards radical racial pragmatism in social work praxis.

There are several reasons why interpretive description and intersectionality are compatible. Intersectionality (as described in Chapter 3) is a theoretical framework that reveals the complexities of social identities and the impacts of social categorization, describes synergistic power differentials, provides a social justice approach to research, and requires reflexivity of the researcher. The reasons interpretive description (ID) and intersectionality are compatible within this study include: 1) The research design of this study was oriented to practice (experiences of vaccinators and vaccine promoters) with a focus on intersecting power structures in relation to vaccination communication (why groups such as ACB communities were most affected); 2) In theoretical positioning constructivist (in ID) and critical (in intersectionality) foundations can lead to more robust reflexive practices, intersectionality is focused on power, structure, and

system inequity with ID highlighting the process of communication in practice; 3) the research purpose involved a practice problem (improving vaccination communications) and intersecting principles of inequity (in the most affected groups, such as ACB communities); 4) sampling was purposeful with participants from diverse areas of practice and levels of authority, in relation to serving disadvantaged groups; 5) data collection included an interview guide with questions that were open to eliciting how systems of power and social locations contributed to shaping experiences, with a focus on positional interactions with ACB clients; 6) in analysis, patterns related to structures of oppression and privilege, while reflexivity was essential for maintaining rigor (in ID) and awareness of social location and positionality (in intersectionality); and 7) the results informed practical interventions and advocated for equity-oriented, justice informed practices (Collins & Bilge, 2020; Crenshaw, 1989; Dhamoon, 2010).

The value in combining intersectionality with interpretive description includes: 1) To provide guidance in exploring complex problems related to practice and intersecting social identities; 2) nuanced exploration of experiences grounded in social context and power structures; 3) how/why people experience healthcare differently based on intersecting identities; 4) generates findings that are socially aware and actionable in practice; 5) patterns within ID are enriched as the researcher looks at how systems of oppression/privilege contribute to them, for example, why an ACB client may be less likely to get vaccinated due to intersecting factors, such as race, socioeconomic status etc.; 6) helps to identify themes in lived experiences (in ID) and considers how systems of racism, social position, income etc. intersect to shape those experiences; 7) highlights how interventions might affect people differently depending on their social positions; and 8) supports anti-oppressive, equity-oriented practice recommendations.

When ID is combined with pragmatism and intersectionality, the research becomes informed by pragmatism's practicality (to improve vaccine uptake), intersectionality's social justice (in the most affected groups, such as ACB communities), and interpretive descriptions' relation to practice (service provider's experiences).

4.2.1 Setting

The setting of the interviews was completed virtually for all participants. This study took place in Ottawa, Ontario and the national capital region and is related to serving the needs of ACB communities in this area. The Social Planning Council of Ottawa (2021) reported that 8.5% of this area's population or close to 85, 000 individuals self-identified as Black, which is the largest racialized community in Ottawa and has increased by 2.5 times in the past 20 years.

4.2.2 Sample, Sampling Strategies, and Recruitment

Purposive sampling was used to find participants that were knowledgeable about the subject of vaccination communication with ACB clients, which allowed for a smaller sample size to yield sufficient in-depth data (Burdine et al., 2020). Participants were recruited through posters, email circulation, a newsletter, and websites within the Ottawa area, as well as by word of mouth (i.e., snowball technique). Purposive and snowball sampling methods were used initially and concurrently to increase the number of participants and maximize variation (Carpenter, 2011; Polit & Beck, 2017). The inclusion criteria included service providers that worked with at least some members of ACB communities during the COVID-19 pandemic, were a vaccinator or vaccine promoter, could communicate in English, and were over 18 years of age. As data was collected, participants were selected who could further fill in gaps in the information and reinforce findings. This process was informed by concurrently collecting and iteratively reflecting on the data, which is consistent with both the analytical process of interpretive

description and the data analysis method (thematic analysis) used in this study (Thorne et al., 2004; Braun & Clarke, 2022).

4.2.3 Data Collection

Data collection started April 2022 and ended in January 2023. The main source of data collection was through semi-structured in-depth interviews (IDIs), with all interviews being conducted in English, as it was the language spoken by the interviewers. In qualitative research the use of interviews is the most common format of data collection, most of which are also semi-structured and in-depth; this form of data collection is also widely used in research by healthcare professionals (Jamshed, 2014). The initial interview guide consisted of 22 open-ended questions and was developed following the review of the literature shown in Chapter 2. The initial interview guide had the same standardized questions for each participant to establish consistency in the concepts (Polit & Beck, 2017). The question guide later became more refined to allow for early analytical assumptions to be examined and to fill in any gaps in the information (refer to Appendix E and Appendix F) (Burdine et al., 2020). Questions were open-ended, which are mainstay in qualitative nursing research (Thorne, 2013). Interviews were conducted by 3 separate interviewers, each received training to ensure consistency between interviews (Goodell et al., 2016). The training consisted of the first two interviewers conducting an interview together, one of these interviewers subsequently conducted and interview with a third interviewer to provide their training, and then the latter two interviewers proceeded to conduct all remaining interviews separately. Each interview was approximately an hour. The IDIs were recorded through the Zoom meeting online application and transcribed verbatim by professional transcriptionists; these transcriptions served as this study's data set for analysis.

Additional forms of data collection included the use of memos, which contained emerging concepts and relationships within the data as well as field notes which contained observations within the context of the in-depth interviews (Carpenter, 2011; Polit & Beck, 2017). Various web-based documents from health organizations were also used to compliment data collection and strengthen data analysis. Finally, each participant's completed demographic form (refer to Appendix D) was also collected by the interviewer prior to being interviewed.

4.3 Data Analysis

Data analysis must also have coherence with other components of the study's design (Braun & Clarke, 2022). The method for data analysis used in this study was Braun & Clark's (2006) thematic analysis; as themes are developed from the data, they serve as pragmatic tools to address the research purpose (Burdine et al., 2020). Thematic analysis is a method and a transtheoretical tool; it is not a research framework that is informed by theory (Braun & Clarke, 2022). Thematic analysis is often used in qualitative research, it is theoretically flexible and can be used within various theoretical frameworks, which was beneficial in maintaining methodological integrity in this study's use of interpretive description and intersectionality (Braun & Clarke, 2022). It is an inductive approach, whereby the data is coded and analyzed based on the interpretation of the data through the subjective researcher; however, "being purely inductive is impossible" (Braun & Clarke, 2023, p. 69), because although the researcher does not override the participant's stories, the researcher yields influence over the data to some extent when it is analyzed, such as by the decisions that are made about ways to code particular data for a given construct (Braun & Clarke, 2023).

Thematic analysis is inductive and often oriented in experience and contextualized within the theoretical framework, giving meaning to the experiences reported in the data (Braun &

Clarke, 2023). The specific approach of thematic analysis used was experiential reflexive thematic analysis, as it is geared towards exploring the participant's truths within the context of their situated experiences, behaviors, and perspectives (Braun & Clarke, 2022); this is consistent with this study's purpose of exploring service provider's experiences based on the context of their practice. The assumption through this approach is that based on exploration and experience of the participants, truth can be assessed through language, with consideration to how their accounts and experiences are socially mediated (Braun & Clarke, 2023).

Thematic analysis aims to find patterns of meaning to address the research purpose, this is achieved through the semantic meaning of the data or the latent meaning behind what is explicitly stated by the participants in the interviews (Braun & Clarke, 2023). Conceptualizing language is key to this method, as it reflects the true nature of the participants contextually situated unique realities/truths (Braun & Clarke, 2022). Analyzing the perspectives from multiple service providers is also consistent with the philosophical underpinnings of this study, as it creates the pluralistic tenet of pragmatism, whereby multiple accounts of meaning are used to seek patterns of commonalities within their collective discourse (Deering et al., 2021; Misak, 2005; Thorne, 2013).

Analyzing the data through reflexive thematic analysis uses several core assumptions; including: 1) The researcher's subjectivity being a resource; 2) that analysis and interpretation cannot be objective/accurate; 3) that immersion and distancing are both important for reflection and good quality coding and themes; 4) that a single coder is typical; 5) that the themes are analytical outcomes from codes; 6) that themes are patterns of meaning joined by a shared concept; 7) that themes do not emerge, but are produced by the researcher through systematic analysis of the data; 8) that data analysis has theoretical assumptions that are acknowledged and

reflected on; 9) that reflexivity is key to good analysis; and 10) that creativity is central to data analysis, which is held within a framework of rigor. These assumptions were considered during thematic analysis; for example, this researcher was the only person coding the data and reflexivity was a necessity to the analysis process. Reflexivity included contemplation about social positioning, design choices, research values, research practices etc., which all had the potential to delimit knowledge production (Braun & Clarke, 2023).

Reflective note: Consistent with reflexive thematic analysis and the tenets of interpretive description, as well as intersectionality, reflexivity included contemplation about social positioning, design choices, research values, research practices etc., which all had the potential to delimit knowledge production (Braun & Clarke, 2023). For example, consideration was given to, how as a person that falls within the categories of being non-ACB and a female, I am more than the sum of these factors. However, my experiences have been influenced by various societal, historical, and political factors (Hankivsky, 2014), including that I am privileged, the perpetuator of oppression, and simultaneously oppressed (Jones, 2010). For example, it is a privilege to not have daily thoughts of how my race will impact how I am perceived within the healthcare system. My nature is one of finding practical solutions to problems that I have been presented with, the awareness of racial inequities as they pertained to COVID-19 spurred me to raise my awareness and seek solutions for this injustice; thus, as this is my nature, I acknowledge that this pragmatic epistemic stance has influenced how I prioritized problems and solutions associated with increasing vaccine uptake in vulnerable populations.

Beyond this, my experiences as a registered nurse (RN) and researcher have also contributed to how I proceeded to analyze the data obtained by the IDIs. This journey of acquiring my own tacit knowledge in relation to working with ACB community members within

Ottawa and the national capital region included reflecting on the power dynamics, privilege, positionality, and ethics associated with vaccination communication. I came into this research as an outsider in many respects. Although I am an RN and I had worked in Public Health at the time a COVID-19 vaccine had been eagerly awaited by fellow healthcare providers until vaccine rollout first began, I did not work in Ottawa or the national capital region, and I am not ACB. Through my implications with this thesis and the projects within the larger program of research within the CO-CREATH lab, led by my co-supervisor Dr. Etowa, I became more familiar with ACB communities/ community members. I also became increasingly aware of how my social status as an RN intersected with the lived realities of ACB community members. While nursing is often associated with care, compassion, and service, it is also a profession that holds social power and institutional authority that must be candidly reflected upon, especially when contrasted with marginalized or underserved populations. Through my work in research within the ACB led lab, I gained a greater understanding of how ACB communities experience significant socioeconomic hardship, systemic discrimination, housing insecurity, limited access to healthcare, and challenges related to immigration status. In contrast, my professional role has provided me with a degree of security, respectability, and access to systems of power, such as healthcare institutions, government programs, and professional networks. Through engaging in reflexivity, I am aware that these disparities inevitably shape interactions between service providers and their clients within disadvantaged communities. This awareness was considered while analyzing the data obtained by the service provider participants. Furthermore, I acknowledge that as a professional who is part of a system scaffolded by structural racism, that I am bias, whether I am fully conscious of it or not, it inevitably impacted how the data was viewed and interpreted by me. For example, since racism is not an everyday lived experience I

have encountered, this could have contributed to an unintentional distancing or misrepresentation of the data.

I have come to realize that race deeply impacts those who are racialized and with this recognition work must be done to rectify these harms. I recognize that, as a healthcare provider, I carry both the power to advocate and the potential to unintentionally reinforce hierarchies that contribute to the power differentials that create oppression, thus creating the disadvantaged communities I aim to help. Thus, it was essential for me to remain critically reflexive throughout my analysis, including considering the ways my social positioning may influence my perceptions and decisions as I analyse the data and discuss outcomes of this study's findings. I needed to ask myself if I truly understood the intended meaning of the data, and if by analysis helped to recognize and prioritize insights into improving trust and equity within disadvantaged communities or if I am recognizing patterns within the data that are reflective of elitist views or institutional norms. I strived to purposely position myself as someone who challenges systemic inequities, which I realize have created and sustained health disparities. This included questioning my own positionality to foster more equitable, respectful and responsive communications to reach disadvantaged communities in a way that was meaningful to them.

I offer this statement of my reflexivity in acknowledgement that someone else may have analyzed the data obtained from the IDIs differently than myself. As I worked with the data, I reflected on what I had experienced working with and learning about ACB communities and my own positionality as an RN. Someone without this background may look at this data and see it differently, perhaps not identifying some of the nuances I saw or perhaps having an even greater understanding to create additional links. With this I say that a work of this nature is not completed by one study, it is my hope that work of holding a mirror up to vaccination

communication dynamics in relation to disadvantaged communities will continue, and new patterns and perspectives will perpetuate change to end oppressive structures that have contributed to low vaccine uptake in disadvantaged communities, such as ACB communities.

The transformation of data to findings was supported by these reflections, coding, and by increasing the depth of questioning to further understand information that was not apparent; similarities and differences in the data were also extrapolated to represent the nursing discipline, with the recognition that there is always more to know (Thorne, 2013). Braun & Clark's (2006) six step thematic analysis process informed the coding and interpretation of participants experiences, these steps included: 1) Data familiarization; 2) data coding; 3) generating initial themes; 4) reviewing and developing themes; 5) defining and naming themes; and 6) producing the report. Therefore, based on these steps data analysis began in this study with the familiarization of each verbatim transcript, by reading and re-reading it and noting any initial ideas, important points of interest, issues, and patterns (Braun & Clark, 2006). This is also consistent with interpretive description which encourages repeated data immersion before coding to enhance the process of recontextualizing rather than sorting the data (Thorne et al., 1997). Initial codes were then generated by systematically going through the entire data set and coding points of interest and collating the data relevant to each code (Braun & Clark, 2006). Coding was necessary to identify and organize the data into a manageable form; consistent with interpretive description, codes were formed based on the data rather than a pre-existing theory being applied to identify the codes (Burdine et al., 2020). Furthermore, the data was not coded line by line but rather coded to answer the broader questions of the study; this was done to complete the interpretive process through assembling and forming connections within the data (Burdine et al., 2020). Once the relationships between the components became clear, appropriate and logical

conclusions, that informed the research question, were made (Thorne, 2013). This is an inductive approach, whereby the data was coded and analyzed based on the interpretation of the data through the subjective researcher (Braun & Clark, 2023). However, "being purely inductive is impossible" (Braun & Clarke, 2023, p. 69), because although the researcher does not override the participant's stories, the researcher yields influence over the data to some extent when it is analyzed, such as by the decisions that are made about ways to code particular data for a given construct (Braun & Clarke, 2023).

To develop themes, all collating codes were placed into tentative themes with all associated relevant data, this allowed for modification and restructuring of the themes as the analytical process continued (Braun & Clark, 2006; Burdine et al., 2020). The key themes were then used to propagate explanations of the accounts from other participants (Burdine et al., 2020). The tentative themes were reviewed for their relation to the extracted codes and the entire data set to create a thematic map (Braun & Clark, 2006). The themes were further analysed and refined into subthemes and main themes that generated clear definitions and told an overall story (Braun & Clark, 2006). Finally, quotes were extracted from the data that relate back to the research purpose and literature to produce a vivid report of the findings (Braun & Clark, 2006).

Thematic saturation is not a focus of interpretive description, rather the desire is to obtain a deeper understanding of the participants perspectives with all the variations and outliers and possibly infinite variations (Burdine et al., 2020). Data saturation was also not a goal of reflexive thematic analysis, because as themes are constructed there continues to be potential for new understandings (Braun & Clark, 2022). Therefore, based on the timeframe of the main project, the collection of data used in this study came to a practical end, at which point the data from 22 IDIs had been collected and used for this data analysis.

4.4 Rigour Criteria

This study followed rigorous principles in all stages of the research; credibility in interpretive description is based on the researchers' conceptual sensitivity and engagement as well as their ability to logically analyze findings and justify relationships (Burdine et al., 2020). Specifically, Thorne's (2016) list of criteria for rigor and credibility within interpretive description included epistemological integrity, representative credibility, analytic logic, interpretive authority, moral defensibility, disciplinary relevance, pragmatic obligation, contextual awareness, and probable truth. To meet these criteria, epistemological integrity was achieved by ensuring that the pragmatic lens was consistently used throughout the study and representative credibility was achieved by ensuring that the participants had experience related to the research purpose. In addition, analytic logic was maintained through the transparency of analytic decisions (Thorne et al., 2004); an audit trail of the analytical process was kept and served as a record of decisions made and steps taken during the process of converting the raw data into the final results (Burdine et al., 2020). This criterion was also met by having a thick description and verbatim accounts within the results to show further context; thick description also enhances transferability (Lincoln & Guba, 1985; Thorne et al., 2016; Thorne et al., 2004). The criterion of interpretive authority, which relates to the researcher's trustworthiness in revealing truths that go beyond their own experiences and bias, was achieved through incorporating reflexivity throughout the study, including it occurring within the principles of intersectionality and within the data analysis process. In addition, the criterion of moral defense was achieved by explicitly describing why this research was necessary due to the impacts of low vaccine uptake in the most affected groups, such as in ACB communities. The criterion of disciplinary relevance was met by presenting findings that could be used to increase disciplinary

knowledge, including building service providers' communication capacities, and helping to inform best practices and knowledge mobilization tools within the context of the study's purpose. Furthermore, the criterion of pragmatic obligation was met by recognizing the moral obligation and integrity of findings related to the potential for them to be applied to practice. Finally, contextual awareness was achieved through the recognition that the researcher's own perspectives were influenced by their own history and the perspectives of the nursing discipline; this was enhanced through engaging in reflexivity.

4.5 Ethics

Ethical approval was granted by the University of Ottawa research ethics board (REB) to the main project, which included the approval of the following documents: Information Letter (Appendix A), Consent Form for In-depth Interviews (Appendix B), Participant Consent to be Contacted by the Research Team (Appendix C), Service Providers Demographics Form (Appendix D), and Service Providers In-depth Individual Interview (IDI) Guide (Appendix E). Although these appendices were used in this study, they were the responsibility of the main project (AVA).

The Information Letter (Appendix A) was provided to those interested in participating in the study and was available to share with others to aid in snowball sampling; this letter was available through email and paper copy. Appendix A detailed the study's intentions, design, researchers' contact information, and information on ethics. The ethical information included statements about participation being voluntary; confidentiality and conservation of data, which included the use of code names, storage and protection of personal information and transcripts; use of data; risk of emotional stress and resources; benefits; and a statement of ethical approval for the study.

The participants made initial contact with the research team of the main study. After the initial contact the participants were sent the consent form (refer to Appendix B) and the demographic form (refer to Appendix D). Collecting participant's demographics is consistent with the ethical requirements to ensure inclusion and prevent unfair exclusion and burden in research (Panel on Research, 2023).

Upon receiving participants' consent, an online video interview was scheduled and subsequently recorded. After the interview, the participants were also given the option of being contacted in the future (refer to Appendix C).

Chapter 5: Results

This chapter presents the findings from the data analysis of 22 interviews which took place from April 2022 to January 2023 and were conducted with participants using open ended questions based on the literature review (refer to Chapter 2). Through Braun & Clark's (2006) Thematic Analysis, three themes were developed that relate to complex issues experienced by service providers regarding vaccination communication in hard-to reach communities, with a focus on ACB people in Ottawa. This is consistent with interpretive description's premise to understand the complex interactions of human experiences and the aim of generating knowledge that can be used in health- related practice (Burdine et al., 2020; Hunt, 2009; Kolltveit et al., 2024). The three themes are: 1) Mistrust and Empowerment; 2) Active Listening and Education; and 3) Optimizing Knowledge Mobilization, which will be further expanded upon in this chapter. In addition, all themes inter-relate with respect to effective vaccination communication, as theme 1 relates to the perceived needs of those receiving the information (most affected groups), theme 2 relates to the quality of the information to improve vaccine uptake, and theme 3 relates to integrity of the communication process.

The views expressed in this chapter are those of the participants. To protect the identities of participants, pseudonyms were used and identifiers within the quotes were placed in square brackets and replaced with broader descriptors. In addition, to maintain the integrity of the quotes, only words that could be used as identifiers or for clarity were replaced and put in square brackets; therefore, quotes may contain language that some people may find offensive or controversial.

5.1 Sample Description

As shown in Table 1, more service providers were healthcare providers and decision makers than non-healthcare providers, and the categories with the most participants had a master's level of education, had been in their current role for less than 5 years, were age 46-55, female, and ACB.

Table 1 Participant Demographics

Demographic	Categories	Number of participants in percentage (n=22)
Occupation of service providers	*Healthcare professionals **Decision-makers ***Non-Healthcare providers	36.4 36.4 27.3
Years of experience in current position	≤ 1 2-5 6-10 11-15 16-20 ≥ 21 Not answered	27.3 31.8 18.2 13.6 0 4.5 4.5
Education	College Bachelor Masters Doctor of Philosophy (PhD.)	4.5 36.4 54.5 4.5
Age	≤ 25 26-35 36-45 46-55 56-65	4.5 27.3 18.2 36.4 13.6
Sex	Male Female	27.3 72.7
**** Race	ACB Non-ACB	59.1 40.9

*Healthcare professionals (nurse, physician, social worker, psychotherapist), **Decision-makers (coordinator and director in long-term and community services, health officer), and ***non-healthcare service providers (interpreter, faith leader, counsellor, consultant, community worker, researcher). **** Results about race were based on evidence obtained during the interview, since race was not asked on the demographic form or made explicit in the initial interview guide.

5.2 Thematic Findings

In this section the three main themes and their associated subthemes will be described (Table 2). The definitions of these themes are based on interpretive description in the context of improving vaccination communication, with a focus on ACB communities.

Table 2 Main Theme Definition and Subthemes

Main themes	**Definition (Interpretive Description)**	**Subthemes**
Mistrust and Empowerment	Mistrust refers to the lack of perceived trustworthiness of vaccination communication due to reasons including racism and inequities. Empowerment refers to strategies to build trust and relay power to those from the most affected groups to increase autonomy in vaccine uptake.	▪ Racism and inequities ▪ Community outreach ▪ Vaccination equity
Active Listening and Education	Bidirectional communications required actively listening to communities' needs and subsequently providing appropriate education.	▪ Vaccination conversations and relaying information ▪ Address misinformation and misbeliefs ▪ Targeted messaging
Optimizing Knowledge Mobilization	Optimizing knowledge mobilization involves the relaying of information from the source to the user while maintaining the integrity of the information.	▪ Acquire and relay accurate information ▪ Skills and training

5.2.1 Main theme 1: Mistrust and Empowerment

Mistrust in the vaccine and healthcare system was believed to have been a major deterrent to vaccine uptake in ACB communities. This theme describes participant's perceptions related to mistrust in vaccination communication by the most affected groups, such as ACB communities, as well as ways to empower these groups through increased autonomy in vaccine uptake. This theme will be described through the three subthemes of: 1) Racism and Inequities; 2) Community Outreach; and 3) Vaccination Equity.

5.2.1.1 Subtheme: Racism and Inequities.

Participants reported that racism and inequities contributed to the mistrust that was prevalent in the communities most affected by COVID-19 and who had low vaccination rates, such as ACB communities. As such, the roles of racism and inequities must be considered in vaccination communications. Racism refers to prejudice and discrimination based on the belief that different races have distinct abilities and characteristics. While inequities refers to a lack of fairness of judgement, such as the unequal distribution of power and resources resulting in undue burden and oppression. For a summary of initiatives, barriers, and proposed ideas in relation to this subtheme refer to Appendix K, Table 3.

Consistent with Chapters 1 and 2, participants expressed how racism and inequities were evident in the disproportionate number of racialized people who were negatively impacted by COVID-19, including experiencing less appropriate care and higher negative outcomes in the healthcare system. They further described how it impacted vaccination communication in many ways, including being oppressive, creating and sustaining barriers, contributing to mistrust, decreasing receptivity to information and vaccinations, and contributing to inadequate supports and services. It was also believed that telling communities that have been historically mistreated, to trust service providers who are part of the system that has perpetuated mistrust, without acknowledging or addressing its presence and pervasiveness, was not conducive to effective communication. Rather, participants believed vaccination communication must be contextualized through considering the impacts of intersecting power systems found within ACB communities, such as racism, classism, and inequities (such as those related to the SDOH) when considering initiatives to improve vaccine uptake.

> Black people are more likely to be low-income earners and live in multigenerational households… overcrowded…when you put all those together, someone is not able to take

> time off work because of COVID, or they're not able to… work from home…they need to go into the grocery store, they're seeing a lot of people, they get COVID, they don't have time off work, they don't isolate, because how do you isolate in a 3-bedroom house with 10 people. (IDI-SP-003)

> We know that part of the reason why there are disproportionate numbers of people in racialized communities experiencing COVID is because of racism, structural racism. We have more racialized folks living in poverty, we have more racialized folks unable to access opportunities and systems because of racism. We know that people, regardless of living in low income or not, are experiencing less appropriate care, higher negative outcomes in our healthcare system… going out to that community and saying, hey, we're really worried about you because all of these things happen, trust us, you need to do this, doesn't work. Because we are part of the system that has done that… it's not enough to say we know that you don't trust us because of structural racism, but we really care about you so you should trust us and do this. (IDI-SP-007)

Participants also believed that trust and openness among ACB people towards organizations that provided and/or promoted vaccinations were impacted by racism, previous experiences with the healthcare system, and uncertainty. They also noted that these organizations were operating within oppressive systems and therefore faced challenges in effectively serving disadvantaged clients. However, they also described a need for change and how increased awareness of systemic power imbalances and how to address them among service providers could lead to meaningful improvements.

> African, Black, Caribbean community may have mistrust of institutions and agencies like Public Health due to historical, colonial experiences where those organizations or institutions perhaps even in people's home country, these were not institutions that they trusted, necessarily… or there's just a general mistrust of people they don't know, people coming to their door…being afraid…certainly when it came to vaccines... putting this substance into my body, and/or being told what to do. (IDI-SP-009)

> "…the reluctancy to first even come in as a client…there would be the reluctance to disclose certain information as a fear of how I might react…working… in a system that is oppressive" (IDI-SP-019).

*"*I think there needs to be larger structural change to undermine the decades and centuries of racism and systemic racism in our healthcare society and our society in general" (IDI-SP-022).

Consistent with the literature presented in Chapter 2, participants linked vaccination fears and mistrust to racism and cited historical medically related events, such as the Tuskegee experiment which conducted unethical research on Black people in the United States and the impacts of colonialism which founded a distrust of Western medicine due to the pains that it created.

> I remember there is a man who did get his vaccine, but he just did it because it was required by the employer. And he said, "I've never been to the doctor all my life…people… throughout the years of colonialism, just really blocked out…western medicine that they don't want to associate with it because it came with so much pain. (IDI-SP-001)

While historical events shape present perspectives and experiences, participants described how there are also contemporary reasons for vaccination mistrust stemming from healthcare, such as feeling stigmatized, experiencing negative bias, and being dismissed by the medical community. It was also expressed that these experiences could build fears that contribute to people delaying seeking healthcare services, such as delaying getting vaccinated.

> …there is this notion that Black community they are hesitant, … when a frontline worker [has] that belief… they are not just going to bring [the topic of vaccines] up… that's one of the ways that I see is some bias ...which is negative against the race. (IDI-SP-008)

> …when things get so bad, and I see a patient from the ACB community…'why did you let it get this bad before you come?' And they tell you that nobody listened, they just believe I'm making it up or they just sent me home…So, I've seen a lot of that... And they feel that it's based on their ethnic, their racial status… (IDI-SP-008)

> …all it takes is one time for someone to go into a hospital and say, 'I'm feeling pain, I need help… and then… a doctor says, I don't have any pain medication to give you. And then right away you're feeling like they didn't hear a thing that I said… I am not talking to this person again… I'm done with this… it doesn't take a lot when it comes to healthcare…to be…turned off from a service. (IDI-SP-014)

Participants described how newcomers have faced additional challenges, they often had mistrust and mental health issues from experiences prior to coming to Canada, such as experiencing war and complacencies from international health organizations. When newcomers arrive in Ottawa, they can also face a lack of social networks and support, lack of housing, lack of established credit, language barriers, and fears of seeking services based on their previous experiences and uncertainty.

> If you're a new immigrant and have no social networks and no social supports and you have five children… parents, one in ICU, one at home, almost nearly dying because they couldn't breathe, but because they had children, they did not want child services to come in and take the children away… (IDI- SP-006)

Some people within the ACB community were also described as never having integrated into society and relying on their children to be communicators and translators. Not only did language barriers impede integrating into society, but they also affected communications regarding vaccinations, which subsequently contributed to mistrust. For example, one participant described a client receiving services in a language they did not understand which resulted in them becoming ill due to being double vaccinated. There was also no coordinated mechanism to rectify the issue related to the client's vaccination history, which led to their mistrust in the medical system.

> 'My records weren't updated, I wasn't given the information in a language that I understood. I was then double vaccinated, they looked at me like I was a liar'. …I tried to contact somebody …nobody even knew what to do. I even tried to refer her to one of our vaccine clinics and they said because we don't have her medical history, we don't know... I find that she completely lost trust in the medical system because of what happened…it is a potentially dangerous situation and it's somebody who was impacted by not having the right supports and services… (IDI-SP-012)

In addition, participants perceived that immigrant frontline workers also did not receive effective communication around vaccines because despite having received their vaccinations in their home

country they were refusing it here; thus, suggesting that information was not presented in a way they understood or that they were comfortable with.

> …a lot of education needed in this community… some of these people are registered staff who needs to know how important it is for vaccination uptake…they must have taken a lot of vaccine in most of their life… the information is [passed] in such a way…that families [are] comfortable, and they are taking their children too. Unfortunately… it wasn't like that in North America… the information was passed differently, and the people understood it differently. (IDI -SP-005)

Furthermore, some COVID-19 vaccination initiatives, such as mandates, were believed to have had a negative influence on ACB communities, including heightening inequities and mistrust. Despite vaccine mandates not targeting a specific group, ACB communities were heavily impacted, such as through job loss, as these initiatives did not account for the specific needs of ACB people, nor their lack of trust in the medical system.

> …we have a policy of if you are not fully vaccinated you would lose your job…99.9% of people who were off, are people from the ACB community. That is the impact of racism...the communication strategy is one size fits all…but these people need more information… (IDI-SP-005)

Despite conversations being challenging, part of addressing racism and inequities is recognizing and acknowledging they exist, and then working to gain further understanding, asking people what matters to them, being culturally humble, and taking the responsibility to understand power differentials. Clients should also be made aware of any services available within organizations, such as patient advocacy, to raise awareness and instigate change, while service providers should engage in introspection to determine their roles in perpetuating racism and inequities. IDI-SP-001 stated, "But to be honest, navigating racism, whether it's in a Black space or not, is difficult because it didn't feature in my influence in the communication strategies, but it was something that came up whenever we discussed vaccines." In addition, IDI-SP-008 stated, "Very difficult… it's doable, it's just like when all frontline persons is culturally

humble and ready to serve everybody… if there is no bias from the person treating you, always listening to you, then there is no problem"

During COVID-19 there was also an increased recognition that racism and inequities needed to be addressed within some service providers' workplaces. Some organizations were described by the participants as already having measures and policies in place, while others were in the process of amending them during the time of these interviews. It was difficult to understand how an organization could effectively serve communities' needs when they did not have their own antiracism policies. IDI-SP-004 stated, "…they didn't have an antiracism policy …like how are you going to make sure that [there is] equitable health for people?".

Some organizations that did have policies, training materials, programs, and events about racism, did not have them specifically geared towards ACB communities. This was problematic, as it perpetuated misconceptions and did not acknowledge ACB people's unique history. "Because an ACB community… the history stemmed from colonization and slavery… that is just sort of making the ACB community continue to be invisible" (IDI-SP-005). In addition, it was difficult for ACB service providers to advocate from within the organization; as sometimes non-ACB people did not recognize how deeply rooted anti-Black racism is in Canada, because it is not their lived reality. For example, it was often challenging for service providers to convince decision makers that patience was required to see progress, and that approaches needed to include strategies for building trust, such as being present within the communities.

> …we think an approach of like neighbourhood hub would work better but at first there's… not a lot of people from the ACB community who are going but we still have to maintain it because it takes presence, it takes time [for] trust building…it's a lot of like having to explain why we have to do things differently to people that don't necessarily face the same barriers or understand how deeply rooted anti-Black racism is in this country…they don't see, they don't live it so it's not a reality for them. Sometimes they are willing to listen and to hear and to adapt. Sometimes… it took a lot …and it's hard as a person that is part of that group to advocate for them to have the same rights. (IDI-SP-004)

Change should include diversity in leadership, improving understanding and gaining insight for successful change, including policy changes and facilitating advocacy for initiatives that address the needs of ACB people.

> I think that racism has really… influenced our communication strategy…there's no representation on the table. So when we talk about COVID-19 and vaccination in the ACB community, the message that is passed on to the people, especially focusing on my workplace, the decision makers doesn't reflect the people who are supposed to receive this message. So, that is obviously the impact of racism. (IDI-SP-005)

Furthermore, ACB staff should also have increased opportunities to have empathetic discussions within the workplace about racism and inequities that have been perpetuated by co-workers or clients, both within the context of COVID-19 and beyond, to raise awareness and encourage change. Racism was described by participants as taking many forms, such as microaggressions, being overt or covert, and mislabeling people.

> …where staff of the organization can share experiences of microaggressions, share…what they see is racism or overt racism they experience with clients sometimes… share without any fear or reprisal or repercussion or issue with your employment, but then it gives leadership something to work with, like what… might need to change. (IDI-SP-007)

The pandemic provided the incentive for some organizations to look internally regarding equity and diversity, as having more ACB people in positions of leadership may require those in positions of authority to relinquish power; this could help to better serve the needs of ACB clients and help to reduce racism and inequities in the workplace as staff reflect the communities being served. It was also believed that had the workforce matched the demographics of the communities being served sooner, current efforts would have been more effective. IDI-SP-007 stated, "systematically trying to find ways… to let go of power, shift resources, and hold space to really listen and hear about the experiences of what was happening." In addition, IDI-SP-022 stated, "…we need to have a workforce that reflects our community…matching the demographic

of our society, [had we started earlier] we would have been better off." Indeed, it was found that such racially concordant service providers facilitated conversations with clients and brought a deeper understanding of the experiences that could influence vaccination decisions including barriers and conflicts they were facing, help to guide their decisions, counter misinformation, provide the support they needed, and bring a deeper understanding of the experiences that could influence vaccination decisions. For example, one participant described how a patient was comfortable disclosing their medical concerns related to blood pressure medication to a racially concordant service provider when they had not disclosed them to others.

> …he was concerned that he wasn't getting the right medication for his race. But he felt comfortable enough opening up to me to tell me that… having that reassurance that oh yes, this is indeed the right medication you're supposed to be taking… (IDI-SP-003)

Hiring ACB community members, such as service providers, ambassadors, resident/community leaders, internationally trained service providers, and trusted community leaders, were also found to bridge services to communities, build trust, and empower ACB community members to be part of the vaccination process. Indeed, ACB community members, were found to be more relatable, which increased comfort when engaging in conversations within the community and helped to combat mistrust. They were also able to provide insight into the reasons why people had not gotten vaccinated, which was fundamental to providing appropriate vaccination communication.

> …having staff and colleagues and employees that are part of these communities I think was a game changer...engaging the community, understanding certain language, certain cultural nuances, social determinants of health…because somebody doesn't want to take a vaccine doesn't mean that they are less educated or that they don't understand. It's that there's a lot more to it… the health system is a racist institution… people have had their share fair of experiences that is also guiding these decisions. (IDI-SP-004)

However, there have also been health career pathway barriers encountered by ACB people, which has limited their availability in practice.

> The desire was always there but it's challenging to find nurses and other Public Health workers who, because of the structured racism in our society, you don't get as many people of color and people from the ACB community going into Nursing…going into Medicine. (IDI-SP-022)

Consistent with the literature (Chapter 2), transparency in vaccination communication was also found to be important amongst participants to build trust and decrease inequities. It was believed that speaking the same language improved the transparency of the information by helping to prevent misunderstandings and facilitate conversations, Attempts were made to co-locate service providers and community ambassadors into communities where they spoke the same languages and understood community members' lived experiences, which helped to create a basis for trust, so that people were more receptive to the information. In addition, participants believed that hiring international service providers, to work at the vaccination sites, not only helped bridge services to communities, but also helped those who were new to Canada gain work experience,

> …by creating that opportunity and allowing them to volunteer… medical professionals utilizing their skills, their knowledge… like medical interpretation… pharmacists were there to answer questions in people's languages… the fact that you're going in and you see somebody from your own community and you can relate to that country, that culture, whatever it is, people all of the sudden are like, 'oh, they're getting vaccinated maybe I could at least have that conversation… (IDI-SP-012)

However, there were barriers to initiatives related to hiring ACB community members, including funding, time, and resource constraints, for example, funding dictated how many community ambassadors an organization could hire. In addition, hiring ACB staff for vaccination clinics was a time-intensive process due to bureaucracy and decreased availability.

It was also important to highlight the inequities within the most affected communities through the collection of race-based data to help raise awareness and to support positive change.

"…what a community has been saying for years, once you have those data, there's no denying it." (IDI-SP-022). However, once data became available, participants raised concerns around the potential harm caused by how the information was delivered to the public. For example, announcements pertaining to where outbreaks occurred created barriers for ACB people, as it perpetuated misconceptions and biases that ACB people were spreading the virus; this was believed to have heightened ACB people's mistrust.

> …they were saying how a lot of Black people were the ones with COVID-19 infection and so that seemed to make people a whole lot more hesitant because then, if you're telling me that as a Black man, I'm the cause of COVID, then... anything else that you tell me is not going to go down well… (IDI -SP-003)

It was necessary for service providers to work to build trust and empower ACB people to improve their openness to vaccination communication. By building connections and talking to community members about the intersecting barriers they have faced, and working in partnerships with other organizations, resources were brought together to find practical solutions for the community.

> …partners were really creative trying to figure out…what are your barriers… supporting childcare, transportation, like what can we do? Can we come to you? In some cases we were bringing the vaccine to people… partners were really trying to be flexible to meet the needs of people and each person was different. (IDI-SP-009)

In addition, including ACB community members in health initiatives highlighted the healthcare system's support of ACB community's empowerment, by encouraging them to make changes for themselves. "We are seeing a lot more ACB focused health initiatives… [it] is bringing people awareness that we acknowledge that the healthcare system's assistance and we are ready to make that change ourselves" (IDI-SP-001).

5.2.1.2 Subtheme: Community Outreach

Community outreach involved service providers going out into communities to build rapport, address needs, and increase ACB engagement in vaccination communications; thus, working to mitigate mistrust and increase empowerment. For a summary of initiatives, barriers, and proposed ideas in relation to this subtheme refer to Appendix K, Table 4.

Community outreach included creating opportunities for ACB people to engage with vaccination related promotions by providing opportunities to ask questions about vaccinations, have their voices heard, and build community connections. Participants believed that working to build trust and establish rapport within ACB communities required sincerity and perseverance. For example, providing vaccination messaging required going door to door with multiple visits. It was also helpful to include a nurse who spoke different languages (e.g., Somali, Arabic), to help reduce communication barriers.

> We started those messaging at the onset of COVID-19 in November 2020…we saw that… to get any traction is actually going to doors…throughout the last two years… we probably knocked on every single door at least 5-7 times…we were going out every two months, because things were changing so rapidly. (IDI-SP-006)

Providing opportunities for open dialogue also helped to identify community needs and resources to guide appropriate support. Town halls and question and answer sessions provided opportunities for community engagement by offering platforms for bi-directional dialogues pertaining to COVID-19 and vaccine related impacts, concerns, and challenges. Many were held in community members' preferred languages, with ACB service providers helping to ensure a culturally sensitive tone. Their trusted presence fostered openness to receiving the information and encouraged change through empowerment. Some town halls also generated reports that were shared with others.

> …we had many people from the ACB community participate in those conversations… having them in those specific languages…for the most impacted community was really important. We heard people say 'thank you so much for creating this space for us to talk and to vent and for us to be heard. It's really helpful, we want more of this.' (IDI-SP-009)

"…of course, hearing that from someone of the same race as you, tends to make you want to listen more. Because this is someone who you have that background level of trust" (IDI-SP-003).

Other initiatives also provided opportunities for ACB community voices to be heard and influence community conversations, including the incorporation of ambassadors and leaders in meetings, co-generating reports, sharing feedback, and encouraging participation in research. This information was also shared beyond local neighbourhoods to help other similar communities outside of the Ottawa area.

> …looking where there are places for people to have a voice and influence those community conversations, sharing those and then they got shared with…Toronto as well…we can now say, we've done this work together, how do people want to be involved and build on this and be involved in decision making? (IDI-SP-009)

Community outreach also included increasing community presence. However, participants highlighted that it often took time for these efforts to be recognized. IDI-SP-002 stated, "We also tend to meet them where they gather… to make our approach more cultural, and even to bring the vaccine… the way they prefer, where they spend most their time" IDI-SP-002. In addition, IDI-SP-006 stated, "…once you're set up in those communities, consistently people know you're there, that changes... it took four months for our vaccine numbers to go up. So, it's just being there, being present." By building these connections through community presence, service providers could learn about community members' needs, identify trusted leaders, build relationships, and connect with established community programs. Through these connections participants described being invited to community events where they built further rapport and

disseminated information. Presence at community events also provided an opportunity to have lighthearted discussions about topics other than vaccinations, which helped service providers to be recognized in the community and increased the likelihood of community members reaching out to them in the future. This also helped service providers find out more about community members' preferred methods for receiving information as well as how and where to disseminate it.

> …once you're set up in those communities, consistently people know you're there, that changes. It's not the first week or the second week…it took four months for our vaccine numbers to go up. So, it's just being there, being present. IDI-SP-006

It was also found that to gain further community access, trusted community gatekeepers and Black leaders within ACB communities, needed to be identified and leveraged. This could also help promote role models within the community to help increase community empowerment. "…in any intervention in the Black community…before we even think of the service we are going to provide, who are …[the] gatekeepers. Who are the people who can access these people?" (IDI-SP-021). In addition, it was believed that ACB service providers could also provide insight into creating effective outreach initiatives.

> …ask instead of just going into community and assuming that something like an initiative is just going to take off…essentially reach out to ACB service providers as like consultants in that sense... to support them in rolling out initiatives that are ACB specific. (IDI-SP-013)

Community ambassadors were also found to be beneficial in community outreach, since they could help to bridge community members with services and had a deeper understanding of how to meaningfully relay information to their communities.

> …ambassador leaders speaking different languages, living in different communities…they would join us in outreaches. They would already be connected to certain WhatsApp groups, certain Facebook groups, so they would share whatever trickle down the information and because they had undergone a training, they knew how to really respond to certain questions, how to make sure folks have access to up to date [information], because it changed so fast, especially when they started with the vaccine…it was really making sure

> that the disproportionate impacted individuals had access as fast as possible to this information as well. (IDI-SP-004)

Participants described the importance of working to build and strengthen partnerships with other ACB community focused organizations to establish networks that could empower communities and better serve their needs, including supporting partner organizations, Black-led organizations, grassroot organizations, internationally trained healthcare providers, ambassadors, community champions, and community-based clinics, such as by sharing funding and resources. Partnerships and collaborations also provided a means for service providers to advocate for ACB communities in joint discussions.

> …we…were really trying to map out which partners were working specifically with the ACB communities and then trying as much as possible to engage with them…to be part of whatever programming they had and also making sure that our information is shared within them. Some responded. Some didn't. (IDI-SP-004)

New partnerships were also sought to help bring about change to improve the access to vaccination related resources for the most affected groups, such as ACB communities, including working more with schools, settlement organizations, and faith-based centers. Creating new partnerships was believed by participants to not only help to expand resources, but also to expand clientele and networks to address problems more quickly; partnerships were especially important for service providers who worked in a specific field or had other parameters that could limit resources.

> In terms of like changes…we would just need to build more partnerships with different agencies to …widen our scope a lot more… it's very easy to work with the same ACB service providers but there's many other… we're not working with, that we could be and that also helps reach their sort of community base and their clientele… (IDI-SP-013)

There were also barriers to effective community outreach, including limited funding, too much focus on individual programs, and not enough effort on building relationships and establishing networks to increase community ease of access and awareness to services. One participant

described how their organization received funding for one program at a time, so the programs could not be brought together to ensure the consistency and continuity of services or to prevent redundancies between programs.

> …have funding assigned to certain projects and that's what your focus is on. Your focus is not on developing relationships and communication and building bridges with communities… you're not pulling it all together and developing a communication strategy for the whole community or connecting with all these partners and continuing that communication center-wide…You're doing it piecemeal… bringing and coalescing that together… has been missed over the years… (IDI-SP-006)

Furthermore, it was felt that after decades worth of experience in the community, the necessary partnerships and effective actions should have already been known, but instead it felt like everything needed to be started anew. Service providers needed to work hard to establish and re-establish connections within the community that were continuously broken after an emergency; this led to a lack of trust because communities would still be left with the same problems they had before the emergency.

> …some association where like we can't deal with you again because every time you have a need, we have to kind of pick up or we have to come along and follow you and support you but then as soon as that emergency stops for you, we're left behind but we continue to have the same problems that we had prior to COVID and the reason why they were so impacted… by COVID. (IDI-SP-004)

Many service providers did not know how to effectively engage with ACB communities, despite the desire to do so, particularly within communities where no previous relationships existed. It was believed that more structure was needed regarding how service providers should engage with ACB communities and how it could be made more sustainable; work was being done to make improvements, such as creating guidelines. IDI-SP-018 stated, "…this ability to actually reach the marginalized…most people have no idea how to make contact…" Moreover, participants described that the perceived lack of community engagement from the city's leadership, such as the mayor, contributed to the lack of trust within ACB communities. For

example, it was believed that given the value of leadership in ACB communities, that the mayor not personally engaging with them was considered an affront; the engagement of the mayor would have shown support for communities, highlighted their importance, increased understanding of their needs, and provided an opportunity to discuss future plans.

Participants also believed that it would have been beneficial for the city to put together a list of people in Ottawa with resources for the ACB communities, which could have facilitated community outreach by bridging services with community needs. Service providers who did not directly work with ACB communities also could have benefited from a list of community resources both to provide to their clients and to become more involved with; this type of continuity of resources and accessibility could have helped build confidence an improve vaccine uptake.

> I would be glad…for the City to put together, you know, a glossary or a list of persons…maybe … research or…some funding around identifying persons in the ACB community that can help us provide service to this demographic because it helps not [only] for the vaccination, but it helps on many other fronts…because their services are not bridged, so someone easily thinks [communities] are not catered for. It's not the case… the services are there. The resources are there, but we don't know how to reach you… (IDI-SP-021)

> If I was able to know exactly what is available in the community, that could help…I know some and I know that anything that goes through the LHIN or the community services for example… But there are many other groups right and many of those groups, I don't even know that exist and there's many of them that do important things… I wonder if having more presence for what the groups will do it, will encourage me to follow with them more closer. Maybe even get more involved with them as well. (IDI-SP-011)

However, since resources were not bridged, ACB people often felt that the funds and services were not available to them. For example, distribution of resources, such as masks, was found to be overly complex and not as accessible for members of the community when they were delivered to one organization rather than to places where they were needed. In addition, hospitals

should have had initiatives focused towards ACB communities, this could have helped to strengthen and bridge community services and potentially helped to reduce costs by highlighting the preventative benefits of vaccinations.

> …there is no point for government to spend so much money on getting vaccine available and people not taking [it]. And if [hospitals] do a lot to improve uptake, it helps the government in a lot of ways…preventative interventions are better than curative interventions…it's better for all of us…hospitals are not really involved... there's nothing… to improve uptake. (IDI-SP-008)

Through a more holistic system, people could get the services they needed, so that it was not the responsibility of just one or a few agencies; during the height of COVID-19 people were not getting the services they needed, even when parents and children could die.

> Systems in place where we have the entire family, holistically taken care of…The holistic system where everybody sat at the table and actually did their job. And not just fell on one agency… these are not one-offs, these cases came up like during COVID, in the height of COVID… I was on a call with a CAS multiple times…We're talking about children and parents who might die. (IDI-SP-006)

In addition, the City should have established an emergency response program, if this had been previously done with better connections between communities, the COVID-19 vaccination response would have been easier. Because this program was not available, it took a while to create connections, determine who was most impacted, and adapt strategies to meet their needs.

> …if the city, if programs had kind of emergency response, if they had better connections to different communities, and build these over time, it would have made a lot of things easier than to have to start from [scratch]… knowing that the folks that were disproportionately impacted were marginalized community or racialized communities and to then not adapting your strategies to meet them… like a team that supported that, that's what I had wished. (IDI-SP-004)

5.2.1.3 Subtheme: Vaccination Equity.

Vaccination equity helped to counter mistrust within ACB communities and promote empowerment through improving access to vaccines. Participants highlighted several barriers to

vaccine equity that occurred during the roll-out (refer to Appendix K, Table 5). In Ontario, the initial vaccine rollout involved priority groups such as those in long-term care, large flowthrough vaccination clinics, and a booking system for vaccination appointments (vaccine rollout was described in Chapter 2).

As vaccine rollout was fully managed by Public Health, in Ontario, participants believed that it seemed to be overwhelmed by high demands straining the electronic booking system causing long wait times; this could have been a deterrent for those who were hesitant to get vaccinated. Furthermore, last minute calls about vaccine availability were difficult to access due to barriers related to work and family obligations.

> …there was some issue with the system that would prevent you from booking any vaccines…. it took me about two weeks to book the vaccine and the time available was like three months later still… I think that plays an important role when it's not easy to access… a service. When you are not convinced that you want to do it…when you're just going through a lot of frustration… (IDI-SP-011)

To help mitigate these barriers and improve vaccine equity, it was suggested that delegating rollout responsibilities to other agencies could have improved service consistency and manageability. It was also suggested that more flexibility in the vaccination booking system, such as accommodating schedules, could have mitigated frustrations and facilitated eligible people getting their vaccinations. In addition, it was important for employers to be educated about the need to give staff time off to get vaccinated. IDI-SP-009 stated, "I think it was helpful with Public Health and the education they were doing…hopefully employers were educating themselves and then giving permission for people to take time off work"

Initial large central vaccination sites were believed to have posed barriers due to their location and size. The location could cause barriers such as time, travel costs and being in an unfamiliar location. The size raised concerns about impersonal care due to the volume of clients

and inability to answer personal questions because of time constraints and not having individuals' medical histories. For example, a person with Sickle Cell anemia, which is more prevalent in ACB communities, may have concerns that their specific needs would not be addressed or a person with HIV may be concerned that they would be stigmatized. Decision makers should be aware of the fears and concerns of ACB clients to support vaccine equity.

> …the City always says we have provided this service and this service… But no one is really thinking about some of those inbuilt fears that may prevent, inhibit someone from actually accessing those services. So that the funding is there, the program is there, and yet we don't have access to the people. And so there a lot of those inbuilt fears about the ACB community going out to many of the clinics that were made available. (IDI-SP-021)

Some of the practical barriers that impeded vaccine uptake by communities included lack of time, money, transportation, and family responsibilities. Furthermore, it was believed that the government's focus on the daily rate of vaccinations over the unique needs of communities made it difficult for organizations which focused on health and equity to successfully implement the government's vaccination plans. IDI-SP-020 stated, "if I didn't have a car and I'm home with four kids and finance [concerns]… I have bigger fish to fry than trying to get out and get my vaccine." In addition, IDI-SP-006 stated:

> …you're opening clinics from 8:00 to 5:00. My clients work midnight to 8:00…, they need to sleep…Then they have children and childcare and the need transportation…So, all these barriers that we illicit and create…the [amount] of advocacy I've done in my community, like you're having a clinic on a Saturday from 8:00 in the morning until noon… My communities do not get up before noon… like the mainstream people…They don't understand the community.

Once vaccination availability and prioritization shifted from large vaccination sites, efforts were made to reduce barriers by creating in-community vaccination sites where people worked, lived, and worshiped. Offering vaccinations in familiar places, such as in a person's church, also helped to address fears and build trust. Participants also described working to help reduce

barriers by finding suitable vaccinations sites for their clients or bringing the vaccine to people's home.

> I think the biggest challenge with the vaccine uptake was the fear… One of the strategies that I thought was very helpful was having a clinic at the church…it would take away the fear because people have trust, the ACB community has a trust for church…a clinic at the church… the trust is built. (IDI-SP-021)

> …if someone will say, you know, "I want to get vaccinated but I'm working fulltime, like how can I make that happen?" … well let's work with you on that because maybe we could help you to find a time and a location where you can go. (IDI-SP-009)

> …we did outreach in the buildings, and we went back and we had physicians with us, it was very resource intensive. But absolutely like worth it… knocked on their door, if they wanted a vaccine the physician was there, we'd talk about the vaccinations, we also had translation services or we had staff around who were part of the building and knew what the predominant languages were, we vaccinated clients, somebody stayed 15 minutes, monitored, and we moved on through the apartment buildings. So we brought the vaccine to their place. (IDI-SP-006)

Accessibility was also improved by having vaccination clinics held with community events, and by walk-in clinics accepting any form of identification, which occurred following discussions with Public Health and local clinics explaining that not everyone had a health card.

> …we had a lot of community members come in for the Christmas event…then they were also able to bring their kids to the vaccines, …the strategic planning is if you have a lot of kids come in and then they see that there's doctors and they're able to do shots… that day… they had a lot of people come in. (IDI-SP-019)

> …we need to make this as open and as flexible as we can for folks to meet them where they're at and meet their needs and they understood that…a lot of folks really appreciated that… when we're talking about reaching the ACB community, it's…recognizing not everyone has a health card, not everyone has… the IDs that they may need in a more traditional circumstance when accessing health services and that's a big barrier. (IDI-SP-013)

In addition, it was proposed that accessibility to vaccination hubs could have been further improved by extending service hours, which could have been facilitated by hiring more

internationally trained service providers to accommodate the increased hours. However, it was also recognized that hours of operation were impacted by available funding. IDI-SP-001 stated, "I believe if it was open for more hours and more consistently it would have more results…it increases accessibility to them. Like there would be more people coming because we have missed a few just because of our times"

Creating a comfortable ACB dedicated clinic also helped to build trust, strengthened vaccination communication, and encouraged vaccine uptake within the communities, as seeing ACB people at a clinic encouraged more ACB people to come. Furthermore, it helped provide familiarity, comfort, and a relaxed atmosphere. IDI-SP-001 stated, "Just people being in this space, they would automatically feel lighthearted…but it influenced my communication in a way that I feel like I really got to connect with the clients…" In addition, IDI-SP-014 stated:

> …whichever one it is that provides services to the ACB population, that's the kind of place where I want to go and do my vaccine because I've been there before, I have a connection there, I understand that they know a little bit more about me as an individual…

Moreover, having service providers at vaccine clinics who were sensitive and knowledgeable about ACB peoples' concerns were also beneficial in building trust and improving vaccine uptake.

> Sometimes there's a situation where a nurse comes… The person is a little like still not as comfortable with the setting, with receiving a vaccine. They're not sure what's in it so they wanted to see the staff and they're not believing that you're giving me the same one as everybody else… I want to see, why did you turn around? How do I know what you're giving me? And the person gets up and walks away. It's us intervening and talking to the person, how to de-escalating the situation. (IDI-SP-004)

For example, one site was described as having Afrocentric colors, flags, and music as well as images of people who played great roles in the Black community; this was believed to have been inspirational for some clients. The space also provided a place for people to ask questions, share their feelings, and build confidence in getting vaccinated. It was also proposed that there be more

dedicated, welcoming, and hospitable vaccination spaces for different groups, such as newcomers, since a dedicated clinic would be in a better position to use a cultural lens and to understand that people see the healthcare system differently depending on where they were from and how they were raised. Moreover, dedicated sites could help to establish trust and increase comfort levels about asking questions, without feeling their questions might be dismissed, such as those related to the use of traditional medicine.

> …our target was really people who experience racism in the healthcare system, and so needed safe places to go because they already knew they wanted it…they wanted to be able to go to places and ask questions where they weren't also questioned themselves about other things. Like…why are you asking that…make it feel safe to ask the questions that they need to ask in order to feel confident in getting the vaccine. So we had to create safe spaces… (IDI-SP-007)

> …having a place that…has a better understanding, will allow people to feel more comfortable to ask questions. Let's say… if I take some traditional medicine every day because it helps protect me from whatever this illness is,... It might be laughed at…I think having a place [where] they'll understand where you're coming from and it puts you at ease, it allows you to have the conversations that you need to have. (IDI-SP-014)

However, not everyone understood the motivations behind having ACB community clinics, some ACB people were suspicious, and some service providers did not understand the need for additional efforts to engage ACB people in vaccinations. IDI-SP-001 stated, *"…*some clients that didn't understand why there is a hub that is based for the ACB community. And they would ask if white people could get their vaccines and already there's a conspiracy there*."* In addition, IDI-SP-004 stated,

> …once again it's that fight of why… there's a different preferential treatment…or comments in regards to the safety of a certain neighbourhood clinic or like hours should be different, shorter because we are in this place and but it's the same place and it's the same hours as other clinics…

5.2.2 Main Theme 2: Active Listening and Education

This second theme pertains to listening to clients' needs to provide appropriate information so that they can make an educated decision about getting vaccinated. Three subthemes were developed: 1) Vaccination conversations and relaying information; 2) Misinformation and misbeliefs; and 3) Targeted and tailored messaging.

5.2.2.1 Subtheme: Vaccination Conversations and Relaying information.

The effectiveness of vaccination conversations and relaying information involved service providers engaging in conversations with their clients and providing them with appropriate information to help them make informed vaccination decisions. For a summary of initiatives, barriers, and proposed ideas in relation to this subtheme refer to Appendix K, Table 6.

COVID-19 brought new communication challenges for service providers, such as the shift to online or telephone appointments, in which it could be difficult to consider the cultural context of the client. Participants highlighted that this shift was difficult for those who preferred seeing their clients in-person, as well as for clients who could no longer drop in at the office for services.

> …a lot of times those people wouldn't come back. So in the cultural context, drop ins are important. Really important for some people. More than others. Phoning in and leaving a voice mail doesn't work for them…So, it's designing things in a whole different way… (IDI-SP-018)

Participants believed it was challenging to approach the subject of vaccinations with their clients, although they described several strategies, they found useful for initiating conversations, including using open-ended questions, asking probing questions, and initiating a conversation on a related topic that could potentially provide an opportunity to discuss vaccinations and to assess the client's readiness to learn.

> Following where their lead is but also trying to add information there to help inspire or motivate people to be thinking about, perhaps thinking about it differently…, if I hear you say you're really worried about your family, you want them to be healthy and safe and you're worried about them getting COVID, you know, vaccines have proven to be effective and they've been tested…really make sure they have the information they need so they can have those kinds of conversations. (IDI-SP-009)

In addition, one participant described how the prompts on the electronic medical records were useful to initiating vaccine related questions during appointments; since they were within a series of health-related questions it helped to normalize the conversation. It was believed to have come across as more acceptable, rather than the client potentially feeling like they were being preached at or tricked into getting vaccinated. Giving choices with specific options was also found to be beneficial to stimulating vaccination conversations, such as providing options to discuss the vaccine in the current or a subsequent appointment.

> I tend to make it more of their decision… I do not leave it completely open. So I say, "Would you like to discuss this now, or would you like me to book another appointment to discuss this?" Because that way it gives them the choice to either discuss it now or not, but then it doesn't mean you're not going to discuss it ever… Giving them that choice but not making the options open, does help to stimulate those conversations. (IDI-SP-003)

Other beneficial strategies to engage clients in vaccination conversations included requesting to have a follow-up discussion with people in the community after initial contact, encouraging clients to reflect on the impact of vaccinations within their own life, tailoring communication to the client's vaccination concerns, guiding them through reflections with consideration to the rationale behind their thoughts, and motivating thinking to make an informed decision by providing information.

> Following where their lead is but also trying to add information there to help inspire or motivate people to be thinking about, perhaps thinking about it differently…, if I hear you say you're really worried about your family, you want them to be healthy and safe and you're worried about them getting COVID, you know, vaccines have proven to be effective and they've been tested and so, people really, with the resident leaders, we really

> make sure they have the information they need so they can have those kinds of conversations. (IDI-SP-009)

Although participants often used the same approaches to initiate a vaccination conversation with those who were opposed to the COVID-19 vaccine during community outreach, it was also recognized that a follow-up conversation was unlikely to occur and that it was important to listen to why the person did not want the vaccine. However, it was also important to be empathetic and to understand that often feelings of distrust within ACB communities are rooted in traumas. IDI-SP-004 stated, "…just knowing when to stop. Knowing when to not engage is important… it's not always the best time or the best way, it's kind of gauging"

Furthermore, many participants did not feel qualified to address people who were opposed to vaccinations, while some participants believed that their efforts were useless because those who were opposed were unyielding in their opinion. This could create a breakdown in communication between service providers and those opposed to vaccinations. One participant suggested having dedicated staff to discuss vaccines to appropriately address any client concerns and provide them with educational material, such as in a hospital setting, whereby different departments could call for their support to meet their clients' needs. Participants also believed that there was a need for trained, skilled, and experienced service providers to work with those who were opposed to vaccines.

> The ones who said I'm not getting vaccinated, will not get vaccinated, no matter what. Many of them actually were very blunt. I'd rather die than get vaccinated. And sadly many of them did… Many of them died but did not change their point of view of the vaccine. Even the family, relatives of patients who were unvaccinated that died… they still did not want to get vaccinated. (IDI-SP-011)

> So staff, we can have a department like that, that we can say, well I have somebody that's really hesitant or showing very little knowledge about vaccine. Can somebody come and speak with them? These people can even be in the community, we just call for their service to come and talk ... because it should be part of prevention strategies… (IDI-SP-008)

"You have to have skilled people who can work with resistant people, people in denial, people who are reactive because these are heavy, heavy topics…. So you need training for the staff." (IDI-SP-018)

However, it was found to be beneficial to reframe clients' perceptions of vaccinations by acknowledging the pains associated with racism while encouraging them to think about the vaccine's risk/ benefits to them and their family.

> …it's a different topic than COVID. … what you have gone through… I agree. But I tell them… if you continue to live in the past… you are not going anywhere. Actually holding yourself into those feelings is destroying you and your family by stopping you from benefitting the vaccine which has been proven… (IDI-SP-002)

> There are people who are opposed to the vaccine, I can't change their mind, but I would let them know these are the statistics and this is why I think it's safe to get the vaccine, and that would be for the protection of themselves and the community at large. And kind of just also help them reflect on the dangers of not getting the vaccine compared to just not getting it because you're opposed to it. (IDI-SP-001)

Moreover, it was also believed that categorizing people's views as being for or against vaccines could be an impediment to conversations, since some people's vaccination related views were deeply impacted by their lived experiences; labelling people as antivaxxers could contribute to polarizing those who had legitimate concerns.

> So there are people who may want to have the vaccines, but they are concerned about maybe if I get this vaccine will I be able to do things that I could previously? And those are legitimate concerns…so, seeing them… as anti-vaxxers, I think really doesn't do them any justice. And it tends to polarize them more towards not getting the vaccine. (IDI-SP-003)

Since vaccine uptake was influenced by previous experiences, not having specific communication strategies for ACB people may have been a barrier to effective vaccination communication. Furthermore, one participant described how they could not discuss vaccinations with their clients if culture or religion was a factor, as they believed it could be considered interfering. The participant further described that another vaccination communication barrier

within ACB communities was that in their experience the husband made the vaccination decisions for the wife, so the wife would not be interested in discussing the vaccine.

> So that was a resistance also to take the vaccine because of the cultural issues as well. Sometimes you can't advise them, it's just kind of because it's client-centered approach, I can't tell her you need to go, it's just like telling her the options and how we can help them to go and take the vaccine. But if you feel it's cultural issue or something, religious issue, you can't interfere and many of them like this, it's just cultural, they don't want to go, or sometimes they are scared… (IDI-SP-015)

In addition, potential barriers to vaccination conversations within the workplace included leaving it up to the individual service provider to decide if they would discuss the COVID-19 vaccine with their clients and not following up on provided information, which would present an opportunity for the client to ask questions and gauge their understanding. However, one client described how important it was to consider the power imbalance between clients and service providers prior to engaging in conversations with them.

> But I don't follow over the phone if they do not call me because it's disrupting…I know they are marginalized, they are under financial assistance sometimes, they feel that they are not happy… they look to us like a power… But this is how they see us, so I don't call many times. Just if they need something… (IDI-SP-015)

Care should be taken to ensure that clients receive the information they need to make informed vaccination decisions, in an appropriate and respectful manner, including not yielding power over them. "…when they see that you are…trying to… be equal. You are not using any power. These things have been helpful" (IDI-SP-002). Rather service providers highlighted that it was important for them to work towards understanding their clients' perspectives and how their lived experiences may have impacted their vaccination decisions, so that the best ways to meet their needs could be found. Vaccination conversations and relaying information also included understanding clients' distrust in the healthcare system, which involved understanding their sources of stress, what the clients' expectations were, and how the service provider could

help fulfill those expectations. In addition, it was believed that service providers needed to understand that clients required time to make these decisions at their own pace, with guidance and support during this time from service providers. "…we are seeing it from our side, where it requires information from the vaccination, but the other side is very complex, and it's quite heterogenous. It might not work the same way for everyone" (IDI-SP-011).

"They may be hesitant because of things in their past, depending on what country they came from, depending on historical context. There's a lot of things that goes into making these types of decisions" (IDI-SP-014).

> "the barriers have been how strong, how deep the experience of the person is. So some persons who have got really strong feelings, experience, it will be very hard to get them changed and we know change takes time so, usually I will give them time to say maybe one day they will see the benefits of the vaccine and [make] their own decision (IDI-SP-002)

It was important to provide information and educate communities to help support informed decisions, fight misinformation, and raise awareness about vaccine and COVID-19 related inequities; however, too little and too much information both made it difficult for clients to make informed vaccination decisions. For example, one participant received feedback that providing new and changing information to clients as soon as it became available led to some people becoming confused. In addition, there were also barriers to providing clients with relevant resources and sources of trusted information; for example, some participants stated that they did not know where to find available information to provide to their clients, while another participant stated that referring clients to Public Health websites were not well received because the sites were not engaging, had too much information, and posed technology barriers for some clients. In general, technology-based information could be difficult to access, since some clients did not have a phone, computer, or Internet.

> I'm hesitant sometimes to say 'oh, check on the website.' …we've got a population, an elderly population…a lot of them aren't tech savvy. We have a population very marginalized …I just had one fellow he doesn't have a phone. Doesn't have a landline. Doesn't have a cell phone. (IDI-SP-020)

To mitigates some of the barriers to accessing vaccination information, it was beneficial to disseminate information through innovative ways, including through wellness hubs, reaching out to landlords and tenants, and using social media. In addition, the information provided needed to address clients' concerns, including those pertaining to changing and inconsistent information and questions related to the efficacy of the vaccine. "They lose confidence in the system because there were a lot of changes in information that they didn't think that we had all the information that we needed" (IDI-SP-005). Furthermore, transparency was important in helping to mitigate conflicts and build trust, which included stating what was known and unknown to help clients understand that recommendations may change, such as how many booster doses were needed.

> …letting them know, this is what we know at this time. That helps them to contextualize it…So based on the evidence we have now, things have changed and there's no guarantee that it will end at the third dose. But all we know now is that three doses are better than two… (IDI-SP-003)

Clients also needed to know that their vaccination concerns were heard; addressing their concerns not only helped to build rapport and trust but also helped to improve their health literacy. Furthermore, participants highlighted that it was never about a one-time conversation, rather reviewing information with the client was done multiple times.

> I think was important to us, and we learned this as we were going through, is that it was never a one-time conversation. So, somebody that had concerns or somebody that had uncertainty or somebody that was unopinionated at this point in time we sometimes had to have 2, 3 or 4 conversations. (IDI-SP-007)

It was also helpful to talk about how personal vaccination decisions were made and to reassure clients that it is normal to have questions and that questions are important to the process of making informed decisions. Moreover, talking to clients casually, even if it was not directly

related to vaccines, helped to build rapport, provided information, and empowered clients to make informed decisions.

> …you try to go through slowly so that you are not forcing that upon a person because then they stop talking, they're a little more recluse and maybe share a bit of what your hesitancy was, how you thought about it, how you made the decision for yourself. But also just telling the person like it's normal to have questions. Every day we make choices and I think it's important that it's informed. So that was our provision. (IDI-SP-004)

Encouraging and guiding clients through self-reflection also helped the client to make an informed decision by weighing the pros/cons of getting vaccinated in relation to their own life. For example, one participant, reflected on the impacts of not getting vaccinated with a client with a chronic illness (diabetes).

> …informed decision, yeah because people don't want to be forced…, I just tell my patients that they, we should look at ... getting vaccinated and not getting vaccinated, what are the loss, if you get vaccinated and you are a little bit sick, even when you get infection, or you don't get vaccination and the possibility of dying…I still push it to them to go and reflect on it. Like a mother that doesn't want to get vaccinated, a Black woman and then she has two kids and she's a single mom. …she also has Diabetes … In your own time, try to see that, just reflect on it. How will it affect me and my children or my family… (IDI-SP-008)

Listening and acting on people's concerns were also important to improving vaccine uptake. For example, when it was recognized that some people had a preference to a specific vaccine manufacturer, despite all available vaccines having received government approval, a choice of vaccine was eventually given to clients. A reason for why some ACB people may have wanted a choice of vaccine was described by one participant as being linked to feelings of their worthiness; they assumed that they would receive the vaccine that was less desirable and had more side effects. Knowing that they were receiving the same vaccine as everyone else helped build their confidence.

> Sometimes people wanted to have one vaccine over the other and because they believed that this vaccine was better… and for a while there, people couldn't choose, and I think we tried to advocate for people to be able to choose and have access, and after a while we were

> able to be like okay, at this clinic in this neighbourhood we know that they prefer this one, make sure you have more of this. And make sure that people can choose. I think that was a big one. We rather have somebody coming in having whichever vaccine they want than somebody leaving without any. (IDI-SP-004)

> That they felt the best there is… what they are given. And number two, they felt that if they came and asked for Moderna… there was this feeling Moderna is actually more expensive and a few came and said so can I have Moderna and the answer was yes, you can have it too. It changed a lot of things and people went out and told others, 'Hey, can you imagine, it's Pfizer.' And people would call, 'what kind of vaccine?' 'It's Pfizer.' 'Are you sure?... 'Yes. It's Pfizer. And there's even Moderna available too.' I think that for me was the biggest success story as far as the vaccines… (IDI-SP-021)

As the COVID-19 timeline progressed there were barriers to continued vaccination communications. For example, once the COVID-19 vaccine was no longer mandatory, many service providers stopped initiating conversations about the vaccine given the assumption that clients who had not yet received the COVID-19 vaccine were unlikely or unwilling to get vaccinated.

> I don't because it's not there anymore and it's like sometimes people take it more personal. It's very hard to ask them, 'Did you [get the] vaccination?'…because it's not mandated in our office now to ask the clients if you have your vaccination or not. (IDI-SP-015)

> …it's sort of delicate…we had a lot of people that were very, very anti vaccine. So especially more recently, if people have not gotten one COVID shot by now, you know, often they're, they're very much against it…sometimes we would take time to dispel some myths… just assume that the information's out there and after nearly three years of COVID… if it hasn't registered yet…sadly… I don't tend to take the time… (IDI-SP- 020)

Another example was when the focus moved more towards booster doses and less on the initial vaccinations. One participant described how they believed that clients were well informed but were not receptive to additional information because of "COVID fatigue"; being tired of dealing with everything related to COVID-19.

> People are tired of stressing about this, they're tired of worrying about it. And they're seeing, again, in public messaging, not all the people are dying from COVID in the way that they did in the first six months. Of course… that's because we vaccinated all these people… there's still people dying but nobody wants to hear about that…so, that's not

> what's in the news anymore,... if we do hear about COVID deaths, it's usually older people so that's not me, I'm not worried about it…the big messaging that's coming out of government and that's coming across in mainstream media, not sources of information I would trust, but it's what the majority of people see and are inundated with on a daily basis…then I show up at your door and say hey it's still really a concern, we're really worried about you and your kids... we're really worried about the next wave and this could really protect you. They're like, yeah, yeah, yeah. Like it's over. (IDI-SP-007)

Furthermore, participants believed that the government should have reinforced Public Health messaging. The community was caught in the middle when the government was telling them to go back to work while Public Health was warning about infections, it created further uncertainties that compounded inequities that were already being experienced.

> I'd like the government to reinforce what is already Public Health messaging…people are in the middle, like the general public people particularly equity seeking communities who really don't understand all the politics and dynamics happening here, they're in the middle going, 'I just want to live my life. I just want to live. I don't want my kids to be stuck at home all the time. I've already got enough in my life, I'm worried about housing, I'm worried about food security, I'm worried about my kid's mental health. I'm worried about gang activity in my neighbourhood…' they don't have time to navigate all this other stuff and I mean everybody in the world is in these places but these populations of people, these communities of people, they have more to worry about. (IDI-SP-007)

5.2.2.2 Subtheme: Misinformation and Misbeliefs.

The subtheme of misinformation and misbeliefs will describe participants' perceptions related to how incorrect information and subsequent beliefs impacted service providers' communication efforts as they pertain to active listening and education. For a summary of initiatives, barriers, and proposed ideas in relation to this subtheme refer to Appendix K, Table 7.

Misinformation was described as a concerted global effort to destabilize vaccinations. Anti-vaccination efforts had parallels with radicalization, and care was needed to not feed into it; however, it was believed that not saying anything made it worse, citing the misinformation about the MMR vaccine spread in the 1980s as an example.

> There is a concerted effort for misinformation when it comes to vaccine and COVID vaccine in particular. Both within Canada and globally. There is a huge power force to

> overcome … it sounds like a conspiracy but there's a concerted effort to destabilize vaccination… And I'm sure that there are powers in the world that benefit from that. And we have to be very, very careful how we address it. (IDI-SP- 022)

> Not saying anything also makes things worse, right, I think if we had been more active in the '80's with MMR and Wakefield and the drama that came out of the UK, which was a very concerted money-generating for him, effort… that was a conspiracy to change medical literature and practice. And yet that's never really been addressed in the public realm. (IDI-SP- 022)

It was believed that the consorted efforts behind these conspiracies, myths, and other forms of misinformation, were too complex for individual organizations to counter on their own. Unfortunately, sometimes it took devastating events, such as the death of a family member, before those who were impacted by misinformation got vaccinated. Moreover, the globalization of misinformation contributed to conspiracy theories and suspicions that increased vaccination reluctance in some ACB people. For example, an association between Bill Gates and population control, contributed to fears in ACB communities that the COVID-19 vaccine could cause infertility.

> It was a real conversation in the Black community because the person behind the vaccination, …Bill Gates has spoken about… controlling populations, population growth in the world…they know by default that Africa,…is a fast-growing community in terms of production of number of children born per family…the interpretation of Bill Gates' crusade or advocacy… they couldn't understand… I don't really know the factors behind or the motivation behind Bill Gates speaking about population control…But for a Black community, the thinking is…We are the people who normally have large populations and here again is a plot to try to target our populations and kill our numbers. (IDI-SP-021)

Those who benefited from spreading conspiracy theories took advantage of some people's lack of understanding about vaccine science; however, it was believed that culturally targeted and scientifically based information, such as why booster doses were necessary, presented by people who are respected, may have been able to pre-emptively avoid vaccine misbeliefs.

> …in the beginning of this pandemic people started with all sorts of conspiracy theories… there will be a vaccine that will come, and they will force us to get this vaccine. And that will not be enough and there will be another one and then another one. And low and

> behold, this is basically the way it works…when there's a vaccine that comes, you know, a second one is usually required and perhaps a booster. This is just the way science works in this particular case, but because people were already talking about it as a conspiracy theory, now that… it looks like it's happening that way, people are even more hesitant. (IDI-SP-010)

Collaborating with trusted community leaders, such as faith leaders, was also believed to have been impactful in countering misinformation, since there was a tendency within ACB communities to reject the vaccine due to believing it was contrary to their faith.

> Most Black communities are generally spiritual… I didn't see, hear this from any other source, but Christians in particular had a relationship around the Mark of the Beast and some theory around something written in Revelation…, that this entire issue of vaccination was associated to. I have not personally read anything directly like that. (IDI-SP-021)

However, it was also believed that since the communities relied heavily on information from their leaders, that if their leaders were misinformed or did not address misinformation, it could cause the Black community to be misinformed as well.

> I think the failure in the Black community will then be attributed more to the information from the leaders as opposed to the information from the people because they look up to the leaders…what the leaders say and how the leaders lead determines greatly…how the people eventually respond to the fears they have in the inside of them… (IDI-SP-021)

How information was relayed within ACB communities was important to understanding the spread of misinformation. The Black community was described as being based in oral traditions, whereby information was relayed by word of mouth; if one person interpreted something one way, there was a tendency for that interpretation to spread quickly through the community.

> …the Black community is an oral tradition community. It's not a written tradition. It's an oral tradition. So what is passed on from person to person… this is not a criticism or a condescending remark on the community, but usually there's not so much research…As long as somebody said it, that word is carried on and you ask someone…who was involved, how many people, what are the facts behind what you're saying? Well, I don't know. This is what they told me. (IDI-SP-021)

Moreover, social media contributed to the spread of misinformation, not just locally but on a global scale, to the extent that it could undermine years of knowledge to the contrary by stoking fears and disseminating misinformation through people who hold leadership positions.

> …totally turned against the vaccine because... of a WhatsApp group that she was involved with from her home country and religious, societal religious leaders...she's not super religious but this is a leader in society as well, put forward messaging and she believed it, she believed the myths because it came from somebody trusted. It came from her home community. She's been here 30 years in Canada, and this had more sway than her training in science and what was being said in Public Health. (IDI-SP-022)

Furthermore, one participant described how social media groups were infiltrated by radicals who would further spread misinformation about the vaccine. IDI-SP-021 stated, *"*All the communication that you'd find on many of these communication groups were from some of these extremists that are showing facts about the negative implication of … the vaccine…"

Identifying what misinformation existed and why people considered it in their vaccination decisions were important components of actively listening to clients so that appropriate education could be provided. Participants believed that making clients feel comfortable and asking probing questions helped improve trust, this trust could further help to encourage dialogue to determine clients' misbeliefs. Furthermore, resident leaders were also beneficial in relaying misinformation they had heard in their communities back to service providers. Once misinformation and misbeliefs were identified, messaging could then be adapted to counter its spread and address the concerns through disseminating accurate information and providing trusted resources. IDI-SP-001 stated, "a gentleman …had religious reasons for not getting the vaccine but upon probing… it seemed like he knew less about the vaccine but just followed what somebody else would say…" In addition, IDI-SP-004 stated,

> …there's a lot of misinformation that we were hearing and then adapting the message coming back to, and then at some point it was regarding the vaccines for children… we're hearing the questions they're asking, realizing okay, there needs to be a broader kind of

> [public service announcement] PSA around this. So then our comms, they will start tweeting or posting and then we would change a little bit of the language as well and then share it afterwards.

Providers used various strategies to address misinformation, such as participating in activities attended by community members, as well as through newsletters and emails. There were also town halls to specifically address myths around faith and religion, which provided a venue for faith leaders to address faith-based misinformation with correct information to demystify concerns. Furthermore, presenting correct information, and encouraging community members to question what they saw on the internet, was also done by community ambassadors and leaders speaking with people in their communities. In addition, it was found that countering the negativity created by misinformation, with positive messaging was beneficial. IDI-SP-004 stated, "…in certain town halls we were adapting it…there's myths around faith and religion… some specific questions relating to COVID-19 as the sign of the devil, the vaccine. So we were making sure that those were answered" IDI-SP-004. In addition, IDI-SP-009 stated:

> "…people saying, "Well I've heard that in the vaccines that there are microchips that people are inserting into us, and they can follow." So residents can say, "Yeah, I've heard that too… I've heard that's been really disproven… there's research that says that's not the case." So try to present evidence and research."

Participants highlighted that it was important to consider that some people may not be receptive to the correct information, as they may feel that they are being told they are wrong or unintelligent. To encourage the people's willingness to receive the information, discussions began by acknowledging the clients' perspectives, providing support, and then giving the correct information at the same time in a delicate balance. The client's beliefs were not outright denied or challenged, but probing questions were asked to find out more, such as where they heard the information.

> …nobody wants to be made, feel that they're stupid or that they're wrong. So I think it has to be done really delicately because if it's not done properly, if you're dismissive, if you're in any way judging their intelligence… people won't take in any of the true information that you're giving…I often start with … I can see how you… would think that way or feel that way. There's just been so much [information] out there…support them but inform them at the same time … it's sort of a delicate balance. (IDI- SP-020)

Providing information was about improving the ability to make informed vaccination decisions, not about forcing clients. It was also beneficial to share a personal story, show patience, and to build the clients' knowledge.

> …by providing evidence and if that doesn't help, I share my own story. And if that doesn't help still, be patient with them. I come back and do a follow up and continue to build their knowledge to fight misinformation, with time I've seen some clients, after a year, say 'oh, I finally [made] the good… decision.' (IDI-SP-002)

"…we got to speak… obviously I didn't force anybody, I gave them pamphlets and information to go and seek that truth themselves and just face the reality that there is a space for science in the Black community" (IDI-SP-001).

Determining what clients considered trusted sources of information was also important in addressing misinformation and misbeliefs. The recognition that clients and service providers could view trusted sources of information differently, was helpful when working with clients to determine how their vaccination concerns could be best addressed. Racially concordant service providers were also believed to be a trusted source of information.

> …for somebody that had concerns about being vaccinated, our approach was who is the right resource to help you work through those concerns...it was really about finding a trusted resource that had good Public Health information to help them…Sometimes, a lot of the time, it was I'm afraid it's going to hurt… (IDI-SP-007)

> Once they see someone who is of the same skin colour it's like 'okay, I know she wouldn't mislead me.' So there's that baseline trust that is then left to you to either build or destroy...I find that that's definitely one thing that has helped…I find that sometimes they are more receptive. (IDI -SP-003)

However, it should also be considered that the reliance on racially concordant service providers creates additional expectations and responsibilities, for example, two participants described how they were viewed by their clients: “Like ‘we shouldn’t let the government trick us again, why, me as a Black person, did I know that they don’t really want us…they try to let me know that I… shouldn’t be talking about vaccine” (IDI- SP-008).

> It’s definitely a double-edged sword. If they have all this trust for you, and last week you had told me this, that I just need to get two vaccines. And now I’ve gotten my two vaccines and you’re saying there’s a third vaccine…This wasn’t part of our contract.” (IDI-SP-003)

5.2.2.3 Subtheme: Targeted and Tailored Messaging.

The subtheme of targeted and tailored messaging will describe the creation and dissemination of relevant messaging to communities with low vaccination rates, including ACB communities. Commonly used messaging, including its characteristics, formats, and methods of dissemination are shown in Appendix G. In addition, the concerns and considerations for messaging to reach subgroups within the diverse communities, are described in Appendix H and proposed vaccination campaign ideas are described in Appendix I. For a summary of initiatives, barriers, and proposed ideas in relation to this subtheme refer to Appendix K, Table 8.

Creating targeting and tailored messaging was important to help educate ACB communities to help them make informed vaccination decisions. “I believe that educating the community is empowering them to make more informed decisions” (IDI-SP-001). However, participants reported that creating targeted and tailored vaccination information specific to the most affected communities in Ottawa and the national capital region (NCR) during COVID-19 was challenging, due to limited funding and resources. The lack of community-specific data contributed to the lack of information available to support communities.

> …if I wanted specific information on Ottawa, how much will I be able to get and how much stuff can I use for my marketing strategy? But that, marketing strategy, is not

> covered by the Ministry… Somebody has to physically take that marketing and do a fulltime marketing strategy… (IDI-SP-006)

Furthermore, more staff and time were needed for organizations to investigate communication venues that could be used to reach local ACB people. It was difficult to obtain access to online platforms and groups used by ACB communities, such as WhatsApp and Zoom, unless the service provider was already a group member. An additional challenge was that these popular platforms (such as WhatsApp) provided messaging from other countries, so it was difficult to relay a clear message within the local context. Moreover, one participant described how despite all the approaches they had used to disseminate information, it was not enough to overcome the barriers seen in society; for example, there were fears for personal safety that prevented people from answering their door to receive information. IDI-SP-006 stated, "…for like their own personal safety, right, like they don't want to open that door because they just, it's their safety issue as well." However, it was also believed that clients appreciated receiving information that included the importance of vaccinations, its history, and the science behind it, in a culturally relevant setting (such as the dedicated clinics described in the subtheme Vaccine Equity), so that they could make an informed decision about getting vaccinated. Having service providers at vaccine clinics who were sensitive and knowledgeable about ACB peoples' concerns was found to be beneficial for building trust and improving vaccine uptake. Being culturally sensitive, such as through understanding language, preferences, and fears, improved client interactions and their receptivity to information. IDI-SP-007 stated, "…not just tell you the information why vaccines are important but here's where, here's a place and a group of people that you might be more comfortable with than coming to a mass clinic…"

Efforts to create vaccination messaging differed greatly amongst organizations, as many did not have culturally based information to provide to their staff or their clients; ACB community members did not see themselves in the messaging.

> I realize that there is no differentiation in vaccine encouragement or information or support for ACB communities. It's all patient population and we don't tend to differentiate…, based on anything. That's what it comes down to. Do we have things specific for the ACB community? No. No. We don't. (IDI-SP-020)

> The marginalized vulnerable communities... they are suffering the most... they don't see themselves on the posters. They aren't on the television on the channel… their own language, culture, tradition, religious beliefs… there's so many different barriers so they're really being left… (IDI-SP-018)

Service providers believed that it was important to understand ACB communities to determine what information was impactful. For example, mentioning that ACB communities were receiving the same vaccine as everyone else was helpful to increasing vaccine confidence. Furthermore, when messaging reflected community values, such as emphasizing that getting vaccinated helped to protect the unvaccinated, it was believed to have been impactful, especially since mothers wanted to protect their children. "I can tell you unequivocally that many of those women chose to get vaccinated because they heard the message that it will protect your children" (IDI-SP-007). Reassurance was also important, since there were suspicions within ACB communities about the intentions of vaccination campaigns, as there was a belief that there had not been previous interest in their general healthcare awareness before. "When it comes to general healthcare awareness you don't see that push in the ACB community. Why is there that push for vaccine?" (IDI-SP-016). Furthermore, when creating messaging, participants believed it was beneficial for community members such as resident leaders to provide feedback to help create messaging that was more likely to resonate with their community.

> They're lived experience, lived in the community and they have some level of authenticity and trust at the neighbourhood level. And they were really good at saying, you know, just tell it like it is. Put that in this language and distribute it via WhatsApp… (IDI-SP-007)

In addition, messaging was simple, transparent, and written from a strength-based perspective to focus on empowerment, address specific concerns within the communities, and incorporate culture and keywords, such as diversity and community engagement. Some messaging also contained images of ACB people, such as Black celebrities and community champions. Social media was also used to provide information in the languages spoken within the communities and to create videos, such as a YouTube vignette, that had culturally based concerns in client's preferred languages. Furthermore, one participant described a video that had been created to address concerns related to vaccine hesitancy within the ACB community.

> …[in a] video… there is an exchange between some people in the ACB community and the doctor in terms of why there is hesitancy, why their friends are hesitant or why their family members, and they usually are the same thing, religion, history, and fear…there's also a Professor in the video who is…giving information. They're both part of …, this particular community. So the people can relate, maybe a little bit better, because it's becoming a little bit more culturally targeted. So we believe that strategies that are culturally relevant are very, very, very important because if not, then people will see themselves as just you know, getting information that probably doesn't apply to them. (IDI-SP-010)

The languages that the information was relayed in was important for culturally relevant vaccination communication.

> It was very fun and very like it brightened up the mood and somebody would automatically almost trust you just because you spoke the same language, and they were able to open up a whole lot more. There were a few people I even, I had to explain the scientific things in our language, because either there was a language barrier and they would just openly say, "Can you explain it in our, in my language? How would you put it?" You know? And it made a difference. (IDI-SP-001)

Some participants believed that most ACB people speak French or English or have friends or family that can translate/interpret for them. This is consistent with the 2016 Canadian consensus whereby the Black population's mother tongue (first language spoken as a child and understood

as an adult) in Canada was 59.8% English and 19.6% French (Statistics Canada, 2019); however, this is not always the case, and care should be taken to relay information in a preferred language, not only the one understood. Having information in various languages spoken within ACB communities helped to reduce barriers by increasing comfort, access, and understanding of communications; for example, although Google Translate wasn't ideal, it was found to be beneficial in generating messaging in different languages immediately.

> …translate most materials, promotional materials in multi-lingual tongues. So we have them in most of the languages spoken by ACB communities can see stories, ambassador story, all this information has been very good to increase vaccine uptake… (IDI-SP-002)

However, it was recognized that the nuances within the languages may not be captured when translated, so to ensure that the information was reflective of the community and the languages that clients were comfortable and proficient in, some workplaces made adjustments based on community member's feedback before messaging was released. Some service providers worked with ACB community members to edit words so that they would resonate within the community and help with message framing. Diverse staff that spoke multiple languages facilitated the quick translation of materials. Different populations also needed different tools, so the same document was not necessarily translated for every community, and messaging was targeted to populations that needed the information. Despite these efforts, information in other languages was infrequent and some organizations only had information in English or in English and French, with participants stating that they were not aware of any other languages or racial forms of communication. It was also challenging for people who spoke French, but did not speak English, especially for seniors and newcomers; French was often not their first language either. Language barriers were also compounded by the complexities of clinical vaccination information and unfamiliar technologies such as automated call services. "I mean they just use the general

[Ottawa Public Health] OPH pamphlets that are translated into languages but then that's few and far between. Because most times it's English or French" (IDI-SP-003).

> Unfortunately immunization, testing, the news, a lot of information was shared in English mostly. So a barrier for ...French speaking it's maybe a second, third or fourth language as well. So not speaking English was a huge barrier for seniors and for certain newcomers …not understanding information… (IDI-SP-004)

Other initiatives to reduce language barriers between clients and service providers included using interpretation services or having a client's family member interpret. However, translation services were seen as underutilized for COVID-19 information. "when it comes to COVID, and ACB community, we don't use it… calling the translation services…We have the service, but I don't think we use them specifically for COVID-19 information" (IDI-SP-008). There were also concerns that mistakes could be made with harmful consequences if the client did not speak English.

> …if people cannot speak English, if I don't speak their language then I am not proceeding. I got really strict about that because huge mistakes get made when you know, Suzie who knows a few words in that language or even thinks she does know that language, but she comes from a different part of that country and it's a different dialect, like this is really, really problematic. And I know people who would say, 'well get the receptionist, she knows how to speak...' to me, that's very harmful. Unless someone really does know that language of that community, I've seen a lot of harm done because people mean well, but if I don't really understand what you're saying, and I can't confirm that you understand what I'm saying, I'm really not going to proceed. (IDI-SP-018)

Non-verbal skills are also important to help a client feel comfortable when language is a barrier, as there was a concern that clients who experienced language barriers could be getting less attention. "I think there's universal languages, right. Like smiling and, I don't know. I use touch a lot… I think sometimes if there's a language barrier, they're getting less attention, and I often worry about that with people " (IDI-SP-020).

Collaborating with community messengers, such as resident leaders, was found to be beneficial in helping to determine appropriate support to the communities, including how to best disseminate the information. They were also believed to have improved the receptivity of the messaging to ACB communities because of their pre- existing trusted relationships and their ability to speak the same language. Furthermore, one participant expressed the importance of having community members be the first ones to make new announcements, because it was empowering, since the first messages should not always come from certain groups of people. Moreover, it was found to be important to disseminate the information directly to where ACB people frequented to improve information access. IDI-SP-006 stated, "[It] took our resident leaders that were from those communities that spoke the language and that had a trusted relationship with the clients, and then… took information." In addition, IDI-SP-019 stated:

> …what worked as well… a few Public Health workers… would go out and hand out flyers to different community members around. They would post up posters in different areas to let them know that there was a vaccine clinic right next door if they needed to. They would go into the buildings that have predominantly Black individuals as well, put up the flyers…

When creating and disseminating messaging, considerations were also given to how information was relayed to reach its intended audience within a given timeframe; for example, text messaging relayed the information quickly, whereas pamphlets took longer. In short, when creating targeted and tailored information, it was described as: "it's about the right information by the right people and presented the right way, which is culturally targeted, especially for this particular population" (IDI-SP-010).

5.2.3 Main Theme 3: Optimizing Knowledge Mobilization

Optimizing knowledge mobilization describes the process of relaying information from the source to service providers who have the appropriate support, skills, and training, to effectively relay the information to meet their clients' needs. This will be described within the two

subthemes of 1) Initiatives to Acquire and Relay Accurate Information; 2) Initiatives for Service Provider Skills and Training.

5.2.3.1 Subtheme: Acquire and Relay Accurate Information.

Given the dynamic nature of the pandemic, how information was relayed to service providers impacted their understanding of COVID-19 and the COVID-19 vaccine and what knowledge they were able to share with their clients. For a summary of initiatives, barriers, and proposed ideas in relation to this subtheme refer to Appendix K, Table 9.

It was important for service providers to be informed so that they could relay accurate information to their clients. “you cannot have a conversation when you don’t know what you’re talking about” (IDI-SP-003). Participants believed that how information was relayed to them, reflected their abilities to meet clients’ vaccination communication needs. For example, sometimes organizations and service providers received information from the government or Public Health at the same time as the public, this was described as impeding their ability to meet clients' needs due to the short time to process the information and implement new directives.

> I think at one point we had an emergency meeting because the mandate came out… I think when that press release came out, that we had two weeks, we actually go everybody together… did an emergency community of practice meeting to say okay… here are some ideas, what are your thoughts. (IDI-SP-006)

The stress and demands placed on service providers were also heightened by the increased needs of clients due to the pandemic. As service providers tried to meet their clients’ needs, they were also trying to meet the expectations of provincial directives, which were perceived as unrealistic and did not account for the unique challenges faced by these communities. Furthermore, the time constraints made it difficult for service providers to work on improving communication, such as trying to find the best venues to reach the communities they served.

> …the other part of this challenge was that we had two weeks to vaccinate our high priority neighbourhoods…provincial directives… but within the time that we mobilize ourselves, developed our own internal processes to vaccinate our clients, it's not enough time to get people up and onboard and vaccinated. And you're talking about people who are already reluctant, who've had historical trauma, who've come from war-torn countries and have suffered trauma…They're not going to understand that you're doing it because they're living in these neighbourhoods. It's like, oh you're getting me to do it because I'm going to be the guinea pig. So over the course of this vaccination process we had hubs setup in the communities… they would come 3-4 times, ask all these questions to feel comfortable with the vaccination, then come back. You're giving me two weeks to vaccinate my community, and I'm talking about the entire community of Ottawa. And we have to set up transportation, we have to have appointment cards…I think was very unrealistic. (IDI-SP-006)

> So all of our upstream work to try and address the social determinants of health, all of our upstream work to try and deal with structural racism, actually was negatively impacted by COVID because we were racing against the clock and just trying to get vaccinations into arms. (IDI- SP-007)

Changing provincial guidelines caused service providers to work in a crisis, creating a situation that highlighted ineffective communication between the government and healthcare related organizations. Participants described how poor communication jeopardized the goal of increasing vaccine uptake in communities that were the most in need.

> …the provincial guidelines changing every week… I was working in crisis every day… who can get vaccinated changing like by day, but where can I actually vaccinate my clients…that was extremely challenging, not just for us as professionals to keep up with, but then how do you tell a community who does not speak English as a first language, who does not read, who does not follow social media, what and where to go… extremely challenging. (IDI-SP-006)

Some organizations sought out their own information, such as through surveillance, accessing new research findings, and working closely with Public Health, partner organizations, and community messengers (community/resident leaders and ambassadors) who could share their community-based experiences.

> …we had clinical staff, internal to the organization, keeping tabs on research in other parts of the world as well. So, I would say probably our workplace and myself included had

> constant and regular updates on what was [emerging], what was happening, what they could see coming. (IDI-SP-007)

However, participants described different workplaces relaying COVID-19 related updates to their staff in various ways, including relaying information differently depending on the service provider's profession, even within the same organization. Furthermore, some organizations did not provide any updates while others did not provide adequate time to review the information. Ineffectively relaying information to service providers could be overwhelming for them.

> …we're bombarded with information about various things all the time and so I'm beginning to even question myself, like have we gotten updates that I have just sort of glossed over in…emails… possibly…. I find that as COVID goes on, I mean the resilience and the attentiveness to all these emails that I had initially, I don't have in the same way and it's just a little bit of I think fatigue... I mean how up to date am I and how much am I seeking… new information… (IDI- SP-020)

Nevertheless, some participants described ways of relaying information to service providers that they found to be effective, such as using a multipronged process involving weekly emails that included a summary of key information, recommendations, and an attached relevant paper or other sources to underpin the recommendations. Another workplace created short video clips for providers to watch, with an additional information sheet for reference; this had a good uptake. Providing concise information to service providers was beneficial, as it was often difficult for them to process all the information about the COVID-19 vaccine.

> …during the pandemic we also used YouTube for our providers… takes too much time to do it to make it an ongoing thing… we had really good uptake of sort of a 12-minute four part where you could click on just the part you wanted…. They wanted the sheet as well so they could have it in their office to refer back to but just getting those tidbits, that helped. (IDI-SP-022)

Service providers also obtained information from each other as well as from information phone lines; working in teams was also found to be beneficial. "Because no man is an island and having that constant feeding off of each other gives you a whole lot of knowledge that you wouldn't

have gained otherwise" (IDI-SP-003). One participant described Public Health nurses coming into the workplace to talk to staff; however, it was also found that scheduling conflicts and a lack of time made it difficult to have collaborations between professionals to acquire information about how to better serve ACB communities. Another participant suggested that having a platform to create one comprehensive source of information where service providers could discuss misconceptions and how to educate people could be beneficial. "It would be nice to have platforms were people in the healthcare have…conversations, discussions about the misconceptions but not only focusing on them but also educating people…. Because if it's science, let's talk science" (IDI-SP-001).

The information service providers received, however, was often found to be confusing, which impeded their ability to effectively relay the information to their clients. The complexities of the scientific information related to vaccinations was challenging, some service providers were not familiar with the science and relied on other staff to provide explanations to them. While others who produced information for public consumption were challenged by the need to create medically informed material quickly at about a grade 6 level, in both French and English. "…it's very challenging and it was very difficult, it was very confusing because a lot of information was coming and mixed information… unfortunately I will say we did our best" (IDI-SP-005).

> I find the information regarding COVID-19 vaccine as one of the most confusing because it changes from time to time. And that's understandable because it's something that's unprecedented, this is the first time we are all dealing with this, so we are learning on the go and on the fly. (IDI-SP-003)

Information related to COVID-19 could also be inconsistent, which led to some service providers questioning the trustworthiness of the information. For example, participants reported that the type of masks they had to wear made them uncomfortable and impacted on the information they

were able to give to their clients. The inconsistent information regarding the booster also caused confusion and was believed to impact trust with their clients. Vaccination communications were further challenged by the mistrust created when one of the early vaccines was discontinued due to its side effects, after service providers had already supported its use.

> I don't think we knew what we were doing, so it affected us as a staff. At some points it was just…you don't need N95, just use your surgical mask, you're fine and we all just use surgical masks. And some staff that were reading beyond the information we were given, they were researching, they were saying, 'no, I'm not comfortable coming to work, I don't want surgical masks, I want something more.' And they were like having conflict with the management… it took us time to know exactly what we were doing. And it affected the information we are giving people too. (IDI-SP-008)

> …the more the message around the vaccine wasn't aligning, like take the shots, you're going to be protected and then take the second shot, you're going to be protected… As soon as those things start creeping in… the distrust grew more. (IDI- SP-016)

> Like we always have…pedal forward five steps and you have to backpedal 20 because of that one mistrust... like the vaccine… the first one that came out…Because we are telling people you can get it, don't worry, it's all good. But all of the sudden it's out of the market. (IDI-SP-006)

In addition, a number of participants believed that they did not have the knowledge and training needed to provide the required information to answer clients' vaccination questions. They would refer clients elsewhere because they did not want to be the source of misinformation or compromise the trust built in the client relationship. Some participants also had their own questions and did not feel that ethically they could have provided the information to their clients themselves, so they inform the clients that the doctors and nurses at the vaccination clinic would be there to answer questions.

> I didn't think that I had the training and the knowledge enough to provide such information to clients, especially when it came to some of the hesitancies that people had. Especially knowing that I know I also had some of my own… I didn't think I was the right person and I don't think ethically that would have been correct. (IDI-SP-019)

With frequent changes in information, measures were also implemented within some workplaces to ensure misinformation was not passed on to clients, including ensuring the information was current, discussing misinformation, and creating unified messaging before going out into the communities; however, some participants believed there were inadequate structures for acquiring information within their workplace.

> I'm expecting [staff, community ambassadors, and resident leaders] to be carrying correct information around with them in every environment they're in. And one of the ways to do that is by continually giving them key messages and giving them the tools and working with them. (IDI-SP-007)

"…right before we went out in the communities, we did the debrief sessions, like a session in terms of what messaging we wanted to communicate. A lot of the misinformation, we would go through that" (IDI-SP-006).

Participants described their roles in combatting misinformation in their own workplaces and had different approaches to addressing the situation, depending on their relationship with the co-worker. For example, they could speak with them one-on-one in a respectful and friendly way away from clients, depending on the receptivity of their co-worker, and could provide them with the correct information. It was believed that it was also important to listen to their co-worker's perspective to ensure that the service provider was not the one who was mistaken. If the co-worker was in a subordinate position, disciplinary actions could be taken if they provided information based on personal opinions, rather than acting as an agent for the organization. Having meetings to maintain good working relationships was also believed to facilitate openly discussing misinformation and provided a means to share correct information.

> …had a really good working relationship all of us together, and so we could say things like… 'Oh actually, that information isn't accurate, you know, here is the accurate information,' …the space really is to share information and for us to challenge when we're getting misinformed …created that… atmosphere and the way we work and it's always very respectful. (IDI-SP-009)

Different approaches were also used to ensure that clients received accurate information after having been incorrectly informed, such as retracting an incorrect written message. However, different approaches were used by participants depending on the extent to which they believed a client would be negatively impacted. One participant described the steps they would take to correct the misunderstanding, while trying to maintain trust in the client-service provider relationship and in the healthcare system.

> I wouldn't go first to the patient. I absolutely would not go and say, 'you know what, they gave you the wrong information.' Because that breaks the trust between patients and healthcare workers and it's something difficult to build up but it's so frail at the same time. You need to have their trust and I need to confirm that before I do anything else what I heard, or what I thought I heard, or what the patient heard is accurate…Often, it's a misunderstanding…So there's many, many steps. You have to dissect what the issue is and try to understand from both parts before you can do something about it. But I would like to preserve the trust in the healthcare system from the patient at all costs. It doesn't mean that I'm not going to disclose an error… and say, 'well you know, there is an error here, we apologize but I want to correct it and I want to give you the proper information.' (IDI -SP-011)

When the government dropped mandates, participants described facing additional challenges, as some people believed COVID-19 was no longer a risk despite Public Health messaging. This included reduced budgets for preventative measures (e.g., masks and hand sanitizer), and reduced support for some workplace initiatives (e.g., supporting Black led organizations and community ambassadors). Furthermore, as staff returned to the office after the stay-at-home order, it was found that workplace guidelines became less clear within some organizations; it was proposed that workplaces should create venues for staff's ideas to be heard, so that improvements to vaccination communications could be made.

> I'm starting to run in-person workshops…and I had to email two people and say can I get masks and hand sanitizer so that those who want to wear it can have it. And someone said to me, 'oh we don't have budget anymore for masks…and I don't think we have hand sanitizer anymore.'… the other day at my workplace they had an event with over 100

> people, somebody had COVID and nobody knew she had COVID and... it was very messy. (IDI-SP-012)

5.2.3.2 Subtheme: Service Provider Skills and Training.

Service providers require skills and training to effectively meet their clients' needs, communicate with co-workers, and to help establish and maintain networks, such as to collaborate with other professionals and community leaders, in relation to relaying vaccination information. Refer to Appendix J for proposed training with rationale. For a summary of initiatives, barriers, and proposed ideas in relation to this subtheme refer to Appendix K, Table 10.

Vaccination communication required service providers to have knowledge about the vaccine, their clients, and have communication skills; however, there was a lack of training related to ways to effectively combine them, especially within the context of communication training specific to ACB communities.

> There is no training around that, but we are asked to listen to people and address their concerns, that's part of our values. Like you are there to listen and address people's concern… So, with ACB community inclusive we are expected to listen to them (IDI-SP-008)

However, it was believed that knowledge and training in the SDOH, using an equity lens, and understanding White privilege were helpful in improving vaccination communication in communities with low vaccine uptake, such as ACB communities. "I think it was good that I had…, a knowledge of like social determinants of health and equity lens" (IDI-SP-004). Service providers' skills engaging in self-assessment and training were also found to be beneficial. Knowledge could then be acquired through service providers' own initiatives, including self-training and taking free courses. IDI-SP-010 stated, "What we do, especially at the center where I work, we continually stay current with the latest developments, you know, we keep self-

training. We're doing it ourselves, going digging for information and sharing it with one another." In addition, IDI-SP-012 stated, "I did take a couple of trainings… one of them was supporting newcomers with mental health through the pandemic...I found free." However, some participants felt additional training was unnecessary. Reasons included believing that the vaccine was no longer needed, that additional training would not be beneficial because communication skills were built over time, information was already available, lack of willingness, and that changing personal biases was done internally and could not be formally taught.

> I can't think of any additional training that will improve communication. I mean it goes back to the fact that we do have access to guidelines. We do have a lot of access to Public Health, so we have a lot of people to rely on. But how we communicate with the patient is something we have developed over time. To some extent it's quite personal. To some extent it's flexible as well and it's absolutely tailored to the situation… not only experience but skills. Skills to be able to communicate in different situations, different times, different levels of acuity... It takes many, many years, right? From very early in our training we get some of those communications. The daily interaction with patients is what makes it better and better. So the longer you do this job, the better you get at it… (IDI-SP-011)

It was also believed that training was not beneficial, because for change to occur, leadership needed to change.

> All these trainings that I went on for years, but we had predominantly white leadership so nothing changed. We might have intellectually learned a bunch of stuff, and then forgot it… I think people were genuine in their attempts, but until… we have a leader of the Board of Directors there now, is a man of colour. We have an Executive Director, she's a woman of colour…that's where the change is, it's got to come from the people… All these other trainings… Nothing changes. Even when people mean well. (IDI-SP-018)

Furthermore, it was believed that although providing education may be helpful, those that would be interested in the training may already be aware of the issues, while other service providers may not prioritize such training if it were available. Moreover, it was felt that such endeavors may not be effective if, for example, only one service provider in a team took the course.

> I fear that… the issue would be you'd be already preaching to the converted…who would take the course. So the course is offered. You've got six courses to choose from. One is on

> setting up a chest tube system. Another one's accessing dialysis lines… one is on racism in health care. I bet you would get 98 percent signing up for the other stuff and 2 percent would sign up for the racism. (IDI-SP-020)

Despite these beliefs, some participants had knowledge gaps in relation to effective vaccination communication to reach communities with low vaccine uptake, such as ACB communities. For example, one participant described a personal conflict in relation to mandated vaccinations in the workplace yet were not provided directions about addressing vaccine hesitancy.

> I haven't had the like direction on whether I should [address their vaccine hesitancy] but I personally don't feel comfortable addressing people's hesitancy… I feel that everyone is just entitled to do whatever they want in terms of their own health decisions… I even feel that it's wrong that I'm telling someone if you want your full work, I need you to get a shot. Like I think that's wrong, ethically, in my opinion… (IDI-SP-017)

Indeed, service providers may not be aware of what they do not know regarding understanding the needs of ACB communities. Moreover, structural barriers such as how medicine is generally set-up with short appointment times and a narrow focus on content expertise, is not conducive to communications that address societal issues.

> …there was a lot of distrust about vaccinations, about government, about all of these kinds of things because these were cultural and community differences that you know, probably in the large part of my career I really didn't know about …the cultural impact and really the different ways of thinking about these things, government interventions, mandated interventions, vaccinations… these are very problematic in some people's lives, for very good reason. (IDI-SP-018)

"…providers need to see you not just for COVID, but they need to see you for your other healthcare needs…in a 20-minute appointment, how do you create opportunities for questions to be asked and answered? It's hard, you don't" (IDI-SP-007).

Despite some participants not feeling the need for further training, it was believed that service providers must be aware of their own negative biases, to help mitigate occurrences such as microaggressions and labelling people as difficult when they bring up concerns or asked for

their values to be accommodated. Moreover, inappropriate communication was believed to be counterproductive and negatively impacted trust and vaccine uptake; service providers need to listen and act with sincerity for their client's wellbeing.

> …in my opinion, those little things, the microaggressions and the shoving things under the rug and the lack of appropriate communication just made everything worse regarding vaccine uptake. Given that there's already that basal mistrust for the system regarding vaccines and research studies… it made a bad situation worse. (IDI-SP-003)

> But in general, when it comes to like Black people, especially people who are hesitant or they are bringing forward a value in terms of they are requesting something from the hospital or from a staff…Maybe their religion or culture, then we see them as being difficult. So I see that a lot. (IDI-SP-008)

> I am talking about negative bias like 'oh they just come to take up the resources,' or 'he's okay, they're just making it up. If people that are treating them… listen to them sincerely and just take up what their issue is,...I think that's the only solution we have. We have to train frontline persons, doctors, physicians, everybody that meets anyone from ACB community. (IDI-SP-008)

Participants described how the commonalities among ACB people are experiences of microaggressions and daily exposures to racism, but the community is diverse, and different people may respond differently to the same communication approach; therefore, a variety of tools and approaches should be used. Cultural sensitivity involves taking the time to find out what client's personal values are, which may include values found in their culture and religion. Therefore, diversity within ACB communities should also be considered when creating training and education tools.

> …there is diverse cultural practices and beliefs, even within the ACB community. So, it's a very complex intervention…to tailor your communication towards a particular race because within the race there are diverse values…I have read and from my practice, is that cultural sensitivity [is beneficial]. Sensitivity does not mean that you know that culture but taking time to know what their value is around the issue of vaccine. Their value may be personal, it may be something that has been absorbed from their culture, it may be something that has been absorbed from their beliefs or from their religious practices that they are upholding in terms of vaccine. (IDI-SP-008)

Furthermore, despite the importance of religion and faith within ACB communities and its impact on vaccination decisions, it was a subject that service providers often had difficulty talking about with their clients.

> …a lot of Canadians aren't comfortable talking about religion because it's seen as inappropriate, especially in the workplace. And so they wouldn't even touch that conversation with a 10-foot pole…so finding that the one thing which they held dear, which was their religion… was just shoved under the rug… I find that didn't make it easier for them to have those conversations. As opposed to telling them, oh yes, God will save you, but uses things to save you. (IDI-SP-003)

Participants described how cultural sensitivity should also be considered in combination with clients' experiences when undertaking vaccination communication. For example, there should be further training related to communicating with clients as it pertains to their specific experiences and circumstances to make it more relatable; Appendix H describes messaging related to reaching subgroups within the diverse communities. In addition, the COVID-19 vaccination brought about polarizing views that many service providers felt they were not prepared for. The polarization of vaccinations resulted in some service providers facing violence and fearing for personal safety, which impeded and sometimes prevented vaccination discussions. Conflict resolutions skills were important, both inside and outside of the workplace, to help mitigate polarizing views. Further training and creating supportive work environments through policy changes could help mitigate vaccination related conflicts. Policy changes should also be made to improve service providers' vaccination communication skills to create cohesive networks and increase trust.

> What can we do to change… process, to change policy, to change the systems we live in, to produce more healthier impacts rather than just individuals. So, I'm thinking that the answer to better communication with communities about vaccines is actually educating physicians through medical school who are more knowledgeable about communities in general and are better trained in trauma-informed care. Because if you can create a safe space in your physician and your nurse practitioner and the nurse in the office who's weighing the baby and the receptionist who greets you when you come in, you are going to

> fundamentally just trust that person more. And so when the messaging about vaccine comes out, you're going to trust what they have to say. (IDI-SP-022)

Some organizations did provide vaccination related training to people outside of their organizations, such as helping to provide decision makers with the skills needed to discuss vaccine hesitancy with racialized people with HIV, and training community members to become PENs/community ambassadors, while working through a racial equity lens. Training and resources should also be available within the workplace, which could facilitate self-training, improve client services, and could be supplemented by sharing resources between organizations.

> I would have probably been able to do more… if I would have received maybe some Public Health training or something like that. So whatever their workers were having, maybe having like another version of that training for people who weren't directly providing those services but who are still within those circles, within those spaces and who are still in contact with ACB community members who were coming for vaccines. (IDI-SP-019)

"…with the PENs, I was really excited to hear that they were doing training around racial equity and understanding it from a theoretical perspective, or more about understanding racism and the impact on people's lives." (IDI-SP-009)

As efforts become less intensely focused on COVID-19 vaccine uptake, vaccination communication and continuing education remain relevant, since there is a need to improve the uptake of other vaccinations, such as infant and child vaccinations. "…now that things are not as intense with the pandemic and there's other issues with vaccine and not just COVID vaccine uptake but with infant and child vaccination…" (IDI-SP-022)

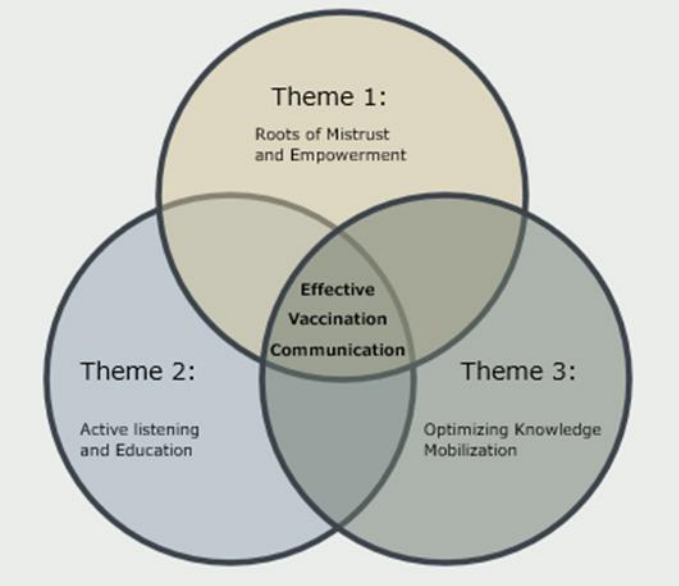
Finally, as these interviews served as a reflection on vaccination communications services, through asking questions, service providers were able to reflect on the services they provided, the barriers they faced, and how they might make improvements; thus, emphasizing how service providers engaging in reflexivity could help to improve future communications.

> …generally speaking I think this is really… eye-opening, just to know how the gap that really exists in healthcare... when we make all these decisions...we just make it from a really narrow lens than actually looking and seeing who is impacted and for who and why. So, this is really good. (IDI-SP-005)

5.3 Summary of Results

Through exploring the insight of service providers who were vaccinators and vaccine promoters, three main themes were developed, namely, Theme 1 (Mistrust and Empowerment), Theme 2 (Active Listening and Education), and Theme 3 (Optimizing Knowledge Mobilization). Although these themes were created inductively through interpretive description and in consideration to intersectionality and pragmatism ("being purely inductive is impossible" (Braun & Clarke, 2023, p. 69)), their overlap reflect the basic elements of communication (the ones receiving the information (receiver), the ones sending the information (sender), the medium used to relay the information (the medium) and the overall process (the process). Overlapping themes in interpretive description (ID) highlight the complexities and nuances within the human experience as they apply to practice; real-life experiences does not neatly fit within isolated categories and acknowledging overlaps can increase analytical depth and the trustworthiness of the findings (Thorne, 2025). Consistent with ID's emphasis on pragmatic and context-sensitive analysis over rigid structure, the themes in this study interact, merge, and remain fluid when appropriated. In relation to vaccination communications, Theme 1 describes the receiver (most affected communities) of the information; foundations for their mistrust and ways to empower and support informed vaccination decisions. Theme 2 describes the quality of the information and discussions (the medium); created through listening and adapting to client's needs. Theme 3 describes the process of ensuring the integrity of communications. All three themes are described through the roles and perceptions of the participants (the message sender). Through effectively combining these elements effective vaccination communication can result.

Figure 1 Relationships Between Main Themes



Note: The three main overlapping themes found in this study converge to provide insight into effective vaccination communications, related to communities with low vaccine uptake.

Chapter 6: Discussion

Although healthcare providers eagerly anticipated the development of the COVID-19 vaccine, many were surprised when they were faced with skepticism, hesitancy, and resistance, despite increasing morbidity and mortality rates (Pilar et al., 2022). This highlighted the need for improved communication between healthcare providers and the public, including service providers listening, working to understand their clients' needs, and relaying relevant evidence-based information to support informed vaccination decisions. Through the exploration of service providers' experiences as vaccinators and vaccination promoters, insight was gained into how they mobilized evidence-based vaccination communications to improve vaccine uptake within the most affected groups, such as ACB communities. This resulted in the three main themes of: 1) Mistrust and Empowerment, which provided insight into reasons for mistrust and ways to support empowerment within communities with low vaccination rates; 2) Active Listening and Education, which highlighted the importance of actively listening while providing vaccination related information; active listening supports a mutual understanding of the information between the client and service provider and is an integral component of enhancing learning (Jahromi et al., 2016; Jovanoska, 2021; Tennant et al., 2023); and 3) Optimizing Knowledge Mobilization, which provided insight into optimizing the integrity of the information as it was relayed by service providers from the source to the client; knowledge mobilization is an umbrella term related to the production and use of evidenced based information from research results (Social Sciences and Humanities Research Council (SSHRC), 2023). This discussion will expand upon the literature review in Chapter 2 and be presented within the Socioeconomic Model (SEM); namely, macro (structural/systems and society), meso (community and organizational) and micro (individual and interpersonal). This is consistent with intersectionality's principle of multi-level

analysis to examine inequities across the macro, meso, and micro levels (Hankivsky, 2014). The three cross-cutting points of establishing vaccination communication scaffolding (macro), vaccination campaigns (meso), and interpersonal communication (micro) skills will be discussed through an intersectionality theoretical framework within the context of interpretive design, in relation to this study's objectives of: 1) To examine ways to build the capacity of service providers to effectively educate communities with low vaccination rates; 2) to identify effective vaccine communication strategies to reach disadvantaged communities; 3) to provide insight to develop best practice guidelines for vaccine uptake in disadvantage communities and 4) to provide insight to create a knowledge mobilization tool for service providers, to improve vaccine uptake. To note, the analysis of the perspectives of the service provider participants in this study are intended as a reflection of the vaccination communication services available to the most affected groups, such as ACB communities, in Ottawa and the national capital region and are meant to provide insight rather than evidence.

6.1 Macro Level

Macro level institutions create the scaffolding for vaccination communications by exerting power that controls, regulates, and influences society's structures and systems that reinforced the distribution of resources. Based on this study's findings, there is a need to improve vaccination communication scaffolding, which includes working to shift power by acknowledging structural racism and realigning social structures and improving vaccination campaign infrastructure, so that the needs of the most affected groups, such as ACB communities are met.

6.1.1 Acknowledging Structural Racism and Realigning Social Structures

This study's findings showed the belief that underlying mistrusts due to structural/systemic racism and inequities needed to be addressed by working to realign social structures to improve

vaccination communication for evidence-informed vaccine uptake. This was believed to involve relinquishing power so that those most informed (including tacit knowledge) become leaders in the decision-making process, including promoting community strengths and empowerment. These views were supported by the literature; for example, Jindal et al. (2023) connected low vaccination rates to the lack of trustworthiness of institutions due to structural racism. Race is a fundamental and foundational aspect of the theoretical framework of intersectionality and equity is one of its principles, it is concerned with fairness and considers multiple positions of privilege and oppression and through its social justice-oriented approach it can help to improve the lives and life chances of those who have been marginalized (Crenshaw et al., 2024; Hankivsky, 2014; McNeely et al., 2020). Consistent with this study's findings, there is a need to build equity in vaccination communication (Sommers et al., 2025), the impacts of systemic racism on vaccine uptake in the most affected groups, such as ACB communities, will be discussed in relation to intersectionality.

Structural racism is the totality of ways society creates and maintains racial discrimination including through mutually reinforcing oppressive systems (e.g. healthcare, education, media etc.) (Jindal et al., 2023). It also prevents people from fully participating in society while denying them equal rights, freedoms, respect, and dignity through system wide reinforcements of racial inequities in policies, practices, and cultural representations (Corbie-Smith, 2021). Additionally, considering the intersecting of multiple axes of oppression, rather than considering one inequity at a time, better serves to reveal the consequences of unequal distributions experienced during COVID-19 by the most affected groups (Acebillo-Baqué & Maestripieri, 2023; Macgregor et al., 2023). Structural racism perfuses into meso level organizations (e.g. hospitals, clinics etc.) by becoming operationalized in default practices of dominant norms and values, which maintains

unequal power dynamics (Corbie-Smith, 2021; Gee & Ford, 2011). Public health governance, as part of a system founded on structural racism and deeply rooted unconscious biases, resulted in dominant siloed approaches becoming adopted and thus rendering vaccination efforts intended to improve health as separate and unequal, which subsequently exacerbated inequities; however, many still remain reluctant to recognize structural racism as the root cause of racial health inequities (Egede et al. 2024; Huffstetler et al., 2022; Mac-Seing & Di Ruggiero, 2024).

Governmentality forgoes responsibility and accountability when it fails to recognize how racial inequities impacted vaccination uptake, thus serving to deflect perceptions onto the individual rather than governmental institutions that are responsible for vaccine accessibility and acceptance, thus engaging in invisibilization by ignoring the social suffering of marginalized groups (Herzog, 2017; Manca et al., 2024). Furthermore, dismissing inequities facilitated the implementation of binary divisions of risk (un/under vaccinated) and not risky (vaccinated), giving rise to the equally banal assumptions that those being considered a risk are uninformed, ignorant, and selfishly irresponsible; subsequent negative emotions are often directed to those with fewer resources, choice, and who are subjected to systemic problems such as classism and racism (Manca et al., 2024). Structural racism also exacerbated health inequities and undermined COVID-19 related public health efforts in Black and other racialized communities (Government of Ontario, 2017; Kemei et al., 2023). Anti-Black racism in public health and health systems was identified as the most significant barrier to vaccine uptake amongst diverse Black communities (NCCDH, 2021). Canada has a long and troubling history of anti-Black racism and despite decades of anti-racism legislation, racism still exists, even though having a society without structural racism has social, economic, and health benefits (Ahlberg et al., 2019; Churchwell et al., 2020; Government of Ontario, 2022). Consistent with this study's findings, the literature

showed that to mitigate racism and inequities, decision makers should consider how their policies impact the abilities of disadvantaged communities to make informed vaccination decisions, to ensure that they are implementing non-discriminatory, trust-based approaches, rather than coercive vaccination policies such as vaccine passports, restrictions, and mandates (Bardosh et al., 2022; Giwa et al., 2023; Pertwee et al., 2022). Vaccine passports, for example, increased the risk of inequities since only those who were vaccinated could access some places and services (Capurro et al., 2022; Giwa et al., 2023). Mandates were also attributed to damaging public trust, decreased vaccine confidence and social wellbeing, increased social and political resistance, increased political polarization and mistrust in the government, increased health and socioeconomic inequities, and raised tensions in those who were hesitant because they were not able to escape the threat, this could result in emotional responses such as anxiety and anger, which are further drivers of vaccine hesitancy (Bardosh et al., 2022; Giwa et al., 2023; Stevens et al., 2022). Moreover, people have been shown to worry more about a risk that is involuntary compared to one that they are in control of; when policies are created that are founded on obedience or lack of choice, it can also draw on systematic forms of oppression experienced by Black people (Giwa et al., 2023; Holt et al., 2016). Although it is recognized that vaccination refusal can have serious public health implications, and tools such as mandates help reduce the spread of infection, consideration should be given to those with deep rooted fears and concerns regarding vaccinations (Giwa et al., 2023; Jones-Nosacek et al., 2024; Shachar & Reiss, 2020). Work should be done to help address these fears and concerns, as mandates interfered with individual agency, were exclusionary, and highlighted the complex inequities experienced by Black Canadians as policies interconnected with race, employment, and religion (Giwa et al., 2023; Jones-Nosacek et al., 2024). Subsequently, due to the lack of relevant information and

mandatory vaccinations, this study found that job loss amongst ACB staff was disproportionately higher, this is consistent with the literature which showed a high job loss of Black people in Canada during the pandemic (Kemei et al., 2023). Job loss also contributed to staffing shortages, provider burnout, and furthered client communication challenges, including increasing time restrictions (Brophy et al., 2024) and decreasing the availability of services, such as ACB translators.

This study shows that the government's focus on the amount of people vaccinated, rather than who was being vaccinated, was believed to be problematic because it did not account for specific community needs, impeded equity achieving processes, and negatively impacted service providers' abilities to reach the most affected communities. Therefore, more work needs to be done to create infrastructures that recognize the impacts of racism on vaccination uptake, this should be supported through the collection of race-based data, since the impacts of racism and inequities on vaccination uptake could be masked by the upward trend in public vaccine hesitancy towards COVID-19 vaccines (Cox & Edwards, 2022; Leong et al., 2022). The continued collection and analysis of race-based data is also essential to identify how racialized communities are impacted by the SDOH, intersecting social identities (e.g. race, class, immigration status, gender etc.), and interconnected social systems (e.g. racism, classism, linguicism etc.) which create marginalization, vulnerabilities, and disadvantages; however, since socioeconomic indicators cannot be measured in isolation and due to the complexed nature of data collection, it is important to include communities in the process (Munroe, 2022; Rossiter & Ndekezi, 2021). Despite those within ACB communities already being aware of vaccination related inequities, as finding showed, it took race-based data to convince others of the need to make changes in vaccination communications that included targeted interventions. The need to

eliminate disparities and to achieve racial justice is crucial to the creation of vaccine equities as well as ethics and human rights principles, highlighted by the disproportionate suffering of disadvantaged groups; as people mourn the inequitable loss of lives from COVID-19, changes must be made for the benefit of racialized communities (Braveman et al., 2011; Huffstetler et al., 2022; McNeely et al., 2020), which in turn benefits all society. PHAC (2021) stated the importance of creating a coherent, shared, impactful, and sustainable data foundation allowed for the protected and collective use of aggregated and individual health data to improve, individual, community, and society outcomes, thus helping to identify the foundational causes of problems, identify improvement opportunities, and help to create guiding principles. However, any project that is biopolitical in nature and ascribes to regulate human life using personal data should be cautioned not to treat populations as co-existing individuals that can lead to a governmentality approach whereby freedoms are considered to be enacted through practices and discourse to encourage self-governance of personal health and social order (Manca et al., 2024) at the compromise of the government taking responsibilities for their role in creating structural racism and inequities. Nor should data be used for moral regulation (moral practices, techniques, and discourse) (Manca et al., 2024) to essentially force people to become vaccinated out of moral obligation; as this study found, vaccine uptake must be based on informed decisions, not out of obligations that do not address, and can even perpetuate, fears and concerns. It must also be recognized that many people who experienced blame associated with low vaccine uptake, have experienced barriers at intersecting locations and disadvantages caused by colonialism and systemic racism (Manca et al., 2024; Marfo et al., 2025).

Achieving vaccine equity is complex and includes vaccination and information access and confidence, which are subsequently influenced by intersecting factors related to, for example,

socioeconomics, culture, environment, discrimination, racism, and historical trauma (Newman et al., 2025; Sobers et al., 2024). Furthermore, the interconnected nature of health systems, community systems, and social norms and behaviors, require multidimensional tools to determine causes and interventions for systemic solutions. These solutions include transformative health policies that inform health related structures, organizations, and public policies to raise awareness of the complex socioeconomical, historical, and political foundations of health and social issues (Hopkins et al., 2023; Marfo et al., 2025). Kimberlé Crenshaw, who coined the term intersectionality, emphasized how the discourse of resistance, such as antiracism and feminism, could legitimize marginalization, as their narrow scope truncated the advocacy around racism and patriarchy by placing resistance movements at odds with each other. As such, understanding how these issues intersect, has broadened this discourse; intersectionality continues to engage a range of issues including power dynamics, discursive structures, politics and legal systems, and social identity (Carbado et al., 2013) which can be used to further refine interventions to meet the needs of the most affected groups.

PHAC (2021) described the COVID-19 pandemic as highlighting the stark interactions between the SDOH in exacerbating health inequities and shaping health outcomes; now that the connection between health and the social environment is understood, the redistribution of power must also be considered. However, racism and other intersecting social factors disproportionately subjected some communities to negative sociopolitical factors, yet they were not prioritized in the initial responses to COVID-19 (NCCDH, 2021). This lack of prioritization led to many communities not trusting the system that failed to protect and support them, and it contributed to low receptivity to vaccine promotion efforts and vaccine uptake (NCCDH, 2021). The importance of using intersectionality in public health to improve vaccination communication

services through nuanced interventions is highlighted in this study. Despite Hankivsky (2014) describing the need to implement intersectionality in public health, there still appears to have been a failure to effectively implement it. Sobers et al. (2024) stated that Canada's vaccine rollout COVID-19 guidelines used the Ethics, Equity, Feasibility, and Acceptability (EEFA) framework, yet it still had vaccination rates that significantly varied by race, ethnicity, geography, and work and living conditions; raising questions about how equity was integrated into immunization approaches. Decision makers must be aware of where the inequities lie to effectively address them; however, findings suggest that little was known about how the intersecting social disadvantages and privileges contributed to the inequities in the use of COVID-19 information and vaccine access (Marfo et al., 2025). This highlights the need to incorporate the theory of intersectionality into public health research, which Cha et al. (2023) found was lacking, despite strong recommendations for its use. Chal et al. (2023) conducted a scoping review which reported that of the 4725 studies identified, 78 of those were included in the review, of which 20 studies included intersectionality concepts, while no studies explicitly used an intersectionality framework to guide their research, and all studies were quantitative. It is important for intersectionality to be used correctly so that its essence is not lost, therefore care must be taken when using quantitative methods not to decontextualize the data from its relevant context (Cha et al., 2023). For example, Gate et al. (2021) systematic review of 413 studies related to factors potentially associated with unequal levels of illness or death from vaccine-preventable diseases (VPDs), found only two trials reporting on interventions to reduce health inequities related to hospitalization or mortality outcomes. Although the studies considered equity factors, health equity was rarely explicitly investigated in relation to vaccination outcomes (Cha et al., 2023). However, Mac-Seing & Di Ruggiero (2024) described how COVID-19 has

brought a recentering to the triad of funding, equity, and accountability for global health and population health research in Canada, with a recognized need to address and act upon power asymmetries for equitable and accountable health outcomes of vulnerable and marginalized groups. This must be considered with protracted intentions, since intersectional analysis, like interpretive description, is a work in progress; situations, social contexts, and social identities (race, class, gender etc.) change within societal power systems (Carbado et al. 2013; Macgregor et al., 2023; Thorne, 2025).

6.1.2 Improving Vaccination Communication Infrastructure

This study's findings showed that through actively listening to clients' needs and working to provide appropriate education, participants believed that it was necessary to address mis/disinformation and to optimize knowledge mobilization by creating solid infrastructure to better relay evidence-based information at the macro level. Participants believed that issues went beyond the capacities of individual organizations to address.

Mis/disinformation and the lack of effective crisis infrastructure negatively impacted vaccination communication, including leading to inconsistent and confusing messaging which were believed to perpetuate fears and concerns founded in real, perceived, historical, and contemporary racism. The power of information and resultant knowledge should not be underestimated, "our power is merely based upon our knowledge of the procedure which Nature follows" (Bacon et al.,1861, p.59). Intersectionality's principle of diversity of knowledge pertains to the relationship between power and knowledge production (Hankivsky, 2014). It must be considered that communication itself is not neutral, rather it is embedded within the omnipresence of power, which is shaped by multiple dispersive sources, such as norms, institutions, media etc., thus reinforcing how trust and authority are socially constructed through

discourse, "Power is everywhere; not because it embraces everything, but because it comes from everywhere. And 'Power,' insofar as it is permanent, repetitious, inert, and self-reproducing, is simply the over-all effect that emerges from all these mobilities." (Foucault, 1978, p. 93). Therefor power and knowledge and consequently communication are intrinsically linked. COVID-19 highlighted the imbalances of power and knowledge divides, including appropriate resource distribution to address community concerns (McNeely et a., 2020).

Consistent with this study's findings, mis/disinformation included conspiracy theories and rumors related to the COVID-19 vaccine which spurred vaccine hesitancy and heightened fears and anxieties, which can often emerge during times of social uncertainty (Jin et al., 2021; Pertwee et al., 2022). In this study, misinformation was also believed to have created a barrier against service providers' efforts to relay vaccination information and engage with their clients; for example, a client told a participant that the COVID-19 vaccine was a trick against Black people and that they should not be promoting it. Misinformation was one of the major influences of vaccine uptake in Black communities (NCCDH, 2021), they had a greater susceptibility to vaccination related misinformation due to current and historical structural inequities, as well as their fears and mistrust being exploited (Attwell et al., 2024; Kemei et al., 2023; Nartey et al., 2021). For example, this study showed that even people with years of scientific training and healthcare experience were susceptible to mis/disinformation due to overpowering fears about the vaccine, and it often took a devastating event, such as a death of a family member, for them to get vaccinated. In addition, ACB communities were specifically targeted by disinformation campaigns; Hotez (2021) found that efforts by Russian intelligence to discredit Western COVID-19 vaccines included specifically targeting African countries with anti-vaccine messaging that exaggerated fears and outrage about being treated like "guinea pigs". This is of concern, since

this current study found that local ACB communities would get their vaccination information from outside of Canada, including African home countries, through online platforms and social media, such as WhatsApp; this information would subsequently be relayed to others in the community. In addition, a participant in this study described online ACB groups being infiltrated by radicals; this is supported by Dwoskin (2021), which found that when Twitter did a sweep of accounts of Qanon (an extremist ideology with radicalized followers) thousands of tweets about the mark of the beast, a prominent myth within ACB communities, disappeared.

Theorist Pierre Bourdieu believed that everything presented as truth is filtered by economic power and symbolic power which is control through language, symbols and ideas to influence people's views on what is important, normal, or right (Christensen, 2023). What is communicated as known, is shaped by discourse and the systems of power which regulate it, Foucault describes discourse as a set of truths on a given subject which determine and reflect perceived reality; thus, power is a strategy formed through discourse (Bristowe & Harrist, 2014) of which communication is a part. The truth also depends on who has the authority to define it, as communication is governed by societal power structures that determine what is said and believed, "Each society has its regime of truth, its 'general politics' of truth: that is, the types of discourse which it accepts and makes function as true..." (Foucault, 1980, p. 131). Moreover, knowledge is described as a belief that has been justified as true, however, epistemic injustice occurs when power influences the credibility of information and when people are disbelieved or excluded from knowledge production due to race, class, gender etc.; it occurs when a person's capacity as a knower is hindered, rendering a victim of epistemic injustice experiencing unfairness in the process of knowledge production, receiving, and sharing (Dhakal, 2025). Fricker (2007) described two types of epistemic injustice: testimonial and hermeneutical.

Testimonial injustice occurs when prejudice causes the message recipient (listener) to downgrade the credibility of the message sender's (speaker) statement, such as a person not being believed due to their race (Fricker, 2007). While hermeneutic injustice occurs when there is a gap in the previous collection and interpretation of resources, which puts people at an unfair disadvantage when attempting to understand their social experiences (Fricker, 2007), such as a lack of accessibility to appropriate evidence-based vaccination information rendering critical concepts, that were not previously encountered, difficult to understand. This highlights how power at the macro level can dictate who is informed and who is left misinformed or uninformed; knowledge and authority construct discourse, which determines who is allowed to communicate credibly and how trust is institutionalized, "There is no power relation without the correlative constitution of a field of knowledge, nor any knowledge that does not presuppose and constitute at the same time power relations." (Foucault, 1995, p. 27). Moreover, government and health agencies shaped the dominant narrative around the pandemic, often reflecting normative and Eurocentric assumptions (Hankivsky & Kapilashrami, 2020), marginalizing the experiences of racialized communities, for example, ACB clients not seeing themselves in the messaging, was believed to have impeded their engagement as it obscured the messages relevancy to them. The lack of cultural and linguistically diverse messaging also reinforced systemic exclusion, further demonstrating that language is not only an instrument of communication and knowledge, but also an instrument of power (Bourdieu, 1991). Discourse is the way language is used socially to convey broad historical meaning, identified by social conditions for its use, who is using it, and under what conditions it is being used (Fairclough, 1992), thus highlighting how communication is shaped by and in turn shapes power and trust in institutions. Vaccine hesitancy, as defined in Chapter 1, was influenced by trust in the vaccine delivery system, policy makers, media

information, and the health professionals that recommend and administer vaccinations; when a risk, such as the pandemic, is controlled by an untrusted source, this can result in increased concerns and anxieties (North et al., 2022; Tumpey et al., 2018). During a public health crisis, such as the COVID-19 pandemic, when information is low and a crucial decision must be made, it is important to trust those in positions of power in relation to the vaccine, including policy and decision makers in the government, health systems, and research (Pertwee et al., 2022). Racism and inequities perpetuate mistrust, yet trust is essential for successful public health interventions, as trust in the government is associated with a decreased opposition to policies and an increase in willingness to follow COVID-19 preventative measures. However, mistrust in the government has been reported to decrease efforts to seek help due to feelings of betrayal and fears of re-traumatization (Hyland-Wood et al., 2021; Lansing et al., 2023; Schmelz & Bowles, 2022). Similarly, participants described how the medical system was founded on the oppressive structures of colonialism and a history of unethical medical practices, such as the Tuskegee experiments, which contributed to fears of further abuse and increased susceptibility to myths; including that the COVID-19 vaccine was intended for population control. Although the Tuskegee experiments are often cited as the foundation for distrust, it should also be acknowledged that distrust is based on centuries of racist exploitations by physicians and researchers (Warren et al., 2020). Martin et al. (2023) cautioned that framing Tuskegee as the reason for medical mistrust and COVID-19 vaccination hesitancy in Black Americans presumes an awareness of historical injustices and could neglect current experiences, potentially leading to the perception that if Black people would stop focusing on the past, they would get vaccinated, thus disregarding the multitude of challenges they currently face. Marginalized communities need accurate health information from sources they trust to address their concerns, especially

during a health emergency (Hopkins et al., 2023). Conveying knowledge to others should help them make sense of their own social experiences; how to achieve this is the ethical question in the operation of social power in epistemic interactions (Fricker, 2007). In this study, it was found that receptivity to vaccination information could be improved by increasing the availability of racially concordant service providers, as participants believed it instilled an automatic sense of trust in clients. Consistent with these findings, the literature showed that racially concordant service providers have been associated with improved communication, cross-cultural care, patient satisfaction, and acceptance of invasive procedures and outcomes, which subsequently may help to reduce health inequities (Guillaume et al., 2022). Despite the desire for more racially concordant service providers, there was also a need to mitigate barriers to ACB people entering healthcare pathways. Black physicians are underrepresented in medicine which further exacerbates their responsibilities to be available for Black clients; Statistics Canada (2016) reported that only 2.3 percent of Ontario's physician workforce were Black, compared to 4.7 percent of the population (Ontario Medical Association, 2023). Although some medical schools have encouraged ACB students to become role models and encouraged others to enter the profession, stereotypes, stigmas, and marginalization of the Black culture and communities have contributed to some Black people not seeing their potential to be role models (Harris, 2017; Newman, 2021; Owoseni, 2020). Furthermore, racially concordant service providers have increased responsibilities both for their clients and from the system, such as needing to maintain their baseline of trust. Placing Black service providers in a position whereby they are deemed as a solution, can also impose additional burdens, as they are expected to go beyond their professional identity to relate to broader Black communities and it could deflect from institutional responsibilities, such as finding long-term solutions (Newman, 2021).

Service providers do not work in isolation; this study found that there was a need for improved infrastructure with strengthened equity-centered collaborations between stakeholders and decision-makers, including government officials, healthcare agencies, organizations serving communities, and community leaders, to support the creations of accessible, trustworthy, and unified messaging. However, due in part to the novelty of the virus, the evolving nature of the pandemic, combined with the structural limitations federal, provincial, and institutional policy makers and managers of healthcare systems faced communication challenges regarding effective COVID-19 health policies, such as maintaining a consistent narrative on public measures, changing treatment protocols, and social media fueling controversies (Filip et al., 2022; Vernon-Wilson et al., 2023). Furthermore, when there are underlying competing values, this can create challenges in the messaging even when it is based on empirical evidence (Hyland-Wood et al., 2021). For example, despite government officials and organizations serving communities understanding the need to mitigate the harms of the pandemic based on empirical evidence, some participants in this study believed that government's agenda to vaccinate the most people in the shortest period of time, was contrary to the needs of the most affected communities, which required additional resources. The lack of unification between the government and public health agencies was also believed by participants to have led to conflicting messaging and subsequent confusion about the need for vaccinations, such as some people believing that the COVID-19 vaccination was not needed once mandates were removed. Leaders should strive for cooperation and consensus, as creating confusion through conflicting messaging could subsequently decrease the uptake of recommendations (Hyland-Wood et al., 2021; WHO, 2023).

Efforts to improve communications must include collaboration with the communities most affected. Consistent with this study's findings successfully closing the vaccination gaps and

increasing vaccine confidence have been attributed to supporting initiatives that are community driven; highlighting the need for partnerships between health systems and communities (NCCDH, 2021; PHAC, 2023). The Government of Ontario (2022) stated that it aimed to fund a variety of programs to help improve racism and inequities, but findings showed that programs in the past have been time and resource limited, running piece meal rather than coherently together, which also compromised community trust when programs ended. Progress can be made for societal change and to create better health outcomes, but efforts should be longitudinally measured, with appropriate modifications made to ensure progress (Monroe, 2022). Based on the principles of participatory action research, which works to build trust by strengthening collaborations and co-creating actionable knowledge to improve equitable health-related decision making, collaborative relationships should extend past a particular project, since the desired change is rarely seen in one project; rather one project is nested within long-term collaborations and attempts to bridge programs are made (Cornish et al., 2023; Lansing et al., 2023). Officials should consider these principles when funding projects to help improve continuity, consistency, and community presence between and within projects, which were found to be lacking by this study's participants. However, this study found that there was a lack of consideration regarding the availability of resources to implement policies and directives, such as lack of time and funding to adequately reach disadvantaged communities that had been most affected by COVID-19. Consistently, Vernon-Wilson et al., (2023) stated that policy communications must be supported by carefully considering resources, that it takes time and resources to engage with communities, and policy makers need to be cautious that any policy changes do not compromise ongoing efforts to build vaccine confidence within the communities. Care must also be taken to ensure that initiatives are not myopic, resulting in further exacerbating other inequities not

directly related to the COVID-19 vaccine and pandemic, including disrupting logistical planning and community engagement work. For example, during the COVID-19 pandemic there was a decrease in routine immunizations and vaccination coverage around the world, thus jeopardizing herd immunity and risking the resurgence of vaccine -preventable diseases (Contarino et al., 2022; Vernon-Wilson et al., 2023). This is consistent with this study's findings whereby working to meet government directives compromised the ability of some service providers to do more work with communities.

Communication approaches during COVID-19 needed to address vaccination hesitancy within the context of the pandemic. To help mitigate the impacts of COVID-19 while providing effective vaccination communication, the WHO's risk communication and community engagement strategy (RCCE) and the United Nations Comprehensive Response to COVID-19, aimed to reduce the negative impacts of COVID-19 by widely championing for people-centered and community led approaches to increase trust and social cohesion, with governments and partners in public health being involved in the development of humanitarian responses that were systematic and consistent (WHO, 2020b). This is consistent with this study's findings which highlighted the importance of community collaborations and working in partnerships with other organizations and knowledgeable individuals. The WHO (2020c) requested that the global health community implement risk communications, to improve vaccine uptake related to COVID-19; risk communication informs the public about the associated risk of a disease or event through mass media, leaders, peers, and dialogue and is a real-time exchange of information, opinions and advice between experts, officials, community leaders and those who are at risk, through engagement, listening, and empowerment, so that people could make informed decisions to protect themselves and others (Nsubuga et al., 2023). In addition, the United Nations (n.d.)

COVID-19 response called for a coordinated and comprehensive large-scale health response by the whole of government, society, and the world to address the resultant health, economic and humanitarian crisis. To improve communications medical, scientific, and public health professionals; government officials; media commentators; and clinicians around the world should all work together (Jacobsen & Vraga, 2020). In addition, the WHO (2020c) stated that risk communications should be integrated, coordinated, inclusive, accountable, open, transparent, and informed by data; as previously described, data such as race-based data was imperative to identifying the most affected and disadvantaged communities, however, data must be relayed with context to avoid further misunderstandings. For example, this study found that reporting that the rate of infection was higher in ACB communities, without context, led to stereotyping and some people believing that ACB people were spreading the virus.

In this current study, it was found that for information to be useful it needed to be relatable and relevant to the communities. People who are expected to follow guidelines should also be involved in their creation, especially when public interests are high, such as during a pandemic, so that the guidelines are trusted, understood, and transparent (Charide et al., 2023). Trust in the government and organizations is also increased when there is transparency in the decision-making process and in the information presented (Hyland-Wood et al., 2021; Schmelz & Bowles, 2022). Communications during a public health crisis should include who was consulted, what scenarios and compromises were considered and what evidence was used to inform the recommendations (Hyland-Wood et al., 2021). This is consistent with this study's findings, whereby it was believed that more ACB people should be the first ones to deliver the messaging because communities want to know where the information is coming from. Moreover, transparency and trust also need to be underpinned by community engagement and cross-

disciplinary perspectives, through bi-directional communications; risk/crisis communications should strive to make communities more resilient and draw on knowledge of socioeconomic and behavioral science (Hyland-Wood et al., 2021; Nnenia et al., 2020). Communication strategies should not follow the "deficit model", whereby communications are unidirectional and used as a means to educate the uninformed public, rather concerns should be shared and addressed, to facilitate building trust, confidence, and follow through on recommended behaviors, with community dialogues being prioritized in risk communication methods (Hyland-Wood et al., 2021; Nsubuga et al., 2023).

Communication infrastructures should incorporate a multipronged strategy to address vaccination uptake disparities in racialized and marginalized communities, including addressing communication challenges and increasing empathy (Richard-Eaglin & McFarland, 2022; Willliams & Cooper, 2019). It must also be considered that although early vaccine disparities were attributed to historical medical and government mistrust by racialized and ethnic minorities, further evidence has shown that barriers to COVID-19 vaccine uptake also included the quality of information; messaging should consider communities' perspectives, including their motives, values, and concerns, to help prioritize communications related to the reasons behind vaccine hesitancies and low vaccine uptake (Chou et al., 2020; Mansfield et al., 2023). Findings in this current study showed that those who intended to get vaccinated may have faced additional barriers related to vaccination access, this could also act as a deterrent for engaging in vaccination education. For example, this study's findings showed that vaccine equity was impeded by a difficult booking system, schedule conflicts, and by large clinics that were unfamiliar and that required transportation. Similarly, NCCDH (2021) stated that barriers to vaccination equity were online booking systems, which required a valid Ontario health card

when not everyone had one, and phone-based booking, which had long wait times and could take time away from work and other responsibilities. Findings also showed that vaccination equity was improved once a health card was no longer needed at vaccination clinics, when internationally trained healthcare providers worked in vaccination clinics to provide support, and when dedicated community clinics where established. NCCDH (2021) also found that waiving health cards and other appointment requirements increased equity and access. In addition, although this study's findings showed that it took time to hire internationally trained service providers due to bureaucracy, Ontario did provide temporary certificates to internationally trained physicians without medical licenses under certain strict conditions (Rizvic, 2020). In 2022 internationally trained nurses also joined the Canadian health workforce (Health Canada, 2024); however, there were still barriers (Balintec, 2022), including each province and territory in Canada establishing their own requirements for internationally educated nurses (CNA, n. d). Rizvic (2020) stated that there were 13,000 internationally trained doctors in Ontario alone who were not working in their field according to HealthForceOntario; this study found that internationally trained service providers should have been provided more opportunities to work to improve vaccine uptake, such as helping to provide vaccination related education.

6.2 Meso Level: Local Vaccination Campaigns

The meso level explores how local vaccination campaigns were impacted at the organization and community level in relation to this study's main themes of Mistrust and Empowerment, Active Listening and Education, and Optimizing Knowledge Mobilization. This will be described within the subheadings of Exacerbated Inequities and Amplifying Communities' voices. Within the subheading of Exacerbation Inequities, the impacts of COVID on local vaccination campaigns will be discussed in terms of inequities faced by the most

affected groups. In the subheading of Multi-pronged Approaches, messaging and improving vaccination communications strategies will be discussed.

6.2.1 Exacerbated Inequities

This study's findings showed that inequities in local ACB communities were believed to have been exacerbated during COVID-19. Part of understanding mistrust and supporting empowerment of the groups most affected, such as ACB communities, was to acknowledge that vaccination communication was influenced by power and oppressive factors such as inequities that created access barriers to appropriate information and vaccines. Local campaign efforts did not work in isolation, macro level structures not only impacted community inequities, but macro level (health authorities and governments) decisions also influenced meso level's (local organizations hospitals, clinics, public health units, community care etc.) abilities to respond effectively. The racialized ideologies and practices stemming from structural and systemic racism impacted the administration of healthcare services, the allocation of resources, services to individuals, and training and education programs, which are also reflected in the practices and policies of health organizations (Garneau et al., 2019); for example, this study showed that some service provider's workplaces did not have sufficient policies to address anti-racism or specifically anti-Black racism for their own staff, which raised questions about how they could then provide effective services to racialized communities, such as ACB communities. Organizations and public health authorities must consider the local context when creating pandemic strategies intended to reach vulnerable groups; ethical engagement must include support to meet local community needs, particularly those with long standing structural, health, and social inequities, to build trust and confidence in the vaccine and the science behind it (Fletcher et al., 2020; Rämgård et al., 2023; Shen et al., 2023). However, prior to creating a

vaccination campaign, organization should look within themselves to ensure that their practices promote trust, including addressing racism and promoting equity and diversity within the organization. For example, this study found that how ACB staff were treated within the organization was believed to be indicative of their abilities to serve ACB communities; that diversity in leadership could provide insight into creating policies and strategies that support communities with low vaccination rates, such as ACB communities; and that diversity was also beneficial to building non-concordant providers' capacity to educate through working in teams and networking, as it helped to reduce barriers, such as by bridging trust in services and helping to reduce language barriers. Similarly, Lee et al. (2021) stated that during a crisis, relatability of needs was improved by diversity-oriented leadership.

Intersectionality's principle of time and space considers that people have different kinds of knowledge based on how, when, and where they live and interact; therefore, privileges and disadvantages are fluid and meaning is constructed (Hankivsky, 2104). Within the sociopolitical context of the COVID pandemic (also referred to as the COVID-19 pandemic), findings showed that there was an increase in disadvantages among the most affected groups, such as ACB communities; the pandemic amplified the inequities that were already present due to the racism and marginalization of disadvantaged communities (Chou et al., 2020; McFadden & Erikson, 2020). Findings showed that social inequities, such as those related to the SDOH and structural inequities, such as discrimination and structural racism, contributed to vaccination inequities. There was also insufficient documentation about the factors that impacted vaccine uptake, including understanding the roles of COVID-19 related stress, health literacy, racial discrimination, conspiracy theories, and confidence in health authorities (Cénat et al., 2023). During COVID-19, even healthcare organizations dedicated to health equity, had difficulty

addressing the intersecting power structures associated with racism (Garneau et al., 2019). When vaccine rollout began, as previously mentioned, government authorities were minimally informed by health inequity frameworks; thus, initial COVID-19 responses often relinquished explicit equity considerations to the background (Beall et al., 2025; Mac-Seing & Di Ruggiero, 2024). Although some groups were prioritized in the initial rollout (Phase one), such as the elderly and those with pre-existing health conditions, ACB communities were not prioritized; this was problematic as many racialized people worked as low-income essential workers and faced a greater risk of stigma and emotional abuse (Marfo et al., 2025). The lack of prioritization and subsequent discrepancies in resource allocations impacted public health initiatives (Fontaine et al., 2024).

Findings showed that the increased health inequities caused by the pandemic strained health organizations, when trying to meet their clients needs and abide by government and health authorities' mandates. In Ontario, the public health units faced ethical, operational, and communication challenges in their response to COVID-19 in delivering local public health programs and services; including fractures in health systems, such as limited capacity and flexibility in service delivery, struggling to manage the large number of cases, navigating of complex ethical and political issues related to their response, balancing public health priorities and individual rights, workforce shortage and the need for additional training, and inconsistent decision making (Fontaine et al., 2024; Sobers et al., 2024). As such, Garneau et al. (2019) stated that there was a lack of prioritization in operationalizing equity, this hampered organizations' capacity to address structural inequities, which resulted in health-related organizations echoing macro level discourses about healthcare in society. This is consistent with this study's findings which found that, creating areas such as mass vaccination centres outside of local

neighbourhoods were problematic because they required transportation, childcare, and time off work, as well as evoked anxieties related to unfamiliarity of services and the environment. This is consistent with residential segregation whereby there is unequal access to resources such as transportation, education, and limited employment which results in difficulties in taking time off work to get vaccinated (Jindal et al., 2023).

This study's findings supports the need to bridge the knowledge to action gap to improve health equity, this includes using a social justice approach to respond to communities' intersecting health and social needs and not defaulting to equality informed vaccination communication related interventions, which assume that all people have the same capacities or lack of barriers, rather health equity recognizes that people have different capacities to obtain health (Garneau et al., 2019). Therefore, interventions need to address the racism and discrimination present in the mutually reinforcing systems of healthcare, employment, housing etc., since failure to mitigate the root causes of structural and systemic racism, socioeconomic inequities, and access barriers, could create vaccination communication strategies that are perceived as superficial and disingenuous (Bailey et al., 2017; Boulware et al., 2016). Furthermore, communications should not evoke emotional responses such as blame, anxiety and fear, which facilitates stigmatization (Manca et al., 2024); such as the belief that Black people were spreading the virus or that they are not interested in the COVID-19 vaccine, as found in this study. Moreover, despite the need to mitigate health inequities being obscured by Canada's neoliberal view of attributing health as the individual's responsibility, blame should not be placed on individuals for their vaccination status, rather communication strategies should empower disadvantaged groups (Manca et al., 2024). Empowerment strategies should include equitable access to health and social resources such as appropriate vaccination information, as

well as by adjusting power differentials that perpetuate systemic inequities and oppression (Marfo et al., 2024).

6.2.2 Multi-pronged Approaches

Organizations faced communication challenges, multi-pronged approaches were needed to address the complex and interconnected factors affecting vaccine uptake, including applying tailored initiatives (Fontaine et al, 2024; Hopkins et al., 2023) to reach the most affected groups, such as ACB communities. This study found that part of creating effective vaccination communication included optimizing knowledge mobilization, as such organizational leaders had responsibilities to maintain the integrity of the information. Findings showed that the process of knowledge mobilization provided the underpinnings for effective communication strategies to relay accurate information to build trust and provide the necessary resources for clients to make an informed vaccination decision. Leaders had to make difficult decisions involving complexed issues; however, drawing on past precedents and experiences, listening to all stakeholders, creating open dialogues, defining long-term goals, proactively drawing on research, maintaining transparency about what was known and unknown and what could potentially change, and being open about the organization's decision-making process, were beneficial to building organizational resilience (Charide et al., 2023; Mendy et al., 2020; Simonovich et al., 2021). Leaders should also ensure that service providers know how to effectively use client educational materials and should provide trusted resources; trusted sources are important for the accurate dissemination of information to communities, since the influx of information made it increasingly difficult to find reliable sources (Fletcher et al., 2020). In addition, organizations should ensure that service providers do not contribute to misinformation; although service providers should clarify any points of uncertainty in communications before acting on them

(Miller, 2022). The ability to communicate to those within and outside of the organization was found to be important in this study, as the effective acquisition and relaying of information during the dynamic environment of the pandemic was found to be reliant on the level of networks, partnerships, and connections available to service providers. For example, cross-disciplinary collaborations, such as with education institutions and housing, could expand resources for communities (Fletcher et al., 2020); similarly, it was also believed in this study that collaborations, such as those with the schools, could help streamline services to reduce gaps and redundancies in services. Community-based organizations could also facilitate connections between government health agencies and the communities to improve experiences and build trust to influence vaccination decisions, since they work to support the public health and the social, behavioral, and physical needs of local communities; they are important partners, not only during a public health crisis, but to build authentic relationships between organizations as well as with community residence (Guan et al., 2024; Shen et al., 2023). Partnerships, collaborations, and networking were also found to be fundamental in planning and implementing vaccination communication strategies. For example, community-based organizations could bridge communities and public health programs by appropriately disseminating salient messaging, through means that resonated within the communities; partnerships between vaccination campaigns could also help to streamline resource management to facilitate a clear and concise approach (Adrien et al., 2018; Shen et al., 2023). Consistently, Holt et al., (2016) stated that healthcare providers could communicate more effectively if they partnered with outside organizations such as patient and public health agencies. It was also found that more effort should be made to develop and sustain partnerships, as they help to build trust and foster transparency, this entails power sharing and collaborations, which are essential for genuine and

productive partnerships with community members; those that are familiar with the communities can help to build flexible, tailored outreach that are socioeconomically, linguistically, and culturally congruent with the community (Chou et al., 2020; Lansing et al., 2023; Mansfield et al., 2023). Community collaborations could also help to avoid presenting healthcare related information intended to focus on diversity becoming configured into individualism, egalitarianism, racialist, and culturalist discourses to yield over simplified, stereotypical representations of the cultural and racialized groups organizations aim to serve (Garneau et al., 2019). Vaccination communications should reach a higher level of integrity by understanding and changing how normative claims and social grammar can silence social groups, such as with exclusionary messaging (Herzog, 2017). It should also be considered how people respond to the signs and symbols used in messaging, such as the vaccine itself, which could create varied emotional responses within different groups, including fear and uncertainty (Manca et al., 2024). Moreover, language is deeply influenced by cultural values and norms, therefore cultural backgrounds play an important role in shaping communication patterns and understanding; linguistic differences accentual power or marginalize those with limited proficiency in the dominant language (Saaida, 2023). Therefore, there should be advocacy for policies that promote cultural and linguistic inclusion to empower communities, as the power in communications shapes the dynamics of interactions between diverse people (Saaida, 2023).

Messages must also ensure that language and discourse do not undermine equity-oriented healthcare efforts or create or maintain inequities, rather they should address and mitigate health inequalities and power differentials (Garneau et al., 2019). For example, when messaging reflects the assumption that anyone can get vaccinated if they choose to do so, is consistent with equality rather than equity; for example, in Canada it is widely believed that all citizens and landed

immigrants have the equal opportunity for optimum health, yet life expectancy is lower among low-income Canadians. Furthermore, consistent with intersectionality, participants believed that immigrants "newcomers" faced vulnerabilities due to potentially experiencing traumas in their home country, unfamiliarity with the government and healthcare, difficulty integrating, language barriers, lack of access to resources, and financial instability. This is consistent with the literature, whereby Hou et al., (2023) found that racialized immigrants may have experienced adaptation challenges due to past traumas and barriers related to language proficiency, transferability of foreign credentials, and acculturative stress. This highlights that public health messaging should not focus on vaccination status being the individual's responsibility, as it ignores systemic barriers; for example, Hopkins et al., (2023) stated that the United Nations recognized the interconnections between social norms, behaviours and health systems, and were looking for more connections and points of leverage, including "nudging" and normalizing immunization behaviour. This is reflective of liberal ideology, marketization and competition, and liberal individualism, which focus on the importance of personal choice, and productivity particularly in the publicly funded healthcare system (Garneau et al., 2019). Messaging pertaining to vaccine hesitancy must go beyond individual choice and acknowledge barriers to vaccine uptake, away from neoliberal models of health governance of moral responsibility rather than the need for action to mitigate social inequities (Manca et al., 2024). Communities with low vaccine uptake should be expressed as a social problem and coercive social power should not be used to show power and dominance on issues of importance, rather to build social relationships that establish a sense of fairness (Docherty et al., 2004; Manca et al., 2024). Furthermore, messaging should also denounce racism as unethical, since it is fundamentally contrary to justice, human dignity, and equality, as it imposes bias and unfair socially constructed

differences (Elias & Paradies, 2021). This is consistent with this study's findings that racism must be acknowledged in messaging to help build trust and raise public awareness. Poor communication along with distrust related to racial and cultural differences can frustrate efforts to reach equitable care; vaccination communications need to consider that people must balance competing priorities and that traditionally marginalized, vulnerable, and underserve populations need to be engaged throughout vaccination campaigns to avoid increasing disparities (Butler & Sheriff, 2021; Chou et al., 2020).

Despite well intentioned strategies and interventions, there was a divide between macro level authorities and meso level organizations when it came to vaccination implementation in relation to equity and disseminating appropriate information (Sobers et al., 2024; Fontaine et al., 2024). Although organizations that provided vaccination communication services are largely under the control of macro level structures, they are still in a better position to know the community's they serve and to subsequently advocate and inform higher level policy makers. The principle of knowledge diversity relates to the relationship between power and knowledge production (Hankivsky, 2014); who is creating the knowledge is important, findings showed that the messaging provided by organizations was not necessarily trusted by those within the most affected groups, such as ACB communities. Therefore, as findings showed within the theme of active listening and communication, organizations must listen to community needs, through collaborations, building networks, establishing presence, and providing relevant education based on what organizations learn from communities through bidirectional communications. Furthermore, listening to marginalized voices helps to expand understanding and knowledge production related to intersecting inequities, while reducing barriers and relinquishing power,

which facilitates the expression of ideas and helps to counter Hermeneutical injustice (Dhakal, 2025; Lewis & Grzanka, 2016).

Vaccination campaigns must consider strategies to build trust within the local communities, since it is critical for effective communication and collective action (Lansing et al., 2023; Rämgård et al., 2023). Trust is also essential for community engagement, to facilitate cooperation and sustain relationships, to promote connections, foster equitable access to resources, and to reduce health disparities and promote overall health and wellbeing; however, understanding how to establish trust at the local level is complex, and more work is needed to determine how to earn and increase it (Lansing et al., 2023; Warren et al., 2020). Consistent with this study's findings, collaborations with Black led organizations were also beneficial for successful community vaccination initiatives (NCCDH, 2021). In addition, using ACB experts in town halls helped to improve their reception within local neighborhoods; community engagement platforms provided an interactive means for delivering comprehensive vaccination education, helped to build trust, and increased vaccination acceptance within communities, while enabling service providers to learn more about underlying community concerns and address them with priority and honesty (Guan et al., 2024; North et al., 2022).

Including the most affected groups, such as ACB communities, in vaccination campaigns is a necessity to avoid the assumption of neutrality in health messaging, since the foundations of mistrust due to historical medical racism must not be ignored; the judicial erasure of Black women's subjectivity was the foundation for the emergence of the theory of intersectionality (Black Health Equity Working Group, 2021; Carbado et al., 2013). This is consistent with Foucault (1980) who described that knowledge production was not neutral, but rather it was shaped and made valid by those in power; it should be recognized that power differentials are

exhibited towards racialize communities, such as ACB communities, by how and when they are spoken to, what is spoken about, and how often their voices are heard or excluded. The exclusion of voices is consistent with epistemic violence which is described as the silencing of marginalized groups through their voices being replaced by those with privileged epistemic practices, subsequently damaging their ability to speak and be heard (Dotson, 2011). Furthermore, Dotson (2011) described that epistemic violence occurs when there is a refusal to engage in conversation due to pernicious ignorance which is any ignorance that is consistent or comes from an epistemic gap (i.e. reliable ignorance) that harms another person. Willful hermeneutic ignorance was also used to describe a dominant group avoiding understanding marginalized people's perspectives because it would harm their social standing (Dhakal, 2025). This is also reflective of Spivak (2010) which described marginalized groups as having been systemically excluded from dominant discourse, resultant from colonial and postcolonial power (Spivak, 2010). To this regard, Jürgen Habermas (1984) described discourse ethics through the universal principle of consensus and communicative rationality whereby everyone has the ability to be heard, and thus the power lies in the better rational argument, for this to occur the ethical power of freedom must be present (Christensen, 2023). Therefore, to promote equitable communication practices, empowering communities to engage in vaccination communication strategies could reduced the hinderance imposed by power imbalances and allow for unique perspectives to contribute to collective discourse, encourage diversity and improve social cohesion (Saaida, 2023). Furthermore, initiatives must consider that not all members of a disadvantaged group are uniformly disadvantaged, there are different oppressive axes, with different depths of severity and duration (Braveman et al., 2011). Intersectionality explains that the overlaying of multiple structural inequities creates vulnerable populations, which are not

fully explained by the actions of the individual; ACB people may identify as members within various groups, whereby the barriers within each group synergistically combine to create the unique barriers faced by the individual (Airhihenbuwa et al., 2020; Crenshaw, 1991). Social, demographic, and contextual factors also played a major role in COVID-19 vaccination communications, including responses to public health messaging, access to resources, preferred modes of communication, what is perceived as providing trusted information, and their capacity to respond and act on the information (AlShurman et al., 2021; Hyland-Wood et al., 2021). This study showed that communications can be tailored to different subgroups, such as by demographics including age, gender, education level, and low income; tailored messaging is particularly beneficial when groups have increased vulnerabilities, such as the elderly, and those with low-income (Guan et al., 2024). Within racialized groups intersecting oppressive systems such as racism, classism, linguicism etc., are highlighted by intersectionality, which provides a view into the ways racialized power operates within the intersections of different identities in the system (Crenshaw, 2024), thus providing guidance when tailoring vaccination campaigns.

To help service providers reach communities, organizations should also be aware of who the communities consider a legitimate source of authority, such as public health officials, religious leaders, celebrities, and family members (Canadian Psychological Association (CPA), 2020; Chou et al., 2020). In addition, it was found that community presence was important to learn more about the communities and identify their trusted leaders; engaging in open dialogue with community leaders could help to reduce concerns, increase risk perceptions, improve perceived vaccine benefits, vaccine access, and willingness to get vaccinated (Nsubuga et al., 2023). Furthermore, this study's findings showed that strong community role models were desired to help community members in the vaccination decision process. Through situational

awareness, community presence could also help to identify those who were the most affected, including what behaviors put them most at risk, partners who could potentially reach them, and the impacts of the SDOH; this should include listening to community members concerns, fears, critiques, knowledge, and beliefs about the illness (Tumpey et al., 2018). Community presence was also helpful in building new and stronger relationships; having pre-existing relationships was found to be key when trying to establish trust in vaccines in the absence of trust in health systems (NCCDH, 2021). Christopher et al. (2008) also described the importance of having presence outside of individual projects, to build trust and show broader community interests. Findings showed that organizational decision makers recognize that gaining trust is an ongoing process and could take multiple meetings, that there should be continued community presence outside of individual programs, and that ongoing community presence was beneficial to building rapport and increasing networking abilities.

When attempting to build community connections, this study found that due to mistrust and unfamiliarity of people from outside of the community, the use of community gatekeepers was believed to be necessary, as they represented and supported the communities they were from. They also possessed a deep understanding of community members' culture, values, social norms, and practices (Bashir, 2023), and were also found to help bridge interactions between organizations and communities, which was essential for providing vaccination education. Established connections are especially necessary during a crisis such as the COVID-19 pandemic; during interviews, a participant stated that the City of Ottawa needed an emergency plan that had established partnerships and networking for service providers to reach the most affected communities more efficiently. In addition, Mansfield et al. (2023) found that future public health emergency programs should be addressed by leveraging partnerships with

community-based organizations and supporting their capacity for the implementation of tailored outreach in local communities. However, it was also found that many community-based organizations were often reluctant to work with people outside of the community, because they felt that they only wanted to complete their agenda, and once done they would leave and no longer show interest; thus, further highlighting the need for consistent and reliable connections. Rämgård et al. (2023) stated that programs that were the most successful during the pandemic had been previously established and had built trust through processes such as reflective dialogue and activities with communities. This study also showed that although communications were done tactfully with the use of a community centered approach, more structure was needed regarding how service providers should engage with ACB communities and how it could be made more sustainable; work was being done to make improvements, such as creating a guideline.

Outreach plans must also consider community needs so that existing disparities are not further perpetuated due to logistical barriers, such as limited access to vaccination sites (due to travel, childcare etc.) and limited access to accurate information (due to literacy challenges, internet access etc.) (Chou et al., 2020). For example, Davidson (2023) reported that service providers at community health clinics found their patients disproportionately impacted not only by COVID-19 directly, but also indirectly through compounding factors including increased insecurities (housing, financial, and food), domestic violence, suffering the loss of life of a loved one, increased substance abuse, and mental health issues of anxiety and depression. This was one participant in this study who stated that they felt like they were starting over due to the pandemic, as all the upstream work they had been doing was undermined. Creating opportunities for communities to be heard and have influence in solutions, such as co-generating reports,

sharing feedback, encouraging participation in research, and collaborating with community leaders, messengers, ambassadors, and members, were found to be beneficial to building service providers capacities to educate communities by helping to develop nuanced materials and bridging trust to improve its receptibility. In addition, targeted/tailored community engagement campaigns should be achieved through a combination of media, partner, and stakeholder outreach, and social media engagements, including strengthening genuine partnerships with community members through collaborations and power sharing (Guan et al., 2024; Lansing et al., 2023; Tumpey et al., 2018). Targeted messaging also needed to directly address practical and psychological barriers and improve vaccination access to empower and promote self-efficacy, so that ACB people could take actions to get vaccinated (Chou et al., 2020; Hyland-Wood et al., 2021). Consistent with this study's findings, public health communication strategies should also consider societal factors to support engagement and participation, while being sensitive to the diverse needs and values within communities (CDC, 2021; Hyland-Wood et al., 2021; OSG, 2021). Efforts should also be made to disseminate information through channels that are trusted within the communities; the frequency of repeating the information from a source considered to be credible increases its believability (CPA, 2020; Rämgård et al., 2023). Consistent with the literature (Faherty et al., 2022; Leibowitz et al., 2021; Mansfield et al., 2023; NCCDH, 2021; Ottawa Public Health, 2024; Rosenberg et al., 2021; University of St. Augustine for Health Sciences (USAHS), 2023), community initiatives to improve vaccination equity included delivering information to where people gathered, including where they worked, lived, and worshiped; finding a vaccination location that was accessible and comfortable; expanding vaccination clinic hours; going door-to-door in social housing; organizing mobile clinics; and creating tailored community clinics that were comfortable, had low barrier access, and had ACB

vaccinators, which helped to establish familiarity and build trust to improve receptivity to vaccination information. It was also important to improve access to information by providing it in different formats such as online, print, and in person. Messaging should also be disseminated through multiple channels, with prioritization given to those that are most used and trusted by the communities, while messengers should be community members and/or respected leaders (Hyland-Wood et al., 2021). As messaging evolved it should be adapted to the audience's preferred communication mechanisms, community reference groups could also advise appropriate modes and platforms to use (Hyland-Wood et al., 2021; Tumpey et al., 2018). However, this study found that despite the desire to gain further insight regarding where ACB people get their information from and their preferences, it was challenging during the pandemic due to limited time and resources, which further highlights the need to understand communities outside of a crisis such as the pandemic.

This study found that information could also be relayed through local community messengers, such as resident/community leaders and ambassadors, which helped to bridge communications between ACB communities and organizations by making them part of the conversation, including helping to identify misinformation circulating in communities, disseminating evidence-based information, and engaging in vaccination conversations with other community members. The lived experiences and connections of community ambassadors/PENs and resident leaders helped to inform the development and implementation of strategies to bridge communities with services and improve vaccine equity; community specific ambassadors also helped to support and enhance vaccine uptake, since they were already trusted community members, which inferred trust to the COVID-19 vaccine (CO-CREATH, 2024; Community Development Framework, 2023; NCCDH, 2021). In addition, racially concordant healthcare

providers, faith leaders, public health experts, and other community leaders where beneficial in engaging communities in vaccination conversations; it was vitally important to have the messaging disseminated by trusted sources, such as those that reflected the diverse views of the communities (Chou et al., 2020; Fletcher et al., 2020). In addition, findings showed that community messengers helped to inspire trust and improve transparency in an inclusive manner to support autonomy.

6.3 Micro Level: Provider-Client Relationship

Within the provider-client relationship effective client-centered vaccination communications included ensuring that service providers had the skills for effectively addressing mistrust and promoting empowerment, actively listening to provide appropriate education, and knowledge mobilization. These will be described within the subheadings of Power or Trustworthiness, The Body is History, and Insight into Vaccination Communication Best Practices. Power or Trustworthiness will discuss how service providers need to understand power differentials and consider if their vaccination communication services are helping to build trustworthiness with their clients. The Body is History will discuss service providers understanding that the reasons for vaccine uptake go deeper than surface level presentations, including the implications of structural, systems, institutional, inter/intrapersonal racism. Insight into Vaccination Communication Best Practices will discuss expanding on service provider skills and training.

6.3.1 Power or Trustworthiness

At the micro level the theme of Mistrust and Empowerment provided a window into the ways power can be projected or trustworthiness promoted within client-centered relationships.

Service providers must be aware of how they use their power when communicating about vaccines; power is generally viewed as being possessed by some and held over others, however, its occurrence is not only top-down, but a complex and socially situated ability to control the actions of others, which also occurs from the bottom up (Christensen, 2023; Fricker, 2007; Zaidi et al., 2021). For example, Foucault's biopower is a bottom-up reflection of everyday life at the micro level that describes how dominant norms and values determine how people's bodies are viewed, represented, counted, made visible/invisible, talked about etc. in society (Zaidi et al., 2021). Power therefore is not only about how the macro level exerts influence on society, rather it is reinforced at the micro level; service providers must be aware of their role in creating and maintaining power differentials, including having a solid foundational knowledge of how structural and systemic racism influence public and institutional policies and practices, social norms, cultural representation etc. in their own practices (Zaidi et al., 2021). Moreover, there must also be an acknowledgement about how the hidden threats on health through implicit bias and structural racism on health creates social vulnerabilities and socioeconomic disadvantages that lead to poorer health outcomes (Macias-Konstantopoulos et al., 2023). Service providers must also go beyond this knowledge to implement interventions that address the deeply embedded power differentials that influence vaccination related policies, programs and practices; COVID-19 brought the need to effectively mitigate the historical harms of oppressed groups while finding solutions to emerging and evolving health challenges (Huffstetler et al., 2022). However, a failure to acknowledge and push back against these factors, such as through client advocacy, works to create what Foucault described as "dispositif" or the decentralized networks in which power is dissipated throughout institutions by individuals (such as staff) whose actions contribute to the maintenance and creation of institutional norms and practices, this causes the perfusion of preferred norms to be dispersed

throughout the profession in ways that often go unnoticed (Zaidi et al., 2021). To gain trustworthiness there must be both competency and commitment, care must be taken not to operationalized mistrust within vaccine hesitancy to implicate ignorance in those who have not been vaccinated, this assumption forgoes the implication of racism at multiple levels, and implies it is a personal choice (Jindal et al., 2023).

Reflexivity can help to improve practice, as it is a means of becoming mindful of one's own thoughts, feelings, actions, and assumptions, including if the actions taken are empowering or disempowering (Taylor & Guerin, 2019). Those who act with self reflection, gain the power of insight when they allow themselves to consider, and are willing to be enlightened, about how their thoughts, actions etc. could be irrational (Haberman, 1985). Reflective practice also helps to integrate theory with application to bridge professional knowledge with real-world practice (RNAO, 2017). In addition, reflexivity provides a foundation for the attainment of epistemic fluency as it focuses on assumptions, default patterns of reasoning, and how knowledge is constructed; learning theory presents that those with epistemic fluency have become flexible thinkers who recognize diverse perspectives and value systems, are able to mobilize various bodies of knowledge and logical operations, envision numerous solutions to complex problems, and recognize the limitations and strengths in their knowledge and reasoning (Birnbaum, 2025).

Service providers must be cognizant of how their actions perpetuate power differentials, including how their occupation and education status are power structures within professional relationships; the service provider-client relationship is unequal with the provider having more power. This imbalance must be considered in the development of communication strategies (Debesay et al., 2021). This study found that it was important not to show power over the client, and to provide them with information while highlighting that the decision was theirs. Effective

communications can be impeded by unequal distribution of linguistic power, recognizing this imbalance helps to foster mutual respect and facilitate empowerment of all those in an intercultural exchange, promoting cultural awareness and inclusive dialogue can facilitate shared learning experiences (Saaida, 2023). In addition, the theme of Active listening an Education, highlighted that vaccination communications should not be about control or attempting to force a client to become vaccinated, but rather to listen to their needs and concerns and provide appropriate education to meet them where they are (mentally, physically, etc.) so that they can make an informed vaccination decision. Although service providers possess the power within the relationship, they should not assume that they alone have the knowledge and authority, which Foucault referred to as the "rarefication of speaking subject" by which discourses are institutionalized with controlled opportunities for knowledge sharing, potentially missing important information (Bristowe & Harrist, 2014) that the client could provide. This study's findings supports service providers actively listening to their clients' needs and subsequently providing them with appropriate information; thus, helping to build trust and empowerment.

Actively listening and providing appropriate education, requires being open to receiving client's views and perspectives without judgement, this was found to be essential for effective communication in this study, however, some participants perceived ACB clients as being reluctant to ask questions and have open discussions about vaccinations because they feared they would be judged or laughed at, such as if they talked about traditional medicine with a non-concordant service provider. Vaccine hesitancy should be viewed as a decision-making process, which is not to be confused with being ideologically opposed to vaccinations (Pertwee et al., 2022). Although communication is bidirectional, the service provider is responsible for how it is conducted and each client must be treated with attention and respect; service providers must

consider that a client may be entering the conversations with emotions, including anger (Kourkouta & Papathanasiou, 2014; Miller, 2022). For example, findings showed that it was beneficial not to be reactive if a client began to fulminate about the government, but rather to understand that the reaction is often rooted in trauma. Anger could be a coping mechanism to adjust to the new situation and serve underlying anxieties, the service provider's response should not be avoidance or indifference but include awareness and readiness to assist the client, as well as to respond with information in a manner that addresses the client's unique needs (Kourkouta & Papathanasiou, 2014). This current study also found that service providers needed to be aware of their own biases; clients may have already been subjected to racism in various social environments which could impact their relationships with service providers (Debesay et al., 2021). Implicit bias and stereotyping in clinicians has been associated with poor quality of communication and poor care ratings, less patient-centered dialogue, and a lower level of trust and confidence in the clinician (Cooper et al., 2012). Findings also showed that many ACB clients would wait until their health issues were advanced before seeking healthcare services and were less likely to seek out healthcare in an unknown setting because they feared that they would be treated with bias and/or stereotyped, such as not receiving appropriate pain medication or being dismissed. Similarly, Fante-Coleman et al., (2022) found that the Ontario ACB participants in their study were dissatisfied with their physicians' approach to care, this was exacerbated by experiences of racism and discrimination. In addition, Szabo (2024) stated that women and racial and ethnic minorities were at the highest risk to be misdiagnosed. Even when attempts are made to stop racialization in practice, following racialized institutional practices could factor into decision-making (McFadden & Erikson, 2020; Tong & Artiga, 2021). However, service providers can help counter racism in healthcare settings by identifying and advocating for non-

discriminatory practices and exemplifying respectful and empathy in their daily practice (Willey et al., 2021).

Although intersectionality provides the framework to help view the ways that racialized power operates within systems, service providers must go beyond being knowledgeable of intersectional power differentials, to take concrete actions; there is a need for commitment in transformative practices and politics, rather than merely partaking in the superficial positive aspects that these movements create (Crenshaw, 2024; Hook, 1991). To create solutions that advance equity, service providers must understand and be cognizant of how lived realities have been shaped by oppressive systems, then purposefully work to address those systems in their praxis (Huffstetler et al., 2022). For example, the intersection of racism and linguicism was demonstrated in this study, when vaccination related information and services were more difficult to obtain for ACB people who did not speak English, yet even when interpreters were available, they were not used to engage in dialogue regarding the COVID-19 vaccine. Similarly, White et al. (2019), an Australian based study, described patients feeling guilty for not speaking English, which led to passive encounters with health professionals, while professional interpreters felt that their services were not being prioritized. Service providers should assess their client's fluency and understanding of English, and subsequently adjust their vocabulary in accordance, or use interpretive services if they are available (USAHS, 2023). This current study found that some immigrants never adapted to Canadian society, with continued reliance on their children for communications; thus, highlighting the need for better cross-cultural communication; effective communication is fundamental to intercultural and acculturation competence, since a person is adapted once they have obtained sociocultural adjustment and have psychological well-being (Liu & Gallois, 2014). Habermas (1984) explained that for ethical

dialogue to occur freedom had to be present, and although authorities (such as government and health authorities) are responsible for powerlessness, it is the agents (service providers) that are responsible for abandoning power and oppression (Christensen, 2023), in the services they provide. Moreover, service providers need to listen carefully to their clients rather than talking at them (Holt et al., 2016). When clients are spoken "at" rather than "to" during interactions, it demonstrates less empathy and acknowledgement of concerns, and communications are subsequently less effective (Butler & Sheriff, 2021). Service providers should also determine what resources a client considers trustworthy, since decision-making also influenced community narratives, motivational reasoning, familiarity and other factors beyond the information itself to help create tailored approaches to address client needs (Aghajari et al., 2023; Public Health Ontario, 2021b). Moreover, service providers also need to help protect their clients from misinformation; it may be beneficial to educate clients on identifying misinformation, such as encouraging them to verify information and to determine if the original source is trustworthy before posting it on social media or relaying it to friends and family (Jacobsen & Vraga, 2020; OSG, 2021).

6.3.2 The Body is History

As service providers work to increase the empowerment of their clients, they must consider the broader context of racial and ethnic discrimination (Bristowe & Harrist, 2014; Nelson, 2002). Service providers need to understand how power systems that are often pernicious affect their clients, as Foucault described the body holds onto the impacts of the power relations it is subjected to, "the body is also directly involved in a political field; power relations have an immediate hold upon" (Foucault, 1995, p.25). It has been known for a long time in "social medicine" that individual health is influenced by factors other than biological ones; in the 1980s

the concept of cultural competency was introduced to include equitable health provisions and promoted knowledge and awareness of people's culture to improve provider/ client communications, unfortunately, it assumed that people could become competent in a culture that was not their own and overtime it reduced culture to stereotypes (Melino, 2022). Teachings then progressed to cultural humility which encouraged open and continued learning and service providers situating themselves as a non-expert, but this still failed to stop stigma or improve health outcomes, rather there was a need to recognize how social and structural factors impacted client health (Melino, 2022). Findings in this study supported the need for service providers to acquire more knowledge about the impacts of racism and inequities, this would help to address provider questions, such as why ACB communities had lower vaccine uptake levels. Service providers need to understand why vaccination status is not simply a matter of choice, and that it should not be attributed to moral reasonability, which forgoes how behaviors are engrained in historical and sociopolitical contexts, including how social inequities increase individual responsibilities which subsequently make it more difficult for the most affected groups, such as ACB communities, to become immunized i.e., assuming that vaccination status is a personal choice demonstrates an invisibilization of inequities (Manca et al., 2024). In addition, taking the uncritical approach that vaccine hesitancy is due to a lack of trust, rather than reflecting on how services are trustworthy, places the individual in a position of vulnerability while missing the opportunity to distinguish between a particular moment of trust and durable institutional trustworthiness (Jindal et al., 2023).

Due to racism, and other intersecting power systems, it must be recognized that all people do not start from the same social position, rather from the beginning there is already a huge imbalance in who has general advantages in society (Crenshaw, 2024). Service providers should

be attuned to the barriers that their racialized clients may face, as stigmatizations permeate Black communities (Harris, 2017; USAHS, 2023). Pertwee et al., (2022) suggested that vaccination communications should begin from a position of empathy and work to build trust; trust is essential for cultivating and sustaining healthy interpersonal relationships, reducing health disparities, fostering equitable access to resources, and promoting civic engagement (Lansing et al., 2023). Moreover, compassion, kindness, caring, empathy, and truthful information are essential in reducing vaccine hesitancy (Miller, 2022; Richard-Eaglin & McFarland, 2022). Being empathetic, showing respect and treating people with dignity can help provide emotional support for clients to manage their anxiety (USAHS, 2023); anxiety was found to be prevalent amongst ACB clients in this current study. Service providers should work towards understanding their clients' stressors related to vaccinations, seek to understand how their client's lived experiences impacted their views on vaccinations, and provide guidance in the decision-making process while respecting the client's decision and reiterating that the freedom to make the decision is theirs. Vaccinators must also make recommendations in accordance with client's best interests, which includes the risk of infections, risks associated with the disease, and concerns about remaining unimmunized (Government of Canada, 2021). Service providers should help guide clients through the decision-making process to improve vaccine equity, including asking prompting questions and listening to client's needs and the barriers they faced, so that practical solutions could be found together. It is important to use patient-centered and value driven communication approaches, including considering clients lived experiences, lifestyle, and perspectives (Cooper et al., 2012; North et al., 2022; Stubbe, 2020). Moreover, communication strategies must consider that individuals can face multiple intersecting barriers to getting vaccinated, and it is not simply providing information to those deemed un/misinformed; acting

with moralizing discourses regarding vaccination status removes behaviors from its historical and sociopolitical context and corresponding inequities, such as access to resources, and ignores how institutional stigmatizations and governmentality and biopolitics continue to exert dominant power in ways that directs self and others (Manca et al., 2024). Consistent with this study's findings framing an individual in a manner that implies they are wrong for not getting vaccinated, as a moralization to motivate vaccination, is more likely to activate a defensive reaction (Rosenfeld & Tomiyama, 2022).

In this study's findings some participants stated that clients should not be considered as being against vaccinations, rather, service providers should be aware that views are based on experiences and may be rooted in trauma. The collection of historical multigenerational and contemporary racism can cause racial trauma; racial trauma results from prejudice, shame, threats, harm, humiliation, and guilt from racial discrimination, as with complex trauma its occurrences are protracted throughout a racialized person's life, with consequences to their mental and physical health, behavior, relationships, cognition, self-concept, and socioeconomic life (Cénat, 2023). Therefore, service providers need to consider the unique circumstances and experiences that have contributed to vaccine hesitancy and promote a respectful dialogue, including the principles of trauma informed care and cultural safety (Public Health Ontario, 2021b). Building a personalized relationship with the client was also found to be beneficial in building feelings of safety and comfort, whereby clients were more likely to disclose information, this could be achieved in part by showing interest in the client and by service providers sharing a personal story (USAHS, 2023). This is consistent with this study's findings which showed that it could be beneficial for service providers to share how they made the decision to get vaccinated, their feelings associated with it, and how they found the experience.

A client centered relationship entails getting to know the client and understanding their needs and finding solutions together through collaborations between the service provider and client; this is ideally done before the meeting to get the vaccination (Government of Canada, 2021; Miller, 2022; USAHS, 2023).

Vaccine hesitancy is related to trust, based on emotions and various rationales ranging from historical community experiences to vaccine safety concerns (Pertwee et al., 2022). Communication should involve approaching every meeting with the intention of understanding the client's concerns, opinions, and experiences (USAHS, 2023). Furthermore, when discussing vaccinations, the individual client's health literacy and demographics (culture, age, etc.) should be considered for tailored communications (USAHS, 2023). Broadening a client's level of health literacy so that it is interactive and critical, can have both personal and social benefits, such as raising awareness of socioeconomic and environmental determinants of health and spurring actions for change (Nutbeam, 2000). Moreover, since how a message is interpreted by the recipient is crucial, it is important to use language that is clear and easy to understand; communication also involves non-verbal aspects and listening (Kourkouta & Papathanasiou, 2014). It should also be highlighted that an estimated 60% of adults and 80% of seniors in Canada are not health literate and have difficulties using routinely available health information (Government of Canada, 2021). This is consistent with this study's findings, whereby a participant stated that health literacy was a big part of the questions they received pertaining to the vaccine. Furthermore, when providing information, the client's understanding should be checked throughout the meeting so that any misunderstandings can be clarified and rechecked through the teach-back technique again (AHRQ, 2020). Handouts and writing key information down and pointing them out to the client can also help with teach-back, whereby the service

provider can point out/review important points in the material and the client can then use the handout to review and restate it in their own words (AHRQ, 2020). Using this method could provide the service provider with insight into the client's level of understanding and as an indicator of how well concepts were explained; poor understanding can cause anxiety and defensiveness (Agency for Health Research and Quality (AHRQ), 2020; Miller, 2022; USAHS, 2023). This further highlights the need to develop accessible and appropriate knowledge mobilization tools, such as pamphlets, which this study found were often not available in the workplace. Information should provide the latest knowledge while stating remaining uncertainties (Chou et al., 2020). However, since education should empower people to make informed decisions about vaccinations, it must include client participation and not the passive transference of information, "Liberating education consists in acts of cognition, not transferals of information" (Freire, 2000, p.79). Moreover, effective vaccination education must include clients' perspectives as not doing so constitutes a cultural invasion, even if service provider's actions are done with good intentions; clients are not to be a depository for information without communication (Freire, 2000). Furthermore, service providers need to anticipate that clients will have questions, such as those related to vaccine safety, schedules, policy changes etc.; this does not mean that the client is opposed to vaccinations (The Government of Canada, 2021). This is consistent with this study's findings, whereby one participant stated that they did not feel that labelling someone as being anti-vaccine rather than addressing their concerns was effective; this could also potentiate limiting communications such as making assumptions about the client not wanting new and updated information pertaining to the vaccine. Furthermore, findings also showed that vaccination concerns and anxieties could be associated with the potential for pain of the injection; the service provider could address this concern by discussing appropriate pain

management strategies that are within their scope of practice (Government of Canada, 2021); this must be done in a manner to ensure that any well founded concerns about racial biases related to pain assessment and treatment recommendations are addressed (Hoffman et al., 2016).

In addition, when tailoring information for a client, this study found that some formats for relaying the information may resonate better with some clients than others; for example, scientific facts and charts may be beneficial for some clients whereas stories or anecdotal information may resonate with others. In addition, findings showed that ACB communities preferred oral communications, highlighting the importance of the use of narratives; similarly, (Martell et al., 2025) found that narrative-based health promotion approaches helped to strengthen vaccine confidence in Indigenous populations. Furthermore, as previously stated, service providers should also use a variety of formats (websites, printed material etc.) to tailor information to different sociocultural groups including those with various ethnic and cultural backgrounds, education levels, and language (Government of Canada, 2021).

Another vaccination communication strategy that was found to be beneficial in this study was the risk/benefit approach, which included having discussions with clients about how remaining unvaccinated could impact their lives, while providing rationales for getting vaccinated. For example, one participant discussed vaccination in relation to a client's family responsibilities and chronic disease management. This is consistent with the Government of Canada (2021) which stated that vaccinators must knowledgeably counsel clients to assess the risk/benefits of vaccination and educate them about the risks of remaining unvaccinated. However, as previously mentioned, care must be taken when counselling clients to consider their lived experiences and not instill as sense of moral obligation (Manca et al., 2024). Furthermore, when providing vaccination education care must be taken to explain the vaccine, disease

prevention, break down medical jargon in a way that the client understands, and communicate in a frank and honest way, which leaves no misunderstandings, doubts or suspicions; addressing concerns and the promotion of health literacy should be done regularly (Kourkouta & Papathanasiou, 2014; Miller, 2022; OSG, 2021). It should also be noted, that if a service provider is responsible for providing vaccination communication services, that they themselves must be knowledgeable about vaccination processes, since this was found to be lacking by some participants in this study, this indicates a gap in vaccination related client services. Another gap in services found in this study was that although the use of decision aid tools may also be beneficial in this process, which has been cited in the literature as helping clients feel less conflicted and building trust (Shourie et al., 2014), this study found that accessible culturally appropriate vaccination communication tools were often not available. Counseling methods, such as motivational interviewing to discuss vaccination concerns, can also enhance client's motivations to change their behaviors, which includes listening with empathy, understanding the client's motives, reflecting on the situation rather than correcting the client, and empowering the client by promoting self-efficacy and autonomy to change motivations (Hall et al., 2015; Lansing et al., 2023; Public Health Ontario, 2021b). This is also consistent with this study's findings whereby participants stated that they did not aim to change their client's mind, but rather encouraged reflection and provided them with information so that they could make an evidence-informed decision. The information should be client-centered, evidenced based, and offered at each meeting, unless the client has stated that they do not want the information or to engage in vaccination conversations at future visits (Richard-Eaglin & McFarland, 2022).

Dialogue is important to motivating and engaging vaccine uptake, although some service providers found it challenging to initiate conversations about vaccinations (Dybsand et al., 2020;

Government of Canada, 2021). One beneficial method found in this study involved asking the clients if they would like to discuss vaccines now or at their next appointment, thus giving them a choice but limiting it. This is consistent with the presumptive approach, such as asking a client when they will get vaccinated prior to asking them about how they feel about getting vaccinated, which Public Health Ontario (2021b) stated was an effective strategy to use in discussions to increase vaccination acceptance. It is also similar to the choice architecture modification approach described by Chou et al. (2020) which included providing choices, but making vaccinations the easier choice, which still allows autonomy to be maintained in decision-making. Furthermore, findings of this study also showed that service providers could help to build trust and empower their clients by participating in community outreach, such as being present in communities to provide information and answer questions, attending community events and town halls, and working to build relationships with community leaders and local organizations including grassroots and Black led organizations. Community outreach is an effective way to engage and empower communities to make informed vaccination decisions; empowerment can help people to overcome vaccination related barriers and make deliberate choices (John et al, 2022). Consistent with this study's findings, service providers should ensure a comfortable and save space for clients with vaccine hesitancies to voice their concerns; creating and engaging in communication platforms with respect and compassion provides an opportunity for service providers to provide education and demonstrate their knowledge and expertise to improve vaccine uptake (North et al., 2022; USAHS, 2023). Service providers should also advocate for appropriate changes to be made to help empower their clients and to strengthen service providers capacities and the healthcare system as a whole, such as by continuing to advocate for the collection and appropriate use of sociodemographic data to support equitable, effective

vaccination programs, and to eliminate biases and disparities in healthcare (Cooper et al., 2012; Public Health Ontario, 2021b).

6.3.3 Insight into Vaccination Communication Best Practices

Vaccination communication best practices should include optimizing knowledge mobilization by ensuring that individuals service providers have the skills and tools to support effectively relaying vaccination information to meet client's needs. This study's findings showed that some service providers felt they needed further training to understand why some communities, such as ACB communities, had low vaccine uptake, and to improve their communication skills with ACB communities. The desire to have more education is consistent with the literature, which showed that there was a massive demand by service providers for real-time learning materials; increasing service providers' knowledge was shown to increased their ability to educate their clients, increased self-confidence, changed attitudes, and was widely adopted in various areas of the healthcare system (Charway, 2020; Schiavo et al., 2020; Utunen et al., 2021). Joo & Liu (2020) found that the most common concern amongst nurses regarding providing culturally competent care was related to communication. This highlights the need to strengthen communication skills, since therapeutic communication is a standard statement of accountabilities in the nurse-client relationship (CNO, 2006). Communication skills are fundamental to establishing trusted and collaborative relationships; vaccination communication should be client centered, respectful of different opinions, transparent, and evidence-based (American Association of Critical-Care Nurses (AACN), n. d.; Government of Canada, 2021; USAHS, 2023).

Culture has a significant impact on individual's perceptions and interpretations of communication; however, nuances in expressions, gestures, and idiomatic phrases can lead to

misunderstandings, thus highlighting the need for culturally based knowledge (Saaida, 2023). The oversimplification of culture can lead to culturalism, a form of stereotyping, related to perceived reasons for people experiencing particular social and health issues (Garneau et al., 2019). To meet a client's communication needs this study found that vaccination information must be tailored to the individual through bidirectional communication; service providers as well as clients have dynamic and diverse backgrounds, therefore service providers need to simultaneously be aware of their own perspectives as well as the client's (Richard-Eaglin & McFarland, 2022). Being open to different perspectives helps to customize client care while implicit bias perpetuates health disparities (Narayan, 2019). For example, in this study, one service provider described others viewing clients as troublesome when they asked for their cultural needs to be met, thus highlighting the need for additional training. Training in diversity and equity should include expanding service provider's knowledge on how cultural systems shape social conditions and racial inequities in health, including governance, health and social policies, practices, and public reception (Cogburn, 2019; Lansing et al., 2023). It should also include cultural competency and humility, meeting people where they are at with flexibility and openness, addressing systemic inequities, supporting collaborations for shared decision-making, and supporting community engagement and empowerment (Lansing et al., 2023). Humility is also important to build trust and rapport, as one participant stated, if the service provider is culturally humble and without bias, listening, and ready to serve, this can help build trust. Cultural humility includes advocating for culturally safe and equitable care that is free from discrimination; it is obtained through self-reflection and evaluation of one's own behaviors, including how social contexts and personal attributes impact client care (CNO, 2022). Cultural humility is fundamental to nursing ethics, and includes treating everyone with dignity, being

respectful and empathetic, and critically reflecting at both intrapersonal and interpersonal communication levels (Hughes et al., 2020). The process of working towards cultural humility can help service providers recognize how their experiences, education, and culture influence their beliefs and attitudes (Schmalz et al, 2022).

It involves a lifelong learning process that includes self-reflection to facilitate being open to other people's identities, optimizing holistic care, meeting the client's unique needs, and encouraging respect and empathy (Hughes et al., 2020); consistent with this study's findings, organization should create an environment for reflection, and teach and encourage introspection and self-reflection practices, since they are important components in cultural humility, collaborative partnerships, as well as personal wellbeing (Debesay et al., 2021; Stubbe, 2020). As previously mentioned, there is a need to expand on cultural humility, so that service providers have foundational knowledge about how intersecting powers of oppression impact vaccination communications and health outcomes.

Garneau et al., (2019) stated that equality and personal responsibility are a foundational axiom of most Canadian programs that are taught to health students, echoing the central tenets of liberal individualism. Intersectionality acknowledges that clients have their own unique experiences, barriers, and opportunities based on social identities related to gender, race, class etc. (Taylor, 2019; University of British Columbia, 2021). An intersectionality approach needs to be applied to vaccination communications strategies to examine the compounding systemic, social, and individual inequities in COVID-19 related vaccination communications (information, access, and use) (Marfo et al., 2025). However, the intention of intersectionality is not to locate identity politics within those oppressed by the system, but rather to allow a view into the ways racialized power operates within intersections of different identities in the system (Crenshaw,

2024). Furthermore, this study and the literature supports that racism creates trauma that must be addressed within vaccination communication services; racism creates racial trauma and is always complex; identifying, assessing, understanding, and treating racial trauma requires consideration and integration of the complexities around it (Cénat, 2023). For example, Melino (2022) proposed a framework for structural competency for nurses working with clients who have experienced harms from structural violence and vulnerability; service providers should learn about historical trauma to better serve their clients and to have the knowledge base to advocate for change (Zaida et al., 2021).

6.4 Implications of Findings

This study has several implications for nursing and public health related to the impacts of communication on the vaccination rates of the most affected groups, such as ACB communities. Effective communication in nursing practice is essential to individualized care and successful outcomes; it involves being kind, sincere, courteous, using language that is understood, maintaining confidentiality, and is contingent on the abilities, education, and experiences of the nurse (Kourkouta & Papathanasiou, 2014). Regardless of the clinical area or specialty, communication is one of the most important aspects of care and an essential component of a nurse's role (Ali & Watson, 2018), as it is a pervasive and fundamental element of practice. The RNAO has several guidelines that could help to inform vaccination communication, yet there are no best practice guidelines to address vaccination communication specifically (RNAO, 2024). There is a need to create a best practice guideline for vaccination communications which addresses vaccination hesitancy, how to appropriately engage with communities, and how to effectively mobilize evidence-based information for effective vaccination communication within the most affected groups, such as ACB communities, including during a public health crisis such

as a pandemic. Vaccination communications must consider the reasons for low vaccine uptake, including mistrust and fears, irrelevant information, lack of understanding, lack of comfort, barriers to accessing information, and intersecting SDOH. In addition, addressing vaccination hesitancy requires a multipronged approach that considers the reasons for vaccination decisions and how to interact with those with varying views. This study has provided a basis for effective vaccination communication including exploring issues related to mistrust and empowerment, active listening and education, and optimizing knowledge mobilization with insight into strategies that were implemented, barriers faced, and new proposed ideas to consider (refer to Appendix K).

6.4.1 Implications for Public Policy

This study's findings showed that there is a need for public policy to strengthen the collaborations between all stakeholders to improve vaccination communication, including creating unified and appropriate messaging. There should also be more infrastructure for combatting mis/disinformation, and for establishing and maintaining networks, partnerships, and community connections for collaborative efforts to strengthen resilience during a crisis, such as the COVID-19 pandemic. In addition, there should be a centralized area within the Ottawa and the national capital area that provides vaccination related resources that connects communities and decision makers, to facilitate access to trusted, relevant, accessible, and reliable information.

This study also highlighted the need for a consistent collection of race-based data. Collecting race-based data is important to identifying the diverse needs of racialized communities and to support initiatives that address systemic racism (McKenzie, 2020; Menezes et al., 2022; Rizvic, 2020; Rossiter & Ndekez, 2021). Work should also be done to change the societal and political views regarding the impacts of racism; for example, to raise public

awareness and achieve health equity the extent to which racism and inequities are barriers to vaccine-seeking behaviors should be contextualized, including changing the narrative from vaccine hesitancy and refusal to the impacts of racism and inequities on vaccination intentions and uptake (Wilson et al., 2023).

There should also be more strategic approaches between and within organizations; for example, having guidelines rather than leaving it up to the individual service provider's discretion as to if and how it is addressed. By providing information in these different organizations, it was believed that it might mitigate clients looking up information on their own from potentially dubious sources.

6.4.2 Implications for Nursing Education

The literature (Isaacson, 2014; West & Eaton, 2019) and the results of this study showed that service providers tend to underestimate their own bias; people can be unaware of their shortcomings due to the lack of meta-cognition needed to perceive them. This highlights the need for incorporating further training within health professionals' education programs in anti-racism and cultural competency. Furthermore, intercultural communication training in university curriculums could also help service providers recognize how their own culture and the culture they have been socialized in impacts their communication behaviors, how stereotypes are perpetuated, the relationship between culture and language, and how idioms and proverbs might be interpreted by a non-native speaker (Liu & Gallois, 2014). For example, in this study's findings one participant described service providers not initiating conversations about vaccinations with ACB clients because they assumed that they would not want to get vaccinated. Other examples in the literature included, nurses making assumptions about their clients' race, culture etc. based only on their last name, and perceiving the absence of expected non-verbal

communication as a rejection; thus, trying to affirm a sense of sameness of personal beliefs, ideas, and practices rather than reflecting on internal challenges and conflicts, embracing diversity, and being attentive to alternative practices (Debesay et al., 2021; McFadden & Erikson, 2020).

In this study it was also shown that applying race in a biological context was a source of confusion and distrust, whereby a client was not taking a medication because they were unsure if it was appropriate for their race; this highlights the conflation of the social construct of race into biomedical practice. Race continues to impact teaching and clinical decisions, providers' attitudes and biases, disease stereotyping and clinical nomenclature, and has reinforced biases in diagnosis and treatment rationales, therefore measures must be taken not to misinterpret race-based data outside of its socio-political system of categorization (Bryant et al., 2022; Hughes et al., 2020; Tong & Artiga, 2021). There has been a movement to change the messaging about using race in biomedical aspects of healthcare, this has been termed by some as "decolonizing medicine" (Hartland & Larkai, 2020). There should be more education on how negative social factors can contribute to allostatic load, imposed by everyday social patterns and institutional processes that sustain inequities, which contributes to disproportionate health outcomes; these are independent of health behaviors and socioeconomic status, further demonstrating that race, which subjects the person to racism and inequities, is an independent SDOH (Government of Canada, 2024; Han et al., 2021).

6.4.3 Implications for Nursing Practice

This study's findings have demonstrated the need for nurses to build therapeutic relationships within the context of vaccination communication in the most affected groups, such as ACB communities. Findings included the need to increase client comfort, provide relatable

information, and enable time for clients to make informed decisions. In addition, creating relevant information was shown to require communication skills that conveyed the information clearly, concisely, and in a manner that was understood by the client. Information should also be relayed in formats that are engaging and tailored to the clients' needs, such as culturally relevant pamphlets. Moreover, care should be taken to ensure that information is understood, such as by using interpretive services and reviewing material with the clients to ensure understanding while providing opportunities for questions. When addressing vaccine hesitancy, the client's concerns should be acknowledged, and skills such as asking open ended questions should be used to encourage reflection, without coercion, so that clients make informed vaccination decisions. Clients should be provided with the opportunity to learn and make decisions at their own pace, as multiple meetings may be required. Clients need ample time to reveal their concerns and to build confidence in the relationship (Kourkouta & Papathanasiou, 2014). It takes time to cultivate trust, a healthcare setting can be scary for some people; service providers need to work to try to make clients feel as comfortable as possible (USAHS, 2023). This includes the need for nurses to be aware of how their actions impact trust; for example, one participant described a client becoming upset and questioning what was in a syringe when the nurse drew the vaccine with their back to the client.

When discussing vaccinations with clients that have hesitancies regarding the vaccine, time is also needed to listen to concerns and perceptions while discussing the benefits of vaccinations in a non-judgmental and non-confrontational way (Government of Canada, 2021). Nursing practice should be client-centered, to help facilitate vaccination communications, a comfortable and supportive environment that is accessible should be created; this includes nurses being non-judgmental, being receptive to questions, and being culturally welcoming.

6.4.4 Summary of New Knowledge

This study began during a time when little was known about why there was low vaccine uptake within ACB communities. It combined vaccine information; communication strategies; the needs of the most affected groups, such as ACB communities; and the experiences of service providers within the sociopolitical context of a pandemic. To the author's knowledge, this combination did not exist prior to this study's commencement. This study provides new knowledge in relation to barriers, facilitators, and proposed ideas for vaccination communication within the local context of Ottawa and the national capital region.

6.4.4.1 Barriers.

This study provides knowledge as it pertains to local vaccination communication barriers, through the experiences and perceptions of service providers as vaccinators and vaccine promoters. Barriers included: 1) Disconnection in vaccination communication services a client might experience in trying to get their concerns addressed, although a community-based organization specializes in community needs, and a hospital specializes in those who are critically ill, findings showed that there was a desire for these organizations to work together for client and public health. 2) Lack of anti-racism or Anti-Black racism policies or vaccination education that resonated with ACB staff; this is problematic not only within the organization, but it also bodes poorly for the implementation of interventions and trustworthiness within ACB communities, as they were perceived as not having the ability to serve racialized communities. 3) Funding barriers impacted vaccination communication on several fronts including inconsistent and piecemeal programs which decreased organizations' trustworthiness, the lack of resources to research community needs, and provide information in English. Funding also dictated how initiatives could be implemented, such as hours of local clinics, and number of internationally

trained providers that could be hired. 4) Local service providers struggled to meet government demands, as unrealistic expectations caused strategies to fail and took time away from other community services. 5) Relaying accurate evidence-based information was not consistent within or between organizations, which led to service provider confusion. 6) Even at the local level consorted global disinformation infiltrated communities online, such as through WhatsApp. This study also highlighted perceived trusted sources of information, which could be used to improve trustworthiness in vaccination campaigns. 7) Faith was not addressed in healthcare, the inability or unwillingness to discuss it with clients was found to perpetuate misinformation within congregations because it was not adequately addressed. 8) It was believed that local ACB people felt that they were meant for the worst and assumed that they would not get the same vaccine as those who society considered were important; giving them the choice of vaccine was deemed as one of the best vaccination motivators of the campaign. 11) Vaccination communications effectiveness was impacted by inequities, from everyday necessities (housing, childcare, etc.) to access (technology, language, transportation, etc.). 12) That the perceived lack of trustworthiness of the healthcare system decreased ACB communities' engagement in vaccination communication. 13) This study highlights that these barriers are connected through power systems that have created low vaccine uptake within ACB communities, highlighting that vaccine hesitancy is not an individual's belief or willingness to get vaccinated but a system with privileges and oppressions.

6.4.4.2 Effectiveness of Targeted Interventions.

This study provides insight into interventions that were believed to be effective in vaccination communication, the knowledge is new as it pertains to the local context and the amalgamation of strategies (since strategies were not universally implemented). 1) PENs/

ambassadors (part of the AVA project), community members trained to educate their communities about vaccines. 2) Outreach that included townhalls (especially with expert community members). 3) Participating in already established programs in the community. 4) The use of gatekeepers to bridge service providers with communities to help establish trust. 5) Collaborating with community members in written messaging so that the visuals and written words were relatable to their community; messaging should reflect community values. 6) Presence on social media was a very important element, for example, WhatsApp was believed to be popular in local ACB communities. 7) It was important to establish community presence. 8) The creation of in community vaccination hubs that had a familiar and empowering décor for ACB communities (like murals of Black heroes and African flags) sent a welcoming message and allowed for vaccinations to occur in a comfortable space. 9) Understanding the community, meeting them where they are, and being patient, it could take more than one meeting, opportunities must be made to have future discussions to build and maintain trust. 10) There was also the desire to have more internationally trained professionals provide support within vaccination campaigns. 11) There is a need to realign power so that those who use the service are a part of its creation and implementation, with authority.

6.4.5 Implications for Future Research

There are several areas of interest that could be expanded upon in future research, including examining ways to build the capacity of service providers by expanding on how their social position (such as through the collection of sociodemographic data) impacts their professional practice when working with disadvantaged communities. Future research should also evaluate the efficacy of the insights in this study to create an evidence-based vaccination communication best practice guide (addressing vaccine hesitancy on all aspects of the

continuum) and knowledge mobilization tools to reach hard-to-reach communities. These practices should also include how to engage with communities to create new connections and maintain a trustworthy presence. Future research should also examine how to establish and maintain networks for rapid vaccination communication in a crisis; this includes effective policy changes regarding who controls the creation and dissemination of the information to avoid conflicting messaging and untrustworthy sources. There is also a need for future research in countering consorted efforts to spread disinformation and address misinformation, this should include unique interventions for targeted populations, such as ACB communities. Future research should examine the impacts of the downward trend on child vaccinations, which has been highlighted by current measles outbreaks in Canada (Government of Canada, 2025), and how it impacts vulnerable populations. There is also a need for research to expand on the intersections of power structure that contribute to inequities; including how they are exacerbated in a crisis such as a pandemic. This should also include examining effective policy changes to realign power differentials and improve social justice for communities most affected. Future research should expand on the use of cultural intelligence in education and effectiveness in service provider practices, including how faith-based support can be strengthened to support clients' needs. There is a need for research on how to stop real and perceived aggressions and violence towards service providers, as described by participants in this study, as well as how it impacts services, such as not approaching people who were perceived as being opposed to vaccines due to their personal safety. There is a need for research on changing policies and practices to unify vaccination related services so that evidence-based knowledge and client needs are accurately and consistently relayed to all areas of services in a way that is meaningful and understood by clients and professionals (hospitals, public health, community health, faith-based

organizations, grassroots organizations etc.). There is also a need for future research to determine effective ways to reduce language barriers when relaying vaccination information, which this study found were often only available in English. Future research should examine effective policy changes so that the power of knowledge is not held by a few or is cost limiting. The implementation of intersectionality should also inform future public health research on inequities, to connect individual barriers to the need to change systemic and structural power differentials that perpetuate them. Furthermore, due to the complexities and perseverance of misinformation and misbeliefs, countering it requires innovative strategies, including the need for further research into why misinformation was persuasive.

6.5 Limitations

This study had several limitations; its first limitation was its breadth of focus. Although interviewing a range of service providers in different areas of practice provided an overview of what clients would have encountered when considering vaccine uptake, for the purpose of increasing service providers capacity, reviewing the needs of one profession at a time could have been beneficial, as different professions may have different needs. Secondly, interviews were conducted during the dynamic times of COVID-19 and therefore those who were interviewed towards the beginning of the process may have had different experiences than those towards the end of the interview process; given the complexity of determining and presenting an accurate timeline based on the data, it was not highlighted in this study. Its third limitation was that it was part of a larger funded project (AVA) which had portions (quantitative and qualitative) dedicated to ACB community members perspectives on vaccine uptake; this study is limited by not having client community members perspectives related to their service provider experiences as its findings were intended to help inform the larger AVA project rather than as a standalone study.

This was a limitation since this study was grounded in race and moved beyond individual-level analyses to identify how structural inequalities create barriers, and how they were intensified by the sociopolitical context of the pandemic. As such the data generated through service providers' perspectives risked obfuscating the perspectives of clients who are marginalized, since by the nature of the service provider/client relationship a power differential exists in favor of the service provider. Furthermore, service provider participants were working within the capacity of public health messaging and within the healthcare system, which is an oppressive institution; the healthcare system that was meant to support health and wellbeing, has hurt marginalized populations through mass, gross inequities (Jemal, 2018). Its fourth limitation was that the interview questions were focused on ACB communities and therefore findings may not be transferable to other disadvantaged communities, particularly those that are not racialized. Its fifth limitation was that the findings may not be transferable to ACB people in other locations, since the data obtained in this study was from service providers in Ottawa and the national capital region. Its sixth limitation was that consistent with intersecting societal roles and with consideration to service providers being diverse, some participants placed their own race-based experiences into their responses, creating community member responses within the service provider experience. However, although service providers themselves have their own social identities, their perspectives were shared within their professional capacity; this may include anecdotal personal stories, but information is still in relation to their professional perspectives. Its seventh limitation was that all interviews were conducted in English, having interviews in French and other languages spoken within the communities may have provided additional insights; English was the language of choice since it was understood by all interviewers. The strength of this study is that it brought together several elements related to vaccine uptake in the

most affected communities, that have often been viewed separately, including racism and inequities, communication best practices, and vaccination intentions.

The third limitation related to solely using service providers' perspectives warrants further expansion as to why this viewpoint has merit in relation to this study's theoretical underpinnings (refer to Chapter 3), despite not being ideal. The importance of the standpoint theory is acknowledged, and as this study is part of the AVA project, ACB community members' perspectives have been combined with service providers' perspectives in the African Caribbean and Black (ACB) vaccine acceptance (AVA) project community report (Etowa et al., 2023). This study, as a portion of AVA, aimed to provide a reflection of vaccination communications from the inside perspective of those working within it, to provide insight into initiatives, barriers faced, and proposed ideas. Pohlhaus (2002) explained that the standpoint theory is not enough, as knowing requires understanding relations with others too, therefore more emphasis should be placed on ways diverse communities can move forward together; knowledge should not only be from a particular standpoint to forge new knowing communities. The aim of this study is to improve vaccination communication services, and this study serves as a reflection of the healthcare system as well as service providers' beliefs about the disadvantaged communities, such as ACB communities, that they serve. It must also be considered that the knowledge in this study is being produced within the interpretive description methodology, with a focus on bringing insight to improve practice; Thorne (2025, p.184) stated,

> "*We develop general knowledge, not because it represents truth, but because it allows us to grasp and communicate about patterns within human behavior more effectively and allows us to make better informed decisions about the individual cases that we will encounter professionally*".

Therefore, this study seeks to find insights not evidence-based facts, to help to improve vaccination communications, and intersectionality helped to provide guidance to navigate the complexities of these insights in relation to the most affected groups, such as ACB communities.

6.6 Conclusion

This study has served as a reflection on the vaccination communication services available during COVID-19, with a focus on the most affected groups, such as ACB communities. The service providers' foundational knowledge is important for social justice, including client advocacy. The epistemic stance of pragmatism and the overarching framework of intersectionality are complimentary approaches; whereby intersectionality highlights the unique forms of discrimination faced by vulnerable populations, such as ACB communities, and pragmatism helps to identify practical solutions for effective communication. Effective communication to improve vaccine uptake was found to include understanding and addressing mistrust and supporting empowerment, actively listening to clients to provide tailored education, and the efficacy of the process of mobilizing knowledge. To improve communication to reach the most affected groups work should be done to create supportive and sustainable infrastructure, contextualize vaccination campaigns to local community needs, and improve interpersonal skills to meet the unique needs of clients. This was found to include building bridges to resources so that they are easily accessible; encouraging ACB people to share their perspectives, such as by participating in research; undergoing training that reflects the dynamic nature of culture that considers cultural sensitivity in tandem with clients' lived experiences; and actively participating in reflexivity to become self-aware of personal biases and how they impact client-service provider relationships. Moreover, nurses do not work in isolation and must work in partnership with a variety of service providers and in collaboration with clients to find practical solutions to

improve vaccine uptake. As a result of this study, the experiences of service providers who were vaccinators and vaccine promoters has provided insight into nursing best practices for vaccination communications.

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Appendices

Appendix A: Information Letter

AVA Project Title: Optimizing vaccine acceptance and uptake among African, Caribbean, and Black (ACB) communities in Ottawa

This letter of information provides details on the AVA project, which pertains to optimizing vaccine acceptance and uptake among African, Caribbean, and Black (ACB) communities in the Ottawa and the national capital region (NCR). You are invited to participate in the quantitative component, which includes an online survey as well as a qualitative component that includes a focus group discussion (FGD); if you are a service provider, you are also invited to participate in additional in-depth interview. Please find the details on this project below.

Principal Investigator	Josephine Etowa, PhD., RN Professor, School of Nursing, Faculty of Health Sciences, University of Ottawa Phone: Email:
Co- Investigator:	Dr Charles Daboné Phone: Email:
Post doctoral fellow	Bishwajit Ghose Email:
Research Coordinator	Itunu Taiwo Email:
Research Assistant	Sheryl Beauchamp PhD. Student, School of Nursing, Faculty of Health Sciences, University of Ottawa Email:
Partner Agencies	Ottawa Public Health; AIDS Committee of Ottawa (ACO); community organizations such as Canadians of African Descent Health Organization (CADHO) and ACB Resource Centre; Community Health Centres such as South East Ottawa Community Health Centre (SEOCHC), and Somerset West Community Health Centre (SWCHC), and faith-based organizations such as the International Pastors and Leaders Forum (IPLF) in Ottawa, Men of Honour Ministry, River Jordan Ministry.

Introduction:

AVA is a two-year community-based participatory research (CBPR) study which seeks to optimize vaccine uptake in the ACB community in the Ottawa and the national capital region

(NCR) through meaningful community and providers engagement in the design, implementation and evaluation of vaccine promotion and knowledge translation interventions. Critical racial and health dialogue about ACB people's knowledge and experiences with vaccines is essential for trust building, with subsequent increase in both acceptance and uptake of vaccines. This project focuses on the Ottawa and NCR including Hall-Gatineau, Kanata, Nepean, etc. and builds on a record of inspired and innovative community-based work in health equity in the ACB communities led by Dr. Josephine Etowa of the University of Ottawa, where she leads the Collaborative Critical Research for Equity and Transformation in Health Lab.

Objectives of the AVA program:

Specific objectives of this project include:
1. To meaningfully engage various stakeholders in project implementation.
2. To examine vaccine knowledge and experiences of ACB community members.
3. To build capacity among health providers working in ACB communities as vaccinators and vaccine promoters.
4. To increase access to vaccines among ACB communities by improving confidence in, acceptance, and uptake of vaccines.
5. To improve evidence-based vaccination communication between immunization stakeholder groups (i.e., health planners, health providers and ACB communities), to promote vaccine uptake.

Data collection and participant recruitment

Quantitative: Surveys will begin in February 2022 and end once statistical significance is achieved; based on previous studies, 500 participants are expected for each survey. Participants will be recruited through purposive sampling and the snowball method. Surveys will be administered online via Survey Monkey platform at the University of Ottawa

Qualitative: The IDIs and FGDs will begin in February 2022 and end once thematic saturation is achieved; based on previous studies, 25 participants are expected for the IDIs and 60 participants for the FGDs. Participants will be recruited through purposive sampling and the snowball method. Data will be collected through the online Zoom platform.

Subsection: Graduate Student Component:

As components of objective 5 above, Sheryl Beauchamp will complete a qualitative study based on exploring the experiences of service providers regarding promoting and administering the COVID-19 vaccine within the African, Caribbean, and Black (ACB) communities and other high-risk persons. The AVA Project will include about 25 IDIs and Sheryl Beauchamp will analyze 15 of these IDI for her doctoral thesis.

Graduate Student Work*:*

Strengthening evidenced-based vaccination communication through innovative knowledge mobilization: COVID-19 as an exemplar.

***First point of Contact**:*

Student-Researcher	Sheryl Beauchamp
PhD supervisor	Josephine Etowa, PhD., RN Professor, School of Nursing, Faculty of Health Sciences, University of Ottawa Phone: Email:

Introduction:

This study is for the partial completion of Sheryl Beauchamp's thesis for the Doctor of Philosophy (PhD.) in Nursing in the School of Nursing, Faculty of Health Sciences, at the University of Ottawa. Dr. Josephine Etowa is supervising this study. The aim of this study is to identify communications strategies that will mobilize evidence-based knowledge to improve vaccine uptake, especially within the most vulnerable populations. This study is a component of the AVA Project. You are invited to participate in this research study, which will explore your experiences regarding promoting and administering the COVID-19 vaccine within the African, Caribbean, and Black (ACB) communities and other high-risk persons.

Purpose:

To explore service providers', experiences as vaccinators and vaccination promoters, and how they mobilize evidence-based vaccination communication to improve vaccine uptake within the most affected groups, such as the ACB community.

Objectives:

1. To examine ways to build capacity of service providers to effectively educate communities with low rates of vaccine uptake.
2. To identify effective vaccine communication strategies to reach hard-to-reach communities.
3. To describe vaccine related communication strategies that build trust and understanding within groups most effected by COVID-19 e.g., ACB community.
4. To create a knowledge translation tool to apply evidence to practice and improve vaccination acceptance.

Participation:

ACB Community Survey

You can participate in the online ACB community survey if you:

- Identify as African, Caribbean, or Black
- Are at least 18 years old
- Understand English or French
- Reside or work within the Ottawa and the national capital region (NCR)

Participation will consist of completing an online questionnaire administered via the Survey Monkey platform at the University of Ottawa. The questionnaire will be filled out online only; however, project staff will be available virtually or in-person (depending on COVID-19 pandemic restrictions) to provide guidance if there is any difficulty navigating the online platform. During the completion of the online questionnaire, questions will be asked regarding demographics, workplace, personal health and safety, COVID-19 related information, communication strategies, perceptions about vaccination, and messaging. The link to the online questionnaire will be provided by the researchers once consent to participate has been received. The questionnaire will take approximately 20 minutes to complete.

Service Provider Survey

You can participate in the online service provider survey if you are:

- A vaccinator or vaccine promoter, such as:
- An administrator or policy maker
- An ACB community champion
- A healthcare provider
- Serve members of the ACB community
- Understand English or French
- Reside or work within the Ottawa and the national capital region (NCR)

Participation will consist of completing an online survey administered via the Monkey Survey platform at the University of Ottawa. During the completion of the online survey, questions will be asked regarding demographics, workplace, personal health and safety, COVID-19 related information, communication strategies, perceptions about vaccination, and messaging. The link to the online survey will be provided by the researchers once consent to participate has been received. The survey will take approximately 20 minutes to complete. At the end of the survey, a link with the option to be contacted regarding participating in an in-depth interview will be available.

In-depth Interview (IDI)

You can participate in the online service provider in-depth interview (IDI) if you are:

- A vaccinator or vaccine promoter, such as:
- An administrator or policy maker

- An ACB community champion
- A healthcare provider
- Serve members of the ACB community
- Understand English or French
- Reside or work within the Ottawa and the national capital region (NCR)

Participation will consist of completing a demographic survey that will take approximately 10 minutes to complete, followed by an online in-depth interview (IDI) which will last approximately 1 hour. You will also be asked to provide contact information, if you agree to be contacted in the future for potential follow-up questions related to this study. During the IDI the researcher will ask questions and invite you to share your experiences about COVID-19 vaccination uptake; including general information about your service provider roles and experiences, your place of work as it pertains to the ACB community and communication, the impact of racism on the services you provide, you views on mistreatment and mistrust of ACB persons within healthcare, issues related to empowering the ACB community and building trust within the ACB community, and your views of messaging to improve vaccine uptake in the ACB community. The IDI will be scheduled via Zoom at a mutually convenient time. The interview will be digitally recorded and transcribed by method of the video platform; the digital recording will be reviewed to confirm transcription accuracy. Notes will be taken during the IDI to document non-verbal communications such as facial expressions and hand gestures.

Community Focus Group Discussion (FGD)

You can participate in the online ACB community FGD if you:

- Identify as African, Caribbean, or Black (ACB) and/or are a vaccinator or vaccine promotor (administrator or policy maker, ACB community champion, healthcare provider)
- Are at least 18 years old
- Understand English or French
- Reside or work within the Ottawa and the national capital region (NCR)

Participation will consist of completing a demographic survey that will take approximately 10 minutes to complete, followed by focus group discussion (FGDs) which will consist of approximately 8-10 people in a group and last approximately 1 hour. The FGDs will consist of six breakout sessions that are embedded within the 2-half day World Café event. During the FGD the researcher will ask questions and invite participants to share their experiences about COVID-19 vaccination uptake. The discussion will focus on preliminary findings of the project and questions will relate to participants' views on the COVID-19 vaccination campaign, the healthcare system and the ACB community, the impact of historical and current racism on vaccine uptake, mistreatment and mistrust of the healthcare system within the ACB community, ways to empower the ACB community, ways to build trust in the ACB community and ways to improve vaccine messaging. The FGD will be digitally recorded and transcribed by method of the video platform; the digital recording will be reviewed to confirm transcription accuracy.

Notes will be taken during the FGD to document non-verbal communications such as facial expressions and hand gestures.

Compensation or Incentive:

Upon confirming participation in the aforementioned collection activities an honorarium as outlined in the consent forms are as follows:

Service providers that consent to an in-depth interview (IDI), may choose a honoraria of a $30 Amazon gift card or $30 etransfer.

ACB community members that consent to a World Café focus group discussion (FDG), may choose a honoraria of a $30 Amazon gift card or $30 etransfer.

ACB community members that consent to complete the online survey, will be entered into a draw for a $150 Amazon gift card sent via email.

Service providers that consent to complete the survey, will be entered into a draw for a $150 Amazon gift card sent via email.

The draw is open to all participants who consent to participate in the survey. Upon completion of the study a name will be randomly selected amongst those who have entered the draw and the person whose name is drawn will be informed by email. To win the prize, the person must correctly answer a skill testing question. If the person cannot be reached within 14 days from the date of the draw, the prize will be awarded to the second name that is randomly selected and so on until the prize has been awarded. The odds of winning a prize are an estimated 1 in 50 but are dependent on the number of participants. The prize must be accepted as awarded or forfeited and cannot be redeemed for cash.

We reserve the right to cancel the draw or cancel the awarding of the prize if the integrity of the draw or the research or the confidentiality of participants is compromised. The draw is governed by the applicable laws of Canada.

This honorarium is yours to keep, even if you decide to withdraw from the study at any point in time.

Voluntary Participation:

All components of all studies are completely voluntary, and you can withdraw your participation at any time. You do not need to answer any question that you do not choose to answer.
Due to the anonymous nature of the surveys (i.e., you will not provide your name), if you request your individual information to be removed, we will need you to provide us with your code name you chose on the consent form and filled in on the survey. However, after 3 months of your participation we may be unable to remove your individual data entirely if it has been integrated

with the data from other participants and may affect data from other participants. In addition, for those who participate in the FGD, due to the collective nature of the group discussion, data provided will still be used even if you withdraw.

Confidentiality and Conservation of Data:

The researchers mentioned will be the only people with access to the personal information you provide. This information will be kept in a secure location and will not be disclosed to anyone nor will your name or any personal identifiers be used on study materials. Once you agree to participate in this study, researchers will protect your anonymity by using a code name in all written information. The survey questions, and records of your interview will be identified only by this research code; your real name will not be connected to them in any way.

Data collected will be kept in a locked filing cabinet in Professor Etowa's secured office at the University of Ottawa. We will store the consent form and your contact information in a separate folder from research data. The digital recordings of the focus group discussion and in-depth interview will be downloaded onto a password-protected computer and be transcribed into written texts as a password protected document. Once the transcription is completed, we will store the files on password-protected computers. These computers will be stored in a locked filing cabinet in a secured office. Only the research team will have access to this office. All audio files will be destroyed post transcription. FDG and IDI transcripts and notes will be destroyed 5 years after the study has been completed and published as required by the funding agency."

Everyone who has access to the raw data will be asked to sign a confidentiality agreement. In any reports coming from this research all information that could be used to identify you, will be substituted with fictional or generic names. The results of this study may be described in oral and written presentations and may be published in professional journals. However, at all times the results will be presented in a combined group format only and no personal identifiers will be used. Please note that the data from this study will be utilized and incorporated into a student thesis.

Limits of confidentiality: Since *the focus group discussion (FGD) meeting involves several participants, confidentiality cannot be absolutely guaranteed. Confidentiality is kept only when all persons keep everything that is shared in focus group confidential and not share any information with anyone outside of the group discussion. To protect your confidentiality, we encourage you to think through and decide what you will and will not share in a group setting. You are also encouraged to use a made-up name while taking part in the consultation meeting to enhance your privacy.*

Risks:

There is a risk of emotional stress. I am aware that there is free psychological counseling, which is available in Ontario at ConnexOntario. Toll-free by phone: 1-866-531-2600,

Online web chat. https://1576prairiefyre.cloudcollaboration.ca/ccmwa/chat/a91000d1-9584-466b-bb4f-6b039b802173?client=99_238_242_204

Benefits:

This study will give me the opportunity to share my story about my experiences regarding promoting and administering the COVID-19 vaccine within the ACB community and other high-risk persons. My accounts may provide insight into identifying communications strategies that will mobilize evidence-based knowledge to improve vaccine uptake, especially within the most vulnerable populations.

Voluntary Participation:

Participation is voluntary, and participants can withdraw at any time. Participants do not need to answer any question that they do not choose to answer.

Ethics:

This study has received ethics approval from the University of Ottawa, Research Ethics Board (REB). If you have any questions regarding the ethical conduct of this study, you may contact the Ethics Office:

Tabaret Hall, 550 Cumberland Street,
Room 154, Ottawa, Ontario, Canada K1N 6N5
ethics@uottawa.ca

***Please note that there is an error in the objectives portion which states:**

1) To examine ways to build capacity of service providers to effectively educate communities with low rates of vaccine uptake; 2) to identify effective vaccine communication strategies to reach hard-to-reach communities; 3) to describe vaccine related communication strategies that build trust and understanding within groups most effected by COVID-19 e.g., ACB community and 4) to create a knowledge translation tool to apply evidence to practice and improve vaccination acceptance.

It was not updated to be consistent with the Appendix B which states:
1) To examine ways to build capacity of service providers to effectively educate communities with low vaccination rates; 2) to identify effective vaccine communication strategies to reach disadvantaged communities; 3) to develop best practice guidelines for vaccine uptake in disadvantage communities and 4) to create a knowledge mobilization tool for service providers to improve vaccine uptake.

Objective 3 in Appendix A is still addressed in this study as building trust is a pervasive element within the other objectives.

Furthermore, the wording was also edited to reflect the scope of a PhD. Therefor in this study, rather than developing best practice guidelines or creating a knowledge mobilization tool, insight into their future development was provided. In this study the objectives are:

1) To examine ways to build capacity of service providers to effectively educate communities with low vaccination rates; 2) to identify effective vaccine communication strategies to reach disadvantaged communities; 3) to provide insight to develop best practice guidelines for vaccine uptake in disadvantage communities and 4) to provide insight to create a knowledge mobilization tool for service providers to improve vaccine uptake.

Appendix B: Consent Form for In-depth Interviews (IDIs)

African, Caribbean and Black Vaccine Acceptance (AVA) Project Title: Optimizing vaccine acceptance and uptake among African, Caribbean, and Black (ACB) communities in Ottawa

Principal Investigator	Josephine Etowa, PhD., RN Professor, School of Nursing, Faculty of Health Sciences, University of Ottawa Phone: Email:
Co- Investigator:	Dr Charles Daboné Phone: Email:
Post doctoral fellow	Bishwajit Ghose Email:
Research Coordinator	Itunu Taiwo Email:
Student-Researcher	Sheryl Beauchamp PhD. Student, School of Nursing, Faculty of Health Sciences, University of Ottawa Email:
Partner Agencies	Ottawa Public Health; AIDS Committee of Ottawa (ACO); community organizations such as Canadians of African Descent Health Organization (CADHO) and ACB Resource Centre; Community Health Centres such as South East Ottawa Community Health Centre (SEOCHC), and Somerset West Community Health Centre (SWCHC), and faith-based organizations such as the International Pastors and Leaders Forum (IPLF) in Ottawa, Men of Honour Ministry, River Jordan Ministry.

Funding : This project is funded by the Public Health Agency of Canada (PHAC).

Invitation to Participate: I am invited to participate in the above-mentioned research study conducted by (Dr. Josephine Etowa, Dr Charles Daboné, Bishwajit Ghose, Itunu Taiwo, and Sheryl Beauchamp).
Purpose of the Study: The purpose of the study is to optimize vaccine uptake in the ACB community in the Ottawa and the national capital region (NCR) through meaningful community and providers engagement in the design, implementation and evaluation of vaccine promotion

and knowledge translation interventions. The specific objectives include: 1. To meaningfully engage various stakeholders in project implementation; 2. To examine vaccine knowledge and

experiences of ACB community members; 3. To build capacity among health providers working in ACB communities as vaccinators and vaccine promoters; 4. To increase access to vaccines among ACB communities by improving confidence in, acceptance, and uptake of vaccines; and 5. To improve evidence-based vaccination communication between immunization stakeholder groups (i.e., health planners, health providers and ACB communities), to promote vaccine uptake.

Subsection: Graduate Student Component

Thesis Title: Strengthening evidenced-based vaccination communication through innovative knowledge mobilization: COVID-19 as an exemplar.

The IDIs inform objectives 1, 2, 3 and 5 of the AVA project and will provide all data collected for Sheryl Beauchamp' doctoral thesis.

Principal Investigator: Sheryl Beauchamp **Affiliation**: School of Nursing, Faculty of Health Sciences, University of Ottawa **Email address:**	**Name of Supervisor:** Dr. Josephine Etowa **Affiliation**: School of Nursing, Faculty of Health Sciences, University of Ottawa **Email address:**

Project type: Doctoral thesis

Funding: This study is funded by the Public Health Agency of Canada (PHAC) through the AVA project.

Invitation to Participate: I am invited to participate in the above-mentioned research study conducted by Sheryl Beauchamp and Dr. Josephine Etowa.

Purpose of the Study: To explore service providers' experiences as vaccinators and vaccination promoters, including how they are mobilizing evidence-based vaccination communication to improve vaccine uptake within the most affected groups, such as the ACB community. Objectives specific to this component of the AVA project and the doctoral thesis study include: 1) To examine ways to build capacity of service providers to effectively educate communities with low vaccination rates; 2) to identify effective vaccine communication strategies to reach disadvantaged communities; 3) to develop best practice guidelines for vaccine uptake in disadvantage communities and 4) to create a knowledge mobilization tool for service providers to improve vaccine uptake.

Participation: My participation will consist of completing a demographic survey that will take approximately 10 minutes to complete, followed by an online in-depth interview (IDI) which will last approximately 1 hour. I will also be asked to provide my contact information, if I agree to be contacted in the future for potential follow-up questions related to this study. During the IDI the researcher will ask questions and invite me to share my experiences about COVID-19

vaccination uptake; including general information about my service provider roles and experiences, my place of work as it pertains to the ACB community and communication, the impact of racism on the services I provide, my views on mistreatment and mistrust of ACB persons within healthcare, issues related to empowering the ACB community and building trust within the ACB community, and my views of messaging to improve vaccine uptake in the ACB community. The IDI will be scheduled via Zoom at a mutually convenient time. I understand that the interview will be digitally recorded and transcribed by method of the video platform; the digital recording will be reviewed to confirm transcription accuracy. Notes will be taken during the IDI to document non-verbal communications such as facial expressions and hand gestures.

Risk: My participation in this study will entail that I volunteer personal information and discuss sensitive topics, and this may cause me to feel emotional. I have received assurance from the researchers that efforts will be made to minimize these risks including the option to refuse to answer any question, the option to withdraw at any time, and the protection of my identity. I am aware that there is free psychological counseling, which is available in Ontario at ConnexOntario. Toll-free by phone: 1-866-531-2600 and Online web chat: https://1576prairiefyre.cloudcollaboration.ca/ccmwa/chat/a91000d1-9584-466b-bb4f-6b039b802173?client=99_238_242_204.

Benefit: My participation in this study will contribute by providing insight into identifying communications strategies that will mobilize evidence-based knowledge to improve vaccine uptake, especially regarding promoting and administering the COVID-19 vaccine within the ACB community and other high-risk persons.

Confidentiality and Privacy: Due to the online collection of information, in order to minimize the risk of security breaches and to help ensure my confidentiality, it is recommended that I use standard safety measures, such as signing out of my account, closing my browser, and locking my device when I am no longer using it/when I have completed the study. I understand that the information I provide will be used only for the purposes and objectives of this study; namely to meaningfully engage various stakeholders in project implementation and examine vaccine knowledge and experiences of ACB community members by providing information that can be used to build capacity of service providers to effectively educate communities with low vaccination rates, identify effective vaccine communication strategies to reach disadvantaged communities, develop best practice guidelines for vaccine uptake in disadvantage communities and create a knowledge mobilization tool for service providers to improve vaccine uptake. I have received assurance from the researchers' that efforts will be made to keep the information I will share confidential. Efforts to maintain my confidentiality will include the use of a code name in all written information and storing the consent form and study information in two separate areas. The collected data will be identified only by the code name; my real name will not be connected to them in any way. Everyone who has access to the raw data will be asked to sign a confidentiality agreement. In any reports coming from this research all information that could be used to identify me, will be substituted with fictional or generic names. The results of this study may be described in oral and written presentations and may be published in professional

journals. I understand that the data from this the IDI will be utilized and incorporated into Sheryl Beauchamp's doctoral thesis as well as the AVA project.

Conservation of Data: The data collected; both hard copy and electronic data; including digital recordings, transcripts, demographic survey datasets, researchers' notes, and consent forms, will be kept in a secure manner. The researchers directly involved in this study will be the only people with access to the personal information you provide. This information will be kept in a secure location and will not be disclosed to anyone outside of the research team. The study data will be securely stored in accordance with the policy of the University of Ottawa REB and other Ethics committees. The recordings will be destroyed five years after study completion.

Compensation: Once the researchers receive my consent to participate in the IDI, I can choose to receive a honoraria of a $30 Amazon gift card via email or $30 via e-transfer. If I choose to withdraw from the study, I will still receive this compensation.

Voluntary Participation: I am under no obligation to participate and if I choose to participate, I can withdraw from the study at any time and/or refuse to answer any questions, without suffering any negative consequences. If I have any questions about the study, I may contact the researchers. If I have any questions regarding the ethical conduct of this study, I may contact the Office of Research Ethics and Integrity via email (ethics@uottawa.ca) or telephone (613-562-5387). It is recommended that I (keep/print/save) a copy of this consent form for my records.

Acceptance:
By selecting the consent statement below, I agree to participate in this research study.

- Yes, I want to participate.
  (Name) _____
  (Signature, date) _____
  Email _____

- No, I do not want to participate.

*Please note that the wording was also edited in this study to reflect the scope of a PhD. Therefor in this study, rather than developing best practice guidelines or creating a knowledge mobilization tool, insight into their future development was provided. In this study the objectives are:
1) To examine ways to build capacity of service providers to effectively educate communities with low vaccination rates; 2) to identify effective vaccine communication strategies to reach disadvantaged communities; 3) to provide insight to develop best practice guidelines for vaccine uptake in disadvantage communities and 4) to provide insight to create a knowledge mobilization tool for service providers to improve vaccine uptake.

Appendix C: Participant Consent to be Contacted by the Research Team

African, Caribbean and Black Vaccine Acceptance (AVA) Project Title: Optimizing vaccine acceptance and uptake among African, Caribbean, and Black (ACB) communities in Ottawa

I _____ hereby authorize Dr Josephine Etowa, and the research team members to contact me through the information I provide below for the purposes of participating in other aspects of the study or in receiving study materials. I understand that my information will not be shared with other people.
I confirm that I have saved a copy of this agreement for my records: Choose Yes/No
Contact details (phone #, email): _____
Best time for contact: daytime/evening_____
I would prefer to speak to the researchers in the language English/French _____
Signature: _____Name: _____
Dated: _____ Witness: _____

451 rue Smyth 451 Smyth Rd
Ottawa (Ontario) K1H 8M5 Canada Ottawa, Ontario K1H 8M5 Canada

Appendix D: Service Providers Demographic Form

AVA Project Title: Optimizing vaccine acceptance and uptake among African, Caribbean, and Black (ACB) communities in Ottawa

Background information

- District_____
- Name of health facility_____

Position / expertise	Years in role	Age	Sex	Highest level of Education achieved	Ethical consent: verbal (V) or written (W)

Appendix E: Service Provider In-depth Individual Interview (IDI) Guide

AVA project: Optimizing vaccine acceptance and uptake among African, Caribbean, and Black (ACB) communities in Ottawa

Date of interview: _____
Start time: _____
Finish time: _____
Participant information
Informant identifier number _____
Interviewer: _____
Transcript due date: _____
Transcript file name: _____

Hello. I my name is_____, I am a _____ researching vaccine acceptance. This interview is being conducted to get your input about your experience with low vaccine acceptance with your clients. I am especially interested in any issues you faced and if you have any recommendation for improving communication.

If it is okay with you, I will be recording this virtual (Zoom or TEAMS) meeting and the application will transcribe our conversation. The purpose of recording and transcribing is so that we can have an attentive conversation. I assure you that all your comments will be confidential, and a pseudonym will be used on all information.

Question set 2: General Information

1. I'd like to begin by asking you to tell me a little bit about yourself and your role at this health facility.

2. Could you please describe to me your responsibilities regarding vaccine communications with the African Black Caribbean community and other marginalized groups?

Question set 3: Agencies and industries

Next, I would like to ask you questions about your workplace and communications with the ACB community.

3. Please describe what steps have been taken at your workplace to increase vaccine uptake in the ACB community.

a. Describe the ways you feel this is effective.
b. What would you change?
c. In what ways would these changes increase vaccine uptake?
d. How would you make these changes?

4. Please describe how you and/or your workplace addressed the new and changing information about the COVID-19 vaccine and relay it to your clients.

a. Describe how it was effective and what you would change.
b. In what ways would these changes improve the way information is addressed and relayed?
c. How would you make these changes?

5. Please describe the different ways you communicate with an ACB client:

a. Who has concerns about being vaccinated?
b. Who has stated they are opposed to vaccines?
c. Who has not voiced an opinion?

6. Please describe how your communication strategies regarding vaccine uptake in the ACB community change depending on:

a. The age of the client
b. The gender of client
c. If your client is pregnant
d. The general health of the client e.g. number of co-morbidities
e. The income level of the client
f. The education level of the client
g. How often you see the client
h. If you are speaking to a parent or caregiver.

7. Please describe what type of additional training you would like to have available to improve vaccination communication in general and in the ACB community specifically.

8. If you became aware of a co-worker stating incorrect information, what would you do?

a. Describe how it was effective and what you would change.
b. Describe other strategies you would like to use but have been unable to.
c. What barriers have you encountered that have stopped you from implementing these strategies?

9. Please describe how you and/or your workplace address vaccine misinformation.

a. Describe other strategies you would like to use but have been unable to
b. What barriers have you encountered that have stopped you from implementing these strategies?

Question set 4: Impact of historical and current racism

Thank-you, I would now like to ask you some questions about the impact of racism on the services you provide.

10. Please describe how you feel racism has influenced your communication strategies regarding COVID-19 vaccination and the ACB community.

a. Describe strategies that may decrease the influence of racism in the ACB community.
b. Have you attempted to implement these strategies?
c. What barriers have you encountered
d. What encouragements have you received?

11. What measures has your workplace taken to reduce inequities in the ACB community.

a. Describe the ways you feel this is effective.
b. What would you change?
c. In what ways would these changes reduce the inequities?
d. How would you make these changes?

12. Please describe what measure are available to ACB persons to discuss real and perceived inequities within your workplace.

a. Describe how concerns have been addressed regarding Covid-19 vaccination messaging in your workplace.
b. How effective do you feel this has been?
c. What would you change?
d. In what ways would these changes improve the messaging?
e. How would you make these changes?

Question set 5: Mistreatment and mistrust

I am now going to ask you some question pertaining to the mistreatment and mistrust of ACB persons within healthcare.

13. Please describe a situation where you felt that a client was not receiving health services because of their mistrust in the medical system.

a. How would you have improved the situation?
b. Have you attempted to implement these strategies?
c. What barriers have you encountered?
d. What encouragement have you received?

14. Please describe a communication strategy that you have found helpful to address ACB persons who are reluctant to receive the services you provide due a general distrust of the healthcare system.

a. Describe other strategies you would like to use but have been unable to
b. What barriers have you encountered that have stopped you from implementing theses strategies?

Question set 6: Community empowerment

The following questions that I am now going to ask are on empowering the ACB community.

15. Please describe how your organization has worked to empower the ACB community to increase COVID-19 vaccine uptake.

a. Describe the ways you feel this is effective.
b. What would you change?
c. In what ways would these changes empower the ACB community?
d. How would you make these changes?

16. Please describe the cultural messaging your workplace uses.

a. Describe the ways you feel this is effective.
b. What would you change?
c. In what ways would these changes improve cultural messaging?
d. How would you make these changes?

17. Please describe how you incorporate culturally sensitive language into your discussions with clients.

a. Describe how it was effective
b. What you would change
c. What barriers have you encountered
d. What encouragements have you received?

Question set 7: Community messengers

Thank- you, next I am going to ask you about empowering ACB community messengers.

18. Please describe how you and/or your workplace have been able to support ACB community influencers, trusted messengers and organizations to help increase vaccine uptake.

a. Describe the ways you feel this is effective.
b. What would you change?
c. In what ways would these changes improve support?
d. How would you make these changes?

Question set 8: Building trust

I am now going to ask you some question about building trust in the ACB community.

19. Please describe how you and/or your workplace have encouraged transparent and open dialogue with your clients, that has allowed for questions to be asked and answered.

a. Describe the ways you feel this is effective.
b. What would you change?
c. In what ways would these changes encourage transparency and open dialogue?
d. How would you make these changes?

20. Please describe ways that you help your clients make informed decisions about the COVD-19 vaccination.

a. Describe other strategies you would like to use but have been unable to
b. What barriers have you encountered that have stopped you from implementing these strategies?
c. How might these barriers be addressed?

21. Please describe how you and/or your workplace help to build trust with the ACB community.

a. Describe the ways you feel this is effective.
b. What would you change?
c. In what ways would these changes improve trust?
d. How would you make these changes?

Question set 9: Messaging

The final set of questions I am going to ask you are about messaging to improve vaccine uptake in the ACB community.

22. Please describe what written and visual message you would create to increase uptake in the ACB community.

a. Where do you think this message would be most effectively seen by the public and ACB community?

Closing

Please can you complete the contact information sheet to help us provide the study results and invite you to future project events like the world café event.

That concludes our interview. Thank -you for participating in our study, your input greatly appreciated

Appendix F: Amended Service Provider In-depth Individual Interview (IDI) Guide

AVA Project Title: Optimizing vaccine acceptance and uptake among African, Caribbean, and Black (ACB) communities in Ottawa
Date of interview: _____ _____
Start time: _____
Finish time: _____
Participant information
Informant identifier number _____
Interviewer: _____
Transcript due date: _____
Transcript file name: _____

Hello, my name is _____ and I am_____ researching vaccine acceptance with a focus on communities with low vaccine uptake, such as African, Caribbean, and Black (ACB) communities. This interview is being conducted to get your input about your experiences as a vaccine promotor and or vaccinator, with a focus on any issues you have faced and if you have any recommendation for improving communication.

If it is okay with you, I will be recording this virtual Zoom meeting and our conversation will be transcribed. The purpose of recording and transcribing is so that we can have an attentive conversation. I assure you that all your comments will be confidential, and a pseudonym will be used on all information.

Before we proceed with the interview do you acknowledge that you have read the consent form and are satisfied that all your questions about this study have been answered, that you fully understand your rights regarding this study, and you agree to take part in this study?

1. I'd like to begin by asking you to tell me a little bit about yourself and your role at the health facility where you work.

2. Could you please describe to me your responsibilities regarding vaccine communications with the African Black Caribbean community and other marginalized groups?
a. Do you identify as a member of the ACB community or a marginalized group?

3. What steps have been taken at your workplace to increase vaccine uptake in the ACB community.
a. How do you feel the process could be improved
b. Have you tried to make these improvements? If yes, what barriers have you encountered?

4. How is new information about vaccines are relayed to your client.
a. What do you feel could make this process more efficient or reach more clients?

5. How do you address vaccine misinformation with your clients

a. I what ways has your workplace addressed vaccination misinformation

6. Please describe how you and/or your workplace address vaccine misinformation.
a. Describe other strategies you would like to use but have been unable to
b. What barriers have you encountered that have stopped you from implementing these strategies?

7. What are your communication strategies for someone who is opposed to vaccines in general or specific to COVID-19
a. If your client has not shown an interest in getting vaccinated (COVID-19 or other) would you bring up the topic?

8. What are some different ways you might talk to your client about vaccinations based on your client's age, gender, health, income or education level, or if they are a parent or caregiver.

9. How do you build rapport with your clients.
a. In what ways might you communicate differently with a client you see regularly compared to a client you see once regarding vaccinations?

10. What additional training do you feel would be helpful to improving your communication skills regarding vaccinations?

11. Please describe strategies that you feel are helpful to decreasing the influence of racism and its impact of vaccine uptake in ACB communities.
a. What barriers have you encountered when implementing these strategies?

12. In what ways has your workplace reduced inequities in ACB communities?
a. What strategies to you feel would be helpful to further reducing inequities?
b. If you have tried to implement these strategies what barriers have you encountered

13. What process is available for a ACB employee to discuss real or perceived inequities within your workplace.
a. What changes would you make to improve this process
b. If you have tried to implement these strategies what barriers have you encountered

14. What process is available for a ACB client to discuss real or perceived inequities about the services your workplace provides
a. What changes would you make to improve this process
b. If you have tried to implement these strategies what barriers have you encountered.

15. In ways do you feel mistrust in the medical system has impacted the healthcare services you provide to ACB clients?
a. How have you worked to build trust in the healthcare system with your clients?

b. Are there additional strategies you would like to use? If so, what barriers have prevented you from implementing them?

16. Please describe a communication strategy that you have found helpful to address ACB persons who are reluctant to receive the services you provide due a general distrust of the healthcare system.
a. Describe other strategies you would like to use but have been unable to
b. What barriers have you encountered that have stopped you from implementing theses strategies?

17. In what ways does your workplace work to empower ACB communities to help increase vaccine uptake?
a. In what ways are community organizations and community messengers supported?
b. What other strategies do you feel would help to increase empowerment?

18. How you and/or your workplace help to build trust with the ACB community.
a. What other strategies do you feel would help to increase trust?
b. What barriers have you encountered in implementing these strategies?

19. In what ways are you do you help your clients make informed decisions about vaccinations (COVID-19 and other)?
a. What other strategies would improve the ability to make informed decisions?
b. What barriers have you encountered to implementing these strategies?

20. In what ways do you/ your workplace encourage transparent and open dialogue with your ACB clients/communities regarding vaccines?
a. What other strategies do you feel would increase transparency and dialogue?

21. Describe the cultural messaging you/your workplace uses for vaccination information.

22. How do you incorporate culturally sensitive language into your discussions with clients?

23. What written and visual message you would create to increase uptake in the ACB community.
a. Where should the messaging be placed?

Closing
Please can you complete the contact information sheet so that we can contact you if there is a need to follow-up on any of your answers or to invite you to future events?
That concludes our interview. Thank -you for participating in our study, your input greatly appreciated.

Appendix G: Commonly Used Messaging

Common Message	Characteristics	Format & Dissemination
▪ Importance of vaccination ▪ Location of vaccination and testing sites ▪ Importance for those with high-risk occupations ▪ Importance for those around vulnerable people	▪ Multiple languages ▪ Some pictures ▪ Infographics ▪ Plain language/easy to read	▪ Flyers ▪ Posters ▪ e-pamphlets/printed pamphlets ▪ Newsletters ▪ Door hangers/left at door ▪ Videos ▪ Video conferences ▪ Emails ▪ Telephone ▪ Text messages ▪ Word of mouth ▪ Websites ▪ Social media (YouTube, WhatsApp, Twitter, TikTok, Instagram, and Facebook) ▪ Information sessions, both virtual and in person ▪ Community wellness hubs ▪ Clinical fairs ▪ Community events ▪ Townhalls ▪ Open door policy to ask questions ▪ Through partner organizations, community leaders and ambassadors, places of worship, schools (although they generally created their own)

Appendix H: Communication and Client Demographics

How participants communicated with clients from varied backgrounds.

AGE
Approach **Youth** ▪ Used youth-friendly messaging and forums to bring youths together. ▪ Focus was on helping them understand the importance of vaccination and its availability. ▪ It was a helpful approach to state that getting vaccinated would facilitate resuming in-person activities. ▪ Shorter messages were preferred, so platforms like Instagram and Snapchat, and maybe TikTok were used. The messaging was often missed when Facebook and WhatsApp were used. ▪ Texts rather than a phone call were preferred. ▪ A Twitter handle was provided to clients who wanted to obtain information on social media, this tended to be youths. ▪ Used creative ways to engage youth clients in-person, such as meeting in a parking lot while maintaining social distancing. ▪ Engaged with in-person activities when venues were open, such as a basketball game and a creative art show where youth were showcasing their visual arts, music, clothing art, and textile arts. Youth events were an opportunity to connect with youths, promote COVID information, and answer questions in a youth friendly space. ▪ To share information, staff were a part of online platforms that youth were part of. ▪ Interviews with youth leaders were recorded, and the video clips were shared at ACB serving programs. ▪ Service providers shared their reasons and experiences regarding vaccinations; to highlight it was a personal choice. ▪ Youth ambassadors addressed challenges within the youth population; they were found to be influential. They were better able to relate to the youths' challenges and understand their language. ▪ Youth ambassadors were able to help some youths who wanted to get vaccinated, but their parents were not willing. ▪ Young leaders engaged youths, they did not need a lot of stories or conversations, just to tell them when and where to get the vaccine. ▪ People from similar age groups provided information. ▪ Youth testimonials about their vaccination experiences could engage other youths. ▪ It was preferred to refer a young client to a workshop, young doctor, or someone else the service provider felt the client could relate to and have a respectful discussion with.

- Often multifaceted strategies were used to reach youths, including online and social media (e.g., Instagram (IG live), Snapchat, TikTok, Twitter), in-person, in-communities, and working with other organizations, such as The Boys and Girls club, Community Houses, and faith leaders.

Older adults/seniors/ elderly

- Used older technologies like WhatsApp.
- Often needed the message to be repeated, like the same message for months, and to be given an incentive.
- Seniors speaking to seniors.
- More racial language was used.
- They were brought into conversations from the beginning.
- Discussed how immunity decreased with age (about ≥60) as well as the risks of getting very sick from COVID, ending up in ICU, and death.
- Communication was often done in person since technology could be a barrier, but there were also online seniors' groups.
- Door-to-door outreach which targeted seniors' buildings, including those with higher populations of ACB people or newcomers.
- If it was known that an older client was not following Twitter, information would be printed from the World Health Organization, and they would be given a pamphlet to read.
- Although one participant felt that the church, pastors, priests, imams etc. influenced all ages because they were viewed as mentors, another participant felt that they were more effective in the older population, with some viewing faith leaders as soul guardians.
- Newsletters were better to reach older people.
- Present where there were seniors.

Concerns and considerations

- Age impacted which vaccine was administer due to side effects (e.g., Pfizer was preferred for younger clients and, Moderna was preferred for older)
- Different age groups tended to use different methods to access information.
- Age impacted where people gather and how information is shared.

Youth /young adult

- Long- term consequences if they became infected with COVID
- More susceptible to misinformation due to having a lot of questions and access to information, but difficulty discerning what the correct answer is.
- Tended to use more social media
- Tended to be concerned about social isolation.
- They wanted to socialize with friends.

- It was also recognized that youths were tired of online meeting platforms like Zoom because of school.
- Zoom based information was not found to be effective because it was too broadly focused for people who did not want to be their and had already made up their minds.
- Despite youth preferences and abilities, not all youths had access to a laptop.
- Were found to be easier to talk to than older adults because they were generally more interested in fun and fantasy and less focused on racial discourse compared to some older adults.
- Funding for youth programs, such as the Youth Voices program implemented in the past, was no longer available.

Middle Age

- Adults in their 40-50s were found to be easy to talk to and more willing to share their perspectives.

Older Adult/Seniors/Elderly

- More likely to have mobility issues.
- Technology was a barrier for some seniors and influenced access.
- Some older clients were difficult to reach through the phone or emails.
- Language could be a barrier.
- One participant described how their older clients did not need to be convinced to take the vaccine and wondered if it was due to seeing the havoc communicable diseases had without vaccinations; they appreciated vaccines because they may have known people who died from them, for example things getting better after smallpox vaccinations. Younger people likely did not know what smallpox was because they never experienced it.
- Another participant found older clients were more resistant to talking about vaccines. They were more set in their ways because they had decades to confirm themselves and their particular world views.
- They were one of the most vulnerable populations and were impacted more by COVID-19 from the beginning, it was important to give them information and urge them to become vaccinated.
- Culture may have played a role in the receptiveness of the information, as one participant described how they believed that displays of respect for an older client, such as a bow or a greeting with both hands, may have been expected by the ACB client from the service provider.
- There were more issues around race in the older population; racial issues should be brought up in the forefront and more racial language used.
- Physiological issues must also be considered when communicating with an older client, such as the body's declining immune response.

- Age itself may not have been a factor in communications (e.g., some 85-year-olds are very high functioning), but hearing impairment or cognitive decline may have affected how service providers communicated with their clients.
- Even at home visits some older clients expressed not needing the vaccine because they stayed at home.

SEX and GENDER

Approaches
Pregnancy and fertility

- Evidenced-based resources, such as published papers about pregnancy and the COVID-19 vaccine, were provided.
- It was stated that the COVID vaccine would not affect the baby, and recommend speaking with their family doctor, gynecologist, nurse, or newcomer health clinic.
- Had question and answer sessions specifically for pregnant women, including Somali-led mothers' groups.

Female

- Addressed concerns regarding reproductive health
- Health of their children was often also addressed, such as COVID infections at schools. One participant stated that it may be a bias, but they talk to women about the children.

LGBTQ

- Used pronouns.
- Recognized the ways a person wanted to be identified.

Concerns and considerations

- The concerns of women and men were different.
- Gender impacted where people gather and how information is shared.

Pregnancy and fertility

- Concerned the vaccine would impact the baby.
- People were very concerned about the fertility of their children.
- Despite always recommending that clients speak with their family doctor, not all people had a doctor.

Female

- Women were often concerned about infertility, pregnancy, and concerns about the baby regarding vaccination.
- Women spent a lot of time chatting with their friends, so a WhatsApp group could be helpful.
- A lot of mental health issues came up in discussions about COVID recovery.

Male

- Communication varied based on their age (youth or adult).

PARENT and CAREGIVER

Approaches

- Have a family centered approach
- It was a priority for parents to get vaccinated as well as to provide them with information about vaccinating their child.
- If parents had safety concerns, they were informed that children could get COVID, of Public Health measures that should be followed for their protection, and that children may not have the same awareness as adults.
- They were informed that children would be going back into classrooms after being isolated and they could be exposed to COVID.
- There were conversations about children in the Children's Aid Society (CAS), about what was done in different environments or when both parents did not agree with vaccinating their child. Information was relayed, questions answered, and they were trusted to make the decision.
- When speaking with parent groups, discussion sessions were less structured and often specific questions regarding their children or pregnancy were asked to a healthcare provider.
- When communicating with a caregiver, work was done to build rapport by having introductions, chatting before providing COVID information, showing interest without being too invasive, and being empathetic.
- It depended on the relationship the caregiver had with the client, how well they knew the client, and if they were the decision maker or power of attorney. Someone who provided care was an extension of the conversation, and it was important to involve the patient.
- Communication differed if the caregiver was a relative of a patient, a representative, a personal support worker etc. If the caregiver knew their patient well and interacted with them all the time, it was easier to communicate with them.

- Decision makers were more challenging, including if they were the power of attorney; the service provider needed to make sure that they were actually involving the patient. The patient/client must not be excluded.
- When the caregiver did not believe in getting the vaccine, such as a caregiver for a resident in long-term care, education was given to separate the two as individuals. Sometimes legal action had to be taken to advocate for the client.

Concerns and considerations

- Childcare and transportation of children.
- It could be difficult to convince a client to get vaccinated if the caregiver did not believe in the benefits of the vaccination.
- It was important to try to get the caregiver to understand the importance of getting vaccinated; however, there was no training for communicating with a caregiver.

EDUCATION

Approaches

- Some participants stated that their clients' education level did not influence how they communicated as they were mindful to use plain, clear, and simple language with their clients.
- All communications were at about an elementary school level initially; this could be altered after becoming more familiar with their clients' knowledge.
- It was important to communicate in-person since some people may not have had the literacy to access or understand written information.
- Literacy levels could be low, so having multiple forms of communication was key, including having clear, simple language, and the use of visual imaging (e.g., especially in the beginning to show COVID safety). This helped people remember the information.
- Information was sent out differently based on the client's education level, their understanding, where they accessed information, and where they found themselves.

Concerns and considerations

- Those with a higher education were found to be more likely to listen but did their own research. Those with less education may have required the information to be conveyed more times, but they responded more easily.
- There are a lot of people who live in the ACB communities with graduate degrees, and although they were likely to do their own research, language could be a barrier.

- Education may not have made people less susceptible to misinformation, there was a lot of information available, and it could be accessed from different parts of the world, potentially making it more difficult to make educated decisions.
- Words and examples should be used that are relatable to the client, so they are easier to understand.
- Education may be reflective of interests and aptitudes, so when communicating the importance of vaccinations, statistics may be communicated for stronger evidence with someone who has a higher education, while sharing an emotional story may resonate more with someone with less education.
- Communication should reflect the client's education level to the capacity that they understand the information; for example, someone with a higher level of education, such as a PhD., may not need elements broken down in the same way as someone with a high school diploma.
- Education goes back to knowing the client and using language that they understand, working with them and being flexible.
- Income can be impacted by the client's education, and education can impact how easily communications are understood.

INCOME and EDUCATION

Approaches
Homeless/shelters

- A conversation regarding the social situation of homeless clients may include explaining risk factors and the need for vaccination; conversations were tailored to the client's needs.
- Sometimes they would ask for a bus pass to go to a facility to get vaccinated and a ticket was given to them to go, but often they did not care.
- Tried to improve access to counselling and address cultural needs.
- Went to them and followed up with information on other services and resources, such as the food bank. Connected with them and ensured access, despite the vaccine not being a priority to them due to other issues such as housing, food, children not going to school, and no internet.
- Providing transportation, an address, and/or a phone number was best since some people do not have technology or the internet.
- Perseverance and meeting people where they were within their lived experiences; for example, one nurse went back to the women's shelter for weeks before a lady said that she would get the vaccine and explained that she understood that the environment was high risk and that she did not want to isolate and be all alone.

Low income

- Being low income alone was not a factor because COVID treatment was free in Canada; however, there may be other related factors such as type of employment, so further inquiry into risk factors specific to the client would be looked at.
- Although income does not affect how a client understands or processes information, issues such as transportation became a problem, so information had to be passed differently to reach out to this group of people i.e., the information/vaccine was brought to the people.
- Efforts were made to make communications clear with basic language.
- Income level was not generally asked, however if someone asks why they should be vaccinated, transmissibility within a household where there were more people living together was discussed, as it was more difficult to isolate.
- After leaving the hospital and still having mild COVID symptoms. clients were able to go to the City of Ottawa isolation centers where they could complete their isolation time, since living in crowded living conditions was not suitable.
- Efforts were made to find ways for clients to get vaccinated without losing pay for anytime taken away from work to get vaccinated.
- For clients who needed to move out of the city due to the increased cost of living, efforts were made for them to join online sessions, and to find closer resources for them.

Concerns and considerations

Homeless/shelters

- Having significant contact with other members of this population, that had an unknown vaccination status, was a risk factor for COVID infection.
- When providing services to homeless clients, they often expressed feelings of hopelessness and that getting vaccinated was pointless.
- Vaccination was not mandated in shelters; people would be asked if they were vaccinated and would be tested for COVID, but they were not asked to get vaccinated.
- Shelters services are very limited; they do not have mental health screening or services related to mental health.

Low income

- Many did not watch television and the news; they could not afford to pay for cable or the internet.
- Many did precarious work, were exhausted, and did not have the time.
- Many people lived in a small apartment, where isolation is difficult.
- Some clients were unemployed and did not consider employment; it was very difficult to discuss vaccines with them because they felt it was not needed.
- Many clients were working minimum wage and/or frontline jobs and had a high risk for catching COVID.

- Vaccination status could impact some people's employment, thus placing them in an unfair situation regarding vaccination, which was based on income rather than their health.
- Economic factors, such as increased housing and cost of living, caused some people to move out of the city and further away from resources such as reliable internet and workshops. It also led to feelings of isolation.

GENERAL HEALTH and CO-MORBIDITIES

Approaches

- The client's general health was discussed with them so that they could make an informed decision; they were not pushed to decide.
- They were advised to see their physician for any contra indications.
- If a client had questions specific to their health, they would be provided with a referral; clients were usually receptive to this.
- If the client had a number of co-morbidities that caused them to be concerned about being vaccinated, support was provided, they were asked if they had connected with their health provider and asked if they had received information about their health so that they could make an informed decision.
- If a client was unable to reach their healthcare provider, arrangements were made for a nurse to answer their questions through a referral process.
- Depending on the health condition, the client may absorb and understand the information differently. Communication was tailored to provide guidance and support; for example, someone with a previous vaccination allergy was informed to contact their doctor and have blood work completed.

Concerns and considerations

- Clients could have specific concerns about how the vaccine could affect their health, in relation to their co-morbidities.
- Clients could have difficulty reaching or having questions answered from their specialist or general practitioner since it was a busy time and not everyone was working.
- Consistent with the service providers scope of practice, and based on the client's past medical history, clients should be made aware of any increased risk factors with COVID infection and information about vaccination recommendations.
- Depending on their comorbidities, especially geriatric patients, the client and their families should know the importance of getting vaccinated to help the body fight a possible infection.
- Although older people with comorbidities were more likely to die from COVID-19, as opposed to those who are younger and healthier, it was important to focus more on the

benefits of the vaccination, rather than framing it as a personal fear. It is not good healthcare to make someone do something because they are afraid of the alternative.

MENTAL HEALTH

Approaches

- Many mental health issues were raised through COVID, new online services improved availability and accessibility, such as Zoom meetings and support groups.
- There has been more work done to address mental wellness, including sharing information with their clients about other organizations that serve ACB communities. (ACB Wellness Center and Canadian Women of Leadership Network that is a network for Black and racialized women),
- A lot of the recovery stage communications had a mental health component, such as asking self-reflective questions like how are you doing? What makes you happy? etc.
- Addressing mental health takes time and was taken in small increments.
- Required patience, building rapport, and adapting to the client's needs; for example, an ACB client with a complexed past medical history and frequent hospital admissions, had previously signed out of the hospital against medical advice multiple times. The service provider did not discuss this with the client on the first days, to focus on building trust. The client was later asked why they left and if anything could be done so they would stay longer. Although it was explained that all types of care available in the hospital were not available in the community, when the client decided to leave, efforts were made to connect them with community resources.

Concerns and Considerations

- People spoke about a lot of myths and stigmas around mental health.
- Mental health impacted vaccine uptake. Routine can be good for people who struggle with mental health, and the disruption caused by COVID-19 created more challenges and increased stress.
- Over the years, especially through the Westernized point of view, normal stressors to an abnormal society have been pathologized and medicalized.
- The perception of mental health within the ACB community could be problematic, perceptions were based partly on culture and religion. It is viewed it as a taboo subject, with spiritual rather than medical implications, especially with Christians. If they were diagnosed with a mental illness their community would say it was not a disease, but rather they are under a spell, spiritual attack etc. These views perpetuate stigma which makes it difficult for people to talk about their mental health.
- It could be difficult to seek treatment for mental health because it was often stigmatized and pathologized, some feared they could be reported to the police.

- Sometimes routine can be good for people who struggle with mental health and COVID interfered with that. For example, walking to work etc. could have been a time to decompress or maybe the time before the children came home from school was a time for themselves, taking that away made things more challenging.
- Going door to door and knocking on people's doors did not work in some communities because of anxieties and mental health. People were reluctant to open the door; they were nervous and stressed and did not know what they were going to be told.
- A significant amount of time was needed to build a strong relationship; they could open up and talk which could relieve stress or they could close- up, get anxious, and leave.
- Mental health has been associated with the underutilization of healthcare services.
- In acute care there were not enough available hours a day that a service provider could spend with their clients pertaining to their mental health issues, as it took time away from providing care to other clients. A proposed ideal solution would be to create a multidisciplinary team to support the client, which could be comprised of a social worker and a nurse, who are supported by a physician. A social worker would be good at catching stressors and recognizing living issues outside of the hospital. By working together each individual would not necessarily need to invest as much time.

HOW OFTEN THE CLIENT WAS SEEN

Approaches

- In a hospital setting, vaccination communication was not impacted by how often a client was seen, because if it was written on the chart that the client did not want to discuss vaccines, it was not discussed, to avoid confrontations, arguments or getting people upset.
- The more often the client was seen the easier it was to share information, provide updates, and answer questions. Whereas someone who was rarely seen was given what information and resources were available at the time.
- With longitudinal care, such as in family medicine, the information was provided more slowly to help prevent the client feeling bombarded with information i.e., how often the client was seen influenced how quickly the information was given. The client could also book a follow-up appointment to further discuss vaccinations.
- When a client was seen again for their second dose it was more straightforward and the client did not have more questions about the vaccine, but it was nice to open the platform if they wanted to talk.
- When a client was seen again, it was built-up from the previous meeting. When a client had not been seen previously, there was a tendency to listen more and be guided by them, because if vaccines were pushed their concerns could change to being anti-vaccination.
- Seeing a client more often helped to improve trust.

Appendix I: Proposed Vaccination Campaign

Participants' proposed vaccination campaign.

Messaging	Dissemination
Creation ▪ Invite community members to speak with organizations and share their thoughts, learn about their communities, language and wording that is inviting, the barriers they face, trusted people in their community. ▪ Provide funding for knowledgeable service providers within the community to ensure that the information was scientifically and medically correct. ▪ Gear messaging specifically to ACB people. ▪ Reach out to different community organizations and pull together to create better materials to reach ACB people. ▪ Support people's power to make informed decisions, including where to get trusted sources of information ▪ Socialize the idea of the COVID vaccine as a being a part of the vaccination regiment. ▪ Frame messaging as an opportunity to improve provincial health issues. ▪ Cautious messaging, not saying "you have to" ▪ It is a personal decision, but it is also a community decision. ▪ We are facing the same concerns. *"It doesn't need a more educated person to understand healthcare it just needs us to say let's take care of ourselves." IDI-SP-001*	**Community** ▪ Bring people from the ACB community together and ask them how they would like to receive the messaging. ▪ Communication should start at the community level, whereby people from within the community are champions, advocates, and are trusted by the community to give out information. Not at the government level where people felt they were being told what to do. This would require finding community leaders and convincing them to talk to the community. ▪ Need to involve the community to build it. ▪ Create relationships so people are comfortable to have conversations and ask questions in a safe space. Not with the expectation of giving the vaccination but helping them to make an informed decision. **Posting and dissemination** ▪ Around the city, word of mouth, community influencers, parliament hill, in Black neighbourhoods, ACB clubs and associations, hospitals, workplaces on the road, bus stops, in buses, in big pharmacies, everywhere ACB people go, schools, churches, temples, mosques, any religious activities, Black led organizations, hair and nail salons, waiting rooms at organizations including hospital Emergency, bulletin boards, the

Message attributes

- Improve language gaps by expanding the languages used in messaging
- Afrocentric but local
- Concise, brief, and plain language
- Not generic
- Catchy, to get attention

Respect and building confidence

- ACB focused messaging and information
- Use preferred identifying terms used by community members e.g., ACB, Black, Black Canadian etc.
- Have statements about: the services being offered are the best available; vaccine goes beyond race, and it is for everyone; and a generalizing statement that this is something everyone is going through.
- Not feel forced
- Inform the community that politicians are getting the same vaccine

Culture

- Recognize that culture influences the uptake of information; reflect the culture of the intended audience, this would also help to improve trust.
- Use multiple languages that will reach people
- Knowing that Black people were part of this research, may also help to build trust.
- People of colour/Black people have been shown to benefit from the vaccine; it does not remove the social inequities that surround why they get the COVID infection more, but it does prevent death and severe illness.

beach, food bank, community centers, community groups, Black owned establishments like restaurants, company meetings, newsletters, organization's websites, public screens across Ottawa used to advertise businesses, through healthcare providers and other professionals (e.g., pamphlets for doctors and nurses to give in hospitals), community members, high density and low income neighbourhoods, as well as bring the messaging/ information to the ACB people with mailbox drops, and regularly scheduled mobile vaccine bus coming into neighbourhoods.

- Use the media channels and other resources to disseminate information that are most used within communities. More targeted based on the specific community e.g., the Arabic community prefers WhatsApp.
- Although not everyone can be reached at once, through networking if enough people are initially reached, they can then reach out to others.
- Work in partnerships with other organizations to create information sessions.

Presentation

- Who provides and presents the message is important. ACB people should be the first ones to announce new information and having that voice because it would be narrated a different way.
- In-person through resident/community leaders, faith leaders, and community ambassadors.
- Healthcare providers and other professionals, who self-identify as being from the ACB community, would have more credibility.

▪ Specifically addressing the barriers and question why ACB people have decreased vaccine uptake. ▪ Researchers spent a lot of time making the vaccine as safe and effective for everyone as possible. ▪ What the vaccines are, why they are beneficial, and tying this into their cultural background. ▪ Address what is important to ACB communities e.g., Somali mothers got vaccinated to protect their children. ▪ Relay information effectively in a culturally targeted way, to give them the tools to make informed decisions and give them a voice. **Empathy/ show support** ▪ Inform and show support for the communities ▪ That we care about their safety and health. ▪ They are being sent information because we care about the person. ▪ Understand that at this stage most people have either been affected by COVID or know someone who has. **Relatability** ▪ Even though service providers are providing these services it does not make them immune to racism that they may face or the fears about the vaccine that they may be having. ***Testimonials*** ▪ Testimonials of ACB people (community members, leaders, professionals like physicians and researchers etc.) about how they were	▪ Messaging is stronger coming from someone with the same lived experience (e.g., a community member rather than a White woman). ▪ Partner with local congregations and mosques and hopefully be invited to a sermon to talk. ▪ People highly regarded within the community, such as entertainers and sports people. **Platforms to access information** ▪ More accessible information in school; everybody needs to be updated about healthcare. ▪ More information sessions with a variety of service providers, not just doctors and nurses, community health workers, and community engagements and outreach teams would increase the comfort level of some ACB people and help provide transparency in services. ▪ Must go beyond Canadian media channels ▪ Media based on what the population, subgroups, and ethnicity use; a lot follow the news from back home and not what is happening locally. **Training** ▪ All people who disseminate information should be trained so that the people receiving the information do not feel coerced. **Formats** ▪ Flyers, posters, pamphlets, media channels, social media, videos, postcards, business cards, handouts**,** text messages, television, radio, emails, and phone calls.

able to make better decisions and were able to improve their lives. It is powerful to meet them where they are at and hear their perspectives. ▪ It is always good to communicate and to bring people together who have had similar experiences and to ask them how they were able to overcome them and how they were able to heal. ▪ Put together strategies from a variety of people who have been through the same kind of situation, helps those who are still suffering from it. **Addressing Fears and concerns** ▪ Address fears such as Black people being harmfully targeted, e.g., why diseases like HIV are more prevalent in Black communities. ▪ Long-term side effects. ▪ How quickly the vaccine was developed. ▪ Related to faith, such as there were no ingredients within the vaccine that Muslim people could not take or confirm with faith leaders that the vaccine could be taken during Ramadan. ▪ If they had underlying conditions. ▪ If there are vulnerable people in the family and the impacts of the social determinants of health ▪ Vaccine efficacy and viral loads. **Target youths** ▪ Youth under 25 should be targeted and reliable information shared with them, because they can be the gatekeepers of information to their parents (e.g., immigrants who require information to be translated). They could potentially	▪ Different formats should be used so that everyone is reached; the Public Health system should ensure everyone is reached. ***Television*** ▪ Not everybody, but a lot of people watch mainstream media, so this would be a great venue ▪ The community being served does not watch mainstream media television or radio (like CTV) more work should be done to determine what they listen to. ***Radio*** ▪ About 2% of the community listen to the local radio station, this should be tapped into, as well as other stations they listen to. ***Social media*** ▪ Determining and infiltrating the WhatsApp groups and other media sources they belong to and/or acquire their information from. ▪ WhatsApp groups that are being followed often come from other countries which can be challenging. ***Websites*** ▪ Organization such as those dedicated to ACB clients should have condensed information from the Ottawa Public Health (OPH) website on their own websites or at social events for their clients to access, because a lot of times people are sent to the OPH website which has a lot of information but is not always the most accessible.

lead their families to the correct information, such as access to vaccination clinics and professionals to answer questions. **Resources** ▪ Provide resources and links to websites. ▪ Provide numbers to call in case they had questions. ▪ Vaccination clinic information including date and time. **Educate without imposition** ▪ Educate, train, and create awareness in ACB communities/people ▪ Address religion beliefs that impeded vaccine uptake such as that evil has brought the vaccine to kill them. One participant described a way to address this situation, *"I would try to tell them, okay, take a minute, so your friend, so the person you think is a friend is a healer and the healer cannot be against you. So, in that way, vaccine, a preventative measure is your friend, is coming from your God. If I say God. So I would try to go back to show them that God is the healer, the evil cannot be the one trying to heal you. I would portray something around that." IDI-SP-002* **Audio/ visual** ▪ Visually show Black people or people of a dark skin tone, this would help make them feel spoken to and would be an affective first step; show familiar faces.	▪ Show short video clips. ***Videos*** ▪ Video clips are better than social media because not all ages use social media, but visual images are powerful. Replay short clips in multiple languages in waiting areas *"I would try to portray a small movie to paint a [picture]… say there is somebody was in the middle of the frontline, somebody was fighting, a soldier and he saw a plane, he was in difficulties, but he saw a plane coming and he thought the plane is from the enemy. But as the plane came closer, actually this plane appears not to be from the enemy, but to rescue him. Just to tell them that vaccine, if you see it from a different perspective, it may seem to be your enemy but if you come closer to it, actually it is your friend coming to rescue you." IDI-SP-002* ***Posters*** ▪ These have been created in the past and people have responded well to them, even emailing feedback to the organization. ▪ Small posters with information about vaccine clinics was helpful to message dissemination, since they could be easily shared; easy to take a screen shot of and send it. ***Business cards*** ▪ Something the size of a business card that would fit in a wallet and could be handed out, that summarized main points about the vaccine and a website, because one participant found that people did not typically take the larger pamphlets.

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- Decision makers who look like them, be specific to the ACB community
- Use silhouettes
- Use bright eye-catching colors because a lot of ACB people like brighter colours, they just seen in their clothing and food etc. and it makes sense culturally.
- ACB people prefer information given orally rather than information that needs to be read.
- Generic posters often found in healthcare can look dry; want something that people would want to stop and look at and be curious about.

Messages within videos

- Short videos of ACB providers talking about topics such as signs and symptoms of COVID, history or vaccine mistrust; condense the information (rather than needing to read a lot of text).

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Text messages/ text alerts

- Text messages have previously worked well with ACB clients.
- Information is visually close.
- Text alerts, to encourage awareness and conversations.
- Provide information in a series.

Group discussion/ information sessions

- Information sessions and focus groups where communities could discuss the importance of vaccination in a culturally relevant setting, which could improve receptivity.
- Have a space to openly speak about ACB issues, confront mistrust and why it has occurred, acknowledge that ACB people are not catered to in the healthcare system, and where people are able to be themselves.
- Bring the people who have the information to the table and working with ACB communities to disseminate the messages would really help to improve trust in this population.

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Barriers

- Balance providing information and not making the poster overcrowded. An overcrowded poster would not keep people engaged.
- The type of media used by ACB communities and groups within these communities was not targeted well within Ottawa. More research is needed to determine what media is used most by them and if there are any incentives that could help them to click and read the information.
- The ACB population will not seek out the information, so service providers must be proactive in ensuring they receive it.
- Decisions are made through a narrow lens, but service providers need to see who is impacted and how to address gaps that exist.
- More information is needed regarding the impacts of who the messenger is, e.g., would a young Black nurse have more impact than an old White nurse?

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- People do not connect with someone who they know has the best healthcare available to them, like someone who works for the government, when they don't have basic access to healthcare like a family doctor.
- Creating messages was difficult. One participant stated,

"What are the messages?...Because now you're dealing with a polarized society. Canada's split, Americans we won't even get onto that. People are black and white, we're in a black and white culture. Good, bad, right, wrong, yes, no. And there's a lot of misinformation flying around all over the place" IDI-SP-018

- Despite faith and religion's impact on a lot of ACB people's lives, having religious or faith-based messaging would likely not be effective. For example, if someone is reading a pamphlet that is in Yoruba and it talks about God when they are not religious.

Appendix J: Proposed Training for Service Providers

Participants' views on service provider training.

Training	Rationale
Vaccination Communication (including those with opposing views, initiating conversations, communicating with cultural competency, navigating religions and faith-based, misinformation, work cross-culturally online)	▪ To use the most appropriate approaches and mitigate the use of inappropriate language. ▪ Its not just about vaccines but the other layer that come with it, so how to work with hesitancy within the community and the "heavy topics" that come with it. To help mitigate the misinformation and confusion. ▪ Religion and faith could be a basis for some people's vaccination hesitancies. ▪ To make it friendly, conversational, informal, and informative conversations online
Building rapport in busy workplace	▪ To improve client-service provider relationships and make people feel comfortable; for example, asking nursing students to find three commonalities they had with their client. This may make clients more inclined to talk about their healthcare and social needs; this can be done while providing care.
Finding referrals and resources	▪ To provide the correct information for clients to make informed decisions, including resources for those who were negatively impacted, such as those who experienced job loss due to not getting vaccinated.
Social media	▪ To become more knowledgeable about what media platforms are most used within different groups and how to effectively use social media. ▪ To help with targeted message dissemination
Practical vaccination training (including how to set-up a vaccination site)	▪ To know where to find resources to help their clients and improve vaccination accessibility.
Vaccinations (including the history around vaccine hesitancy and testing, and medical jargon)	▪ Learn how vaccines were tested on different communities ▪ For non-medical service providers to better understand vaccine-based terminologies
The needs of ACB people	▪ To provide information that is best suited to the client ▪ Factor in their culture and what role it had in their vaccination decisions

(including the best way to educate and assess health literacy, barriers and realities of vaccine uptake by ACB people, reasons behind low vaccine uptake, the non-academic nuances and realities, how mistrust impacts vaccination decisions, hands on training in the communities, immigrant's world views, and diversity within ACB communities)	▪ To identify underlying issues so that they can be addressed, such that ACB people were receiving the same vaccine as everyone else ▪ To understand the issues that impact ACB communities, including their decisions, mistrust in systems, who is passing information to the communities, and the impacts of racism in all of it. ▪ To improve communications with different cultures and further understand service providers' role in supporting them. ▪ Understanding their world views before and after coming here could help to improve communication ▪ There are diverse cultural practices, values and beliefs.
Afrocentric lens of healthcare	▪ To build trust. There are a lot of situations where ACB people are inappropriately treated because the prognosis model is Eurocentric, such as treatment is perceived differently and pain assessment.
Culture (including cultural humility, cultural sensitivity, specific to ACB people not marginalized people in general, culturally related interventions, anti-racism, islamophobia (all the isms), and impact of culture on vaccine uptake)	▪ To use inclusive, empowering and culturally sensitive language ▪ Taking the time to know what your clients' values are, would be beneficial. Additionally, to create awareness and to educate leaders to recognize that it is important to channel communication to ACB people in a different way, not just in a generic method that is used for everyone. ▪ To effectively reach a particular population, those that fall into different categories of intersectionality such as the world views of the diaspora and how they may have changed from before coming here to now. ▪ To create culturally related interventions regarding how to reach particular populations, such as people who leave their country of origin and then have new problems here. ▪ Although it is a very complex intervention to tailor communications to a particular race, improving cultural sensitivity, which means taking the time to know what your clients' values are, would be beneficial.
Inequities -Use an equity lens -Health equity - Historical and economic factors, racism and inequities in the healthcare system,	▪ Especially in new recruits as they were often found to be unaware. ▪ To strengthen communication so that they can approach a variety of people; in addition to motivating the community to get healthcare.

- Health disparities, access to family health care system, newcomer experience -SDOH	
Anti-racism and racial equity (including: Relaying information without prejudice and negative bias; structural racism, impacts of colour-blind approach)	▪ To understand the theory behind it and knowing the language, not just being operational could be beneficial ▪ Sometimes there is a need to implement approaches that are relevant to a particular population that is trying to be reached. ▪ To help service providers to recognize personal biases and increase sensitivity to their clients as well as their colleagues; given the diverse workforce. In addition, identifying biases can help prevent them from being brought into the communities such as saying things that are inappropriate. ▪ Microaggressions and daily exposures to racism. Both verbal and non-verbal language can impact how a person feels i.e., if they feel included or excluded.
Trauma informed care	▪ To broaden service providers perspectives about how they serve their clients ▪ People don't think about what they don't know; for example, a physician may not consider if a client can afford the medication they prescribe, the more diverse the clients that are seen, the more it is realized that service providers cannot pigeon-hole people when they come in, rather people need to be approached with a broader sense of what is going on by asking them questions. *"Family physicians are challenged to ask, you know, 'is this medication going to be a burden', 'are you making ends meet'? It's hard to ask that question because what if the answer is no. In my seven minutes, what tools do I have to fix that? but if we can work on that, if as a society we can make changes to the way things are funded, so that that's an option, that would be helpful." IDI-SP-022*
Diversity	▪ To better understand the importance of hiring and working with people from within the community, to better serve communities and to further understand racial inequities within healthcare. ▪ Providing ACB people more opportunities; it is also important for managers and human resources to have more training to support overcoming inequities.

Working with community members	▪ Service providers should also be trained to better understand the importance of hiring and working with people from within the community, to better serve communities and to further understand racial inequities within healthcare. ▪ Having racialized people as guest speakers in medical school, such as nurses and physicians would help increase exposure. ▪ People who are connected to and understand the communities from different cultures should lead cultural training would be beneficial. ▪ To increase sensitivity that even people within the same culture communicated differently, such as those of different ages and generations. ▪ Help service providers understand their role in helping marginalized and multicultural communities. ▪ Solutions or strategies to develop a response in a specific population, the solutions lie with the community and need to be led by the community.
Intersectionality	▪ To understand that there is diversity within ACB communities, with diverse cultural practices, values and beliefs. Being ACB is one component of a person's identity; for example, they may also identify as being LGBTQ and/or have a disability. In addition, how the use of language, including body language can make some feel included or excluded within this context.
Self-awareness, mindfulness, and self-regulation	▪ To improve discussions with people with opposing views. ▪ To stay calm, not react, and not blame the client when they are upset or afraid.
Conflict management and resolution	▪ To not treat people as for or against the vaccine but listen to their concerns. Furthermore, more training is needed regarding how to effectively communicate with someone who is angry with the service provider. ▪ Many people avoid difficult conversations, and the COVID vaccine was polarizing. ▪ Having conversations in a sensitive manner and providing targeted information would be beneficial. ▪ Learning better ways to approach people who reject information without judging them, to understand what their thoughts, beliefs etc. are would also be beneficial.

Appendix K: Summary of Initiatives

Table 3: Summary of Subtheme Racism and Inequities

This is a summary of the participants' experiences and perceptions related to racism and inequities, including considerations and initiatives, barriers, and proposed improvements to vaccination communication in relation to Theme 1 (Mistrust and empowerment)

Subtheme	Considerations/ Initiatives	Barriers	Proposed
Racism and Inequities	• Decreased receptivity, uncertainty • Newcomer challenges • Oppression, medicine rooted in colonialism/part of oppressive system, racial tensions • Fears, population control/suspicious of interest • Mistrust, Tuskegee experiments, trust must be earned • Stereotyping, racism, previous experiences, bias • Workplace: Diversity, reduce cultural barriers, build trust, anti-racism policies, racial concordance. • Address racism and inequities: anti-Black racism working group; racialized person on hiring committees; consultant regarding policies, procedures, and practices; diverse workforce; providing equity training and training on anti-Black racism; an anti-racism policy; director of antiracism and diversity and inclusion; wellness department; Black, Indigenous, and People of Color (BIPOC) support group; part of Equity Ottawa's Community of Practice and/or Alliance for Healthier Communities; city of Ottawa's anti-racism strategies • Community: Build relationships, share funding and resources, Black led organizations, internationally trained providers, community champions, community clinics, address barriers, perform wellness check • ACB insight, ambassadors, bridging communities with services, hiring ACB to	• How data was released • Policies without understanding impact (mandates, incentives) • Funding, time, bureaucracy • Ineffective complaint process • Hiring bureaucracy • Incentives (had both pros/cons) • Advocacy difficulties • Materials not specific to ACB people • Increased responsibilities concordant service providers • Believed not working or not mandated meant did not need vaccine • Mandates, job loss • Lack of receptivity to the unique needs, strategies to discuss racism, policies racism/inequities, understanding progress takes time, supporting those who have experienced racism, ACB decision makers in the workplace • Vaccine inequities even with increased availability	• More racially concordant providers • More SDOH focus • Encourage diversity • Open discussions about experiences (racism, inequities, COVID) • Ways to increase trust • Volunteer opportunities for community members • More policies to address inequities and increase resources • More access to family physicians and racially concordant providers • More compassion, empathy, and understanding regarding the impacts of COVID • ACB consultant

	bridge communities, empower, inspire work for change, comfort, languages, relay vaccine confidence • Self-awareness, bias, perpetuating racism • Gain deeper understanding e.g. SDOH, cultural nuance, facilitated conversation / Data collection • Co-locate providers and ambassadors • Racial concordant providers: internationally trained providers, support ACB career pathways, relinquish power	• Lack of time, resources and funding to adequately serve community needs • Uncertainty in availability or interest in organizations hiring ACB people Some ACB people are not open to racial reconciliations	• Hiring more community members • More culturally trained people • ACB service providers advocating for White providers who have undergoing racial sensitivity training

Table 4: Summary of Subtheme Community Outreach

Table 4 is a summary of the participants' experiences and perceptions related to community outreach, including considerations and initiatives, barriers, and proposed improvements to vaccination communication in relation to Theme 1 (Mistrust and Empowerment).

Subtheme	Considerations/ Initiatives	Barriers	Proposed
Community outreach	• Open dialogue; equity lens; presence/ time • Share resources and networking/ building relationships, partnerships, collaborations, and networks • Advocating, working with passion, sincerity, and perseverance • Training and working with partners and community residents/ ambassadors/ community centered approach • Community members help others access services/ Community messengers • Build rapport, relationships, connections and connections • Community clinics/ wellness hubs • Social media/ engaging in community events. • Disseminated information • Creating opportunities to ask questions: Question and answer	• Limited resources/funding • Inefficient planning and coordination • Lack of knowledge about the communities • Difficulties making community connections, • Lack of consistency and continuity of services • Lack of strong trusted community leadership. • Too much focus on individual programs • Not enough effort on building relationships • Piecemeal programing • Broken connections • Faith leaders could be difficult to reach • No personal engagement with mayor	• Centralized place for information and services, with roots in ACB communities/ non-community service providers should be aware of community resources • Holistic system, bridge resources, simplify distribution of services/ City make list resources in Ottawa for the ACB communities/ more resources • Build relationships and connection with communities/ Build more partnerships and networks • Understand resource and roles of grass roots groups • Establish an emergency response program

	sessions, clinical fairs, joining pre-existing programs, reaching out to people directly in the community neighbourhoods, providing vaccinations • Townhalls, preferred languages including Swahili, Arabic, Somali, Burundi, and French, ACB service providers, culturally sensitive tone, share reports • Meeting were people gather, cultural support • Reaching out to landlords and tenants • Door to door and required multiple visits with nurse who spoke different languages • Places where people could influence conversations • Co-generating reports/ sharing feedback	• More structure for how to engage with communities • Unaware of services	• More wellness checks • Organizations assess quality of services • More presence of community-based organization/ groups in hospitals and clinics • Hospital ACB community initiative • Address family doctor shortage • Listening to communities, adapt services • Improve consistency and continuity of services, • More ACB collaboration and led initiatives • Encourage research participation • Establishing role models • Mayor meets with communities • Identify and leverage gatekeeper • Community input before intervention

Table 5: Summary of Subtheme Vaccination Equity

Table 5 is a summary of the participants experiences and perceptions related to vaccination equity, including considerations and initiatives, barriers, and proposed improvements to vaccination communication in relation to Theme 1 (Mistrust and empowerment).

Subtheme	**Considerations/ Initiatives**	**Barriers**	**Proposed**
Vaccination equity	• Provincial guidelines changes • Policies to not feel excluded • Consider people's schedules, time off work • Create community-based, familiar environment, welcoming, ask questions, role models,	• Numbers over who was vaccinated • Unknowns e.g., supply • Vaccination booking system, accessibility, long waits • Not addressing community needs • Limited funding, resources, time • Took resources and time away from other initiatives	• Improving management of vaccine rollout; work with other agencies • Increase flexibility and access of vaccine rollout • Extend clinic hours • Hiring more internationally

	connections, encourage others • Mobile clinics: worked, lived, and worshiped • Identifying barriers and working together for solutions • Find accessible locations • Vaccine to door with physician • Walk-in clinics that accepted any form of identification, • Advocacy to reduce barriers	• Large clinics: impersonal, too busy • Uncertain of motives for ACB clinics • Lack understanding community needs • Lack of understanding impact of COVID • SDOH barriers time, money, transportation, family responsibilities • Lack of vaccine access in hospitals • Limited vaccination hours	trained service providers • More hospitable and dedicated spaces, including for new immigrants

Table 6: Summary of Subtheme Vaccination Conversation and Relaying Information

Table 6 is a summary of the participants experiences and perceptions related to vaccination communication and relaying information, including considerations and initiatives, barriers, and proposed improvements to vaccination communication in relation to Theme 2 (Active Listening and Education).

Subtheme	Considerations/Initiatives	Barriers	Proposals
Vaccination conversations and relaying information	• Initiating conversation: Speak of related topic and transition to vaccine, routine questions, provide options, open-ended questions • Request follow-up after initial contact/ requires multiple conversations • Tailored to concerns • Encourage reflection • Using resources to help build trust • Motivational thinking • Being non-judgmental, empathetic, comfortable setting • Listening/ act on concerns: not trusting any vaccine, side effects (long and short), pregnancy, new, previous experiences and history, waiting for multiple reasons • Seek to understand lived experiences	• In-person to online meetings • Time and funding • Lack of receptivity • Lack of ACB tailored communications • Lack of dedicated spaces • Assumptions, already well informed • Quality and quantity of information • Labelling people as “anti-vaxxers” • Unprepared to address vaccine opposition • No organizational policy about vaccination discussions	• Training to communicate with opposed • Dedicated staff to discuss vaccines • Screening for longer meeting times • Government and public health congruent messaging

	• Stating benefit/ consequences • Acknowledging past, concerns, and views • Give time and space to decide • Provide options • Improve health literacy/address concerns • Ask if have family doctor and tailor resources • Transparency of known/unknown and that things may change • Provide reassurance/ not force • Respect decisions/ not show power over them • Collaboration • Encourage self-reflection, reframing • Space for dialogue • Patience, presence, availability • Disseminate information during outreach, at community clinics/hubs	• Mistrust • New and changing information, inconsistent, feeling misled • COVID fatigue • Information complexity • Too much/too little information • No follow-up/ understanding assessment • Refer concerns • Unaware of material to provide clients • Website technology and time constraints • Decreased media coverage about COVID impacts	

Table 7: Summary of Subtheme Misinformation and Misbeliefs

Table 7 is a summary of the participants experiences and perceptions related to misinformation and misbeliefs, including considerations and initiatives, barriers, and proposed improvements to vaccination communication in relation to Theme 2 (Active listening and education).

Subtheme	Considerations/Initiatives	Barriers	Proposed
Initiatives to address misinformation and misbeliefs	• Globalization, radicalization, role of social media • Religion • Oral traditions, relying on leaders • Identify misbelief, adapt to address concerns, counter spread of misinformation by reporting source, disseminating accurate information, provide trusted resources • Community ambassadors and leaders present correct information, encourage questioning the internet • Acknowledging the clients' perspectives • Not outright denying or challenging • Ask probing questions, show empathy, provide rationale, give concrete examples, provide a personal story, • Patience to build knowledge • Determining clients trusted sources of information	• Too complex, consorted effort • Echoed by faith congregations • Difficult to stay up to date on facts • Bias against ACB vaccination promoters • Lack of appropriate education/lack of foundational knowledge about vaccines.	• Culturally appropriate, scientifically based education • Disseminated and presented by a trusted voice (faith leaders, community members) in a way that resonates • More research • More organizations

	• Service providers and client trusted source not always the same • Trusted by clients: family, neighbours, healthcare providers, universities, Ottawa public health hospital data, Children's hospital of Eastern Ontario (CHEO), spiritual leaders, racially concordant service providers, and specialists • Trusted sources of information used by service providers included Public Health (Ottawa Public Health and Public Health Agency of Canada), the province of Ontario, the Ottawa Hospital (TOH), local organizations such as community health centers, Alliance Community health Centers, Somerset West, Ottawa Hospital, as well as peer reviewed evidence-based literature. • Sensitive and knowledgeable providers at clinics • Being culturally sensitive, understanding language, preferences, fears etc. • Open to feedback • Access to spiritual leaders • Racial concordance, cultural sensitivity	• Lack of service providers knowledge on new information • Burden ACB service providers. • Took devastating events to get vaccinated • Radicalized social media, target ACB	countering misinformation • More education about vaccine and booster function • Pre-emptively avoid misinformation, provide information to mitigate, avoid looking at dubious sources • Address in hospitals and other healthcare organizations beyond Public Health • Guidelines

Table 8: Summary of Subtheme Targeted and Tailored Messaging

Table 8 is a summary of the participants experiences and perceptions related to targeted and tailored messaging including considerations and initiatives, barriers, and proposed improvements to vaccination communication in relation to Theme 2 (Active listening and education).

Subtheme	Considerations/Initiatives	Barriers	Proposed
Initiatives for targeted messaging	• Importance/ science behind it • Meet clients' needs/address community concerns • Culturally relevant, various languages, diverse images • Preferred language increases comfort, access, and understanding • Translation/interpretation, family, interpretive services, diverse staff, client pairing, co-locating, translation machine	• Lack of previous interest in the ACB communities • ACB people, not seeing themselves in messaging • Not presented in a way ACB people understood • Vaccine safety concerns • Complex information • Technologies, newcomers, elderly • Inconsistent messaging	• Appendix I

	• Townhall flexible language, ACB providers • Same vaccine as everyone else/reflect community values • Community messengers/social media • Community members feedback/community engagement • Message framing, words that resonate with community • Strength-based perspective/empowerment • Different tools for different populations • Varied based on the clients' demographics, Appendix H approaches based on their client's age, gender, sex, pregnancy, general health, mental health, income level, homelessness, education level, caregiver, and the frequency of the meetings. • Appendix G	• Dissemination barriers • Lack of culturally based information • Language barriers/ not interpreter • Limited of funding and resources/cost to buy research • Demographic specific, compounding barriers, Appendix H • Lack of staff and time, best communication venues • Access online platforms and groups • Difficult to relay in local context in popular platforms (such as WhatsApp) • Barriers seen in society, fears • Fears for personal safety, not answering door.	

Table 9: Summary of Subtheme Acquire and Relay Accurate Information

Table 9 is a summary of the participants experiences and perceptions related to acquire and relay accurate information, including considerations and initiatives, barriers, and proposed improvements to vaccination communication in relation to Theme 3 (Optimizing knowledge mobilization).

Subtheme	Considerations/Initiatives	Barriers	Proposals
Acquire and relay accurate information	• Surveillance • Partnerships • Ambassadors/PENs • Concurrent with public • Workplace methods for relaying information to service providers: meetings, emails, memos, newsletters, videos, in-person (e.g., by a manager or having a public health nurse speak to staff), post information in a designated area, and advising them to look up the information on the public health website. • From other service providers/networking • Meeting to review • Workplace dependent ways to prevent misinformation	• Busy schedules • Inconsistencies • In office conflicts • Limited information/ • Unanswered questions	• More structure

Table 10: Summary of Subtheme Service Provider Skills and Training

Table 10 is a summary of the participants experiences and perceptions related to service provider skills and training, including considerations and initiatives, barriers, and proposed improvements to vaccination communication in relation to Theme 3 (Optimizing knowledge mobilization).

Subtheme	Consideration/ Initiatives	Barriers	Proposed
Initiatives for service provider skills and training	• Conflict resolution • Self-training • SDOH and equity lens • Interorganizational and member training	• Lack of incentive to train • No longer needed • Perceived lack of training efficacy • Lack of cultural sensitivity • Microaggressions • Religion not discussed • Medicine not community focused • Stress and fear of violence • Conflicted with personal beliefs • Overwhelming workload • Working in a crisis	• Supportive environment • Available training related to vaccination communication including as it relates to the workplace, community, and self. • Share resources • Self-train • Policies to avoid conflict in the workplace • Policies for community knowledge throughout healthcare system • Promote continued relevance • Listen to clients • Recognizing diversity within communities • Consider lived experience with cultural sensitivity • Stop personal bias • Provide pertinent examples when training • Appendix J