African Caribbean and Black (ACB) Vaccine Acceptance (AVA) Project

COMMUNITY REPORT

Optimizing Vaccine Acceptance and Uptake in African, Caribbean, and Black Communities in Ottawa

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AVA

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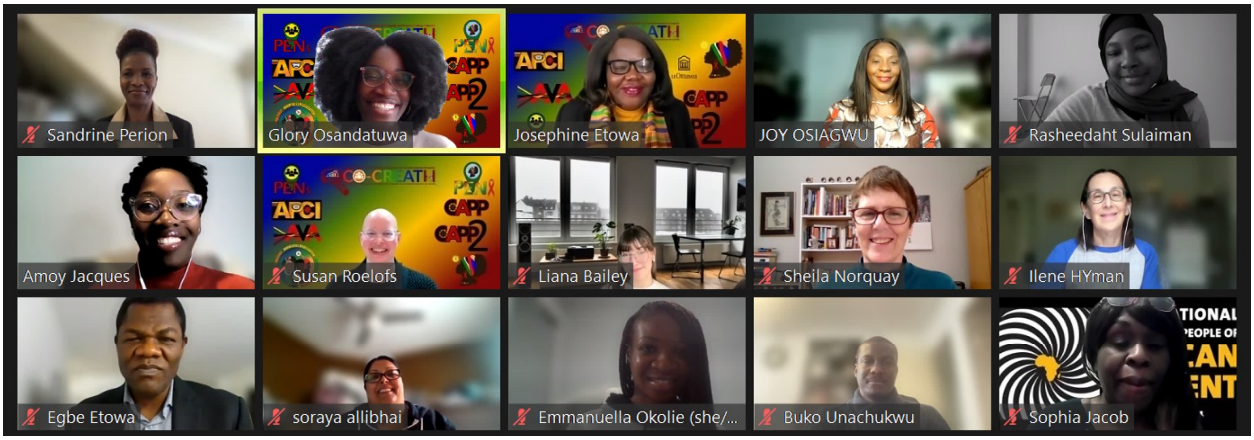
This community report was designed and edited by Maxime Lê (principal) and Tia Wong (designer) of Lê & Co. Health Communication, drawing on research conducted by the AVA Project Team.

Ethics approval for this study was obtained from the University of Ottawa Research Ethics Board.

Project Team

Research team, collaborators and project staff: Dr. Josephine Etowa (University of Ottawa / CO-CREATH Lab), Dr. Charles Dabone (CADHO), Dr. Egbe Etowa (CADHO), Dr. Bishwajit Ghose, Sylvia Sangwa (research coordinator), Susan Roelofs, Amoy Jacques (program manager), Glory Osandatuwa (research administrative assistant), and Sheryl Beauchamp (PhD-trainee)

The project involved meaningful community and provider engagement in the design, implementation, and evaluation of vaccine promotion activities, as well as knowledge translation interventions. The following organizations were key partners and collaborators in this project: Canadians of African Descent Organization (CADHO), South-East Ottawa Community Health Centre (SEOCHC), Ottawa Public Health (OPH), Somerset West Community Health Centre (SWCHC), Restore Medical Clinic, AIDS Committee of Ottawa (ACO), River Jordan Ministry, Men of Honor Ministry, African, Caribbean, and Black Community Wellness Resource Centre-Ottawa, International Pastors and Leaders Forum (IPLF), and iAfrica Voices.



Research Team:

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EXECUTIVE SUMMARY

Introduction

COVID-19 has had a profound impact on the health, social, and economic well-being of people in Canada and around the world. African, Caribbean and Black (ACB) communities represent the most vulnerable populations in terms of their health risks, the quality of medical care they receive and the chances of recovery from COVID-19 infection.

The development of multiple COVID-19 vaccines is an incredible achievement, but vaccinating people remains a grand challenge. Maintaining public trust in COVID-19 vaccines is an important part of the equation. ACB Canadians and other groups disproportionately impacted by the COVID-19 pandemic also face barriers accessing vaccines and have low rates of vaccine uptake.

The purpose of this community report is to share the main findings of the African, Caribbean, and Black (ACB) Vaccine acceptance (AVA) project, which mobilized ACB people and service providers in a critical dialogue about vaccines (especially COVID-19 vaccines) and health, with the goal of strengthening the communities' confidence in and acceptance of COVID-19 vaccines in Ottawa and the national capital region.

The information in this report will inform community advocacy, practice and policy actions to help raise awareness of more effective and less-effective communication strategies between service providers and community members, as well as increase the capacity of service providers to provide culturally competent and safe vaccination programs to ACB and other disadvantaged populations.

Research Approach

Guided by the socio-ecological model (SEM), an intersectionality lens and a community based participatory research (CBPR) approach, we used a three-phase mixed methods research approach to implement this project. Key project activities were organized under 5 components which overlap the phases.

These components, which responded to specific objectives (see further in this report), were:

1. Community engagement and mobilization (objectives 1 & 3)
2. Innovative research and data generation (objective 2)
3. Capacity building
4. Collective empowerment (objectives 3 & 4)
5. Knowledge mobilization (objectives 3, 4 & 5)

We collected data through:

1. A scoping review of existing literature resulting in the analysis of 60 articles
2. A survey of ACB Community Members with 345 respondents
3. A survey of ACB Service Providers with 96 respondents
4. Six focus group discussions involving 49 participants
5. 22 in-depth Individual Interviews of ACB Service Providers.

JBI guideline for scoping reviews and thematic mapping guided the scoping review data analysis. Braun & Clarke's (2006) thematic analysis six steps framework guided the qualitative data analysis and interpretation using Nvivo software. SPSS was used for the survey data mining with descriptive statistics and multiple regression. Peer debriefing, external audits and community member validation ensured the trustworthiness of the qualitative findings.

Results

Our analysis of each data set revealed specific themes for each one, as described below. However, when analyzed together, five common and cross-cutting themes emerged. These cross-cutting themes were: 1) Knowledge, 2) Racism, 3) Communication, 4) Access, and 5) Agency of ACB people.

Specifically, the five themes revealed by the **scoping review** were 1) Racism and inequities, 2) Attitudes, beliefs, and behaviours, 3) Knowledge and misconception, 4) Communication and vaccine messaging, and 5) Stakeholder engagement and impact.

The five themes identified from the 22 **service providers (SP) IDIs** were: 1) Racism and inequities; 2) Information & messaging, 3) Communication approaches, 4) Service provider challenges and support, and 5) Community Empowerment.

The six themes identified from multi-stakeholder FGDs include: 1) Racism and Vaccine Uptake, 2) Knowledge & Misconception, 3) COVID-19 Misinformation, 4) Communication (strategies and barriers). 5) Alternative Remedies (skepticism of Western Medicine) and 6) Agency and community resilience.

Overall, the survey results revealed lower uptake of vaccination amongst ACB communities, declining health during the pandemic for those living with chronic conditions, high level of COVID-19 risk perceptions, skepticism towards COVID-19 vaccination, difficulties identifying trusted sources of information, and accessibility issues.

Recommendations

To address the complex nature of COVID-19 disproportionately impacting ACB communities, ACB community leaders, service providers and other stakeholders discussed the five key cross-cutting

themes using the Socio-Ecological Model (SEM). This model helps identify and tackle important issues and obstacles people face in the different layers of society they're part of. These layers, or "levels" include the individual, interpersonal, community, institutional, and systemic levels.

For example, to improve the uptake of COVID-19 vaccines amongst ACB people at the individual level involves engaging ACB people to equip them with accurate knowledge about COVID-19 vaccines to foster the adoption of healthy behaviors.

Our ACB community members and health leaders at the AVA Action Summit recommended the development of an ACB repository of information that hosts knowledge around vaccine uptake to build on layers of knowledge.

At the systemic level, recommendations included actions to address anti-Black racism with dedicated funding, resources, and supports, such as policy-based and organizational interventions, transparent and accountable mechanisms and authentic long-term relationships with Black and other racialized communities.

Conclusion

Despite the availability of vaccines, some people choose not to get vaccinated for various reasons, including lack of confidence and mistrust resulting from past and present racism and discrimination and the absence of cultural competence in healthcare that might otherwise develop rapport and build confidence. The issue of low vaccine uptake in ACB populations has revealed that issues such as vaccine access is not only a physical barrier but also a knowledge, psychological, and socioeconomic barrier, at the individual, organizational, and systemic levels. These are anchored by persisting structural inequities.

Keywords: Vaccine acceptance and uptake ; COVID-19; African, Caribbean, and Black (ACB) health; Ottawa; Ontario

INTRODUCTION

In May 2020, the 73rd World Health Assembly passed a resolution recognizing the significance of vaccines as a global strategy to prevent, control, and ultimately eradicate the spread of COVID-19[50]. In Canada, several COVID-19 vaccines have received approval from Health Canada following clinical research that validated their safety and efficacy[1]. However, as the uptake of the vaccine is voluntary in Canada, vaccine hesitancy presents a significant challenge to the success of vaccination campaigns. Studies in Canada have identified safety concerns, risks, and side effects as common reasons for COVID-19 vaccine hesitancy. For example, Frank and Arim[2] found that more than half of Canadians reported a lack of confidence in the safety of vaccines (54%) and fear of side-effects (52%) as reasons for vaccine hesitancy. Similarly, a recent qualitative analysis of Canadian Twitter users found that concerns about safety, conspiracy theories, and misinformation were the main drivers of vaccine hesitancy[3].

Research has revealed that vaccine hesitancy is an important issue in Canada, with 23% of Canadians indicating they are unwilling to receive the COVID-19 vaccine, based on data from the Canadian Community Health Survey collected between September and December 2020[51]. Vaccine willingness has been observed to be lower among some vulnerable groups, including members of African, Caribbean, and Black (ACB) communities. For instance, evidence suggests that 22% of non-visible minority Canadians are not willing to receive a COVID-19 vaccine, but this figure increases sharply to 45% among Black Canadians (Statistics Canada, 2021). In British Columbia,[4] it is also found that ACB individuals (57%) are less likely to intend to be vaccinated than their White counterparts (81%). Moreover, studies have indicated that vaccine hesitancy scores are higher among Black Canadians than White Canadians, even after accounting for sociodemographic factors[5]. These findings are considered reflective of the historical and ongoing experiences of systemic racism and discrimination in healthcare, which have eroded trust in the healthcare system and significantly contributed to vaccine hesitancy among ACB individuals[6–8].

Research has identified a complex interplay of psychosocial, demographic, and socioeconomic factors that may be affecting the willingness for people to get vaccinated. Psychosocial factors such as knowledge of COVID-19, risk perception, prior experience with vaccination, and attitudes towards COVID-19 media messages have been found to influence peoples' vaccine willingness[9–11]. Demographic factors, including age and gender, have also been identified as

significant predictors of vaccine willingness. For example, studies have shown that older and female individuals are more likely to be willing to receive the vaccine compared to their younger and male counterparts[12]. Additionally, socioeconomic factors such as income and education have been found to play a critical role in vaccine willingness, with research indicating that people with higher income and education levels are more likely to be vaccinated against COVID-19 than those with lower income and less education[9,12].

Although these findings are important, very few studies have examined the factors associated with COVID-19 vaccine willingness among ACB people in Canada. This knowledge gap in the literature is particularly concerning because ACB people in Canada have been disproportionately impacted by COVID-19[13,14]. For example, the Public Health Agency of Canada (2021) has shown that ACB communities have experienced a higher burden of COVID-19 cases, hospitalizations, and deaths compared to other racial/ethnic groups. In this context, it is important to pay further attention to low levels of vaccine willingness among ACB people that have been previously documented. To this end, the current study aims to identify psychosocial, demographic, and socioeconomic factors that are associated with COVID-19 vaccine willingness among ACB people in Ottawa, Ontario (Canada).

Study Goal and Objectives

The goal of the AVA Project was to meaningfully engage African, Caribbean, and Black (ACB) people as well as service providers in a critical dialogue about vaccines (especially COVID-19 vaccines) and health, and to strengthen the communities' confidence in and acceptance of COVID-19 vaccines in Ottawa and the national capital region.

The expected outcomes included: strengthening multi-sectoral partnerships and collaboration in vaccine promotion and uptake by ACB communities; building confidence through critical health and racial literacy; supporting ACB peoples' involvement in community based participatory capacity-building initiatives; and generating new knowledge to improve vaccine uptake as well as raising awareness about health inequities in ACB communities in the national capital region and beyond using the peer equity navigation (PEN) program.

The main objectives of the study were to:

1. Meaningfully engage various stakeholders in project implementation
2. Identify best practices for improving access to vaccines and uptake of vaccines by drawing on both existing research evidence and ACB community knowledge
3. Develop knowledge translation tools to build capacity among health providers working in ACB communities as vaccinators and vaccine promoters
4. Increase access to vaccines among ACB communities by improving confidence in and acceptance and uptake of COVID-19 vaccines
5. Improve evidence-based vaccination communication between immunization stakeholder groups (i.e., health planners, health providers and ACB communities), to promote the uptake of vaccination

Research Approach: Framework and Process

The theoretical frameworks used to guide the study were the socio-ecological model (SEM), an intersectionality lens and the principles of community-based participatory research (CBPR) approach

1. Socio-ecological Model (SEM)

The socio-ecological model is used to understand complex issue of vaccine uptake among ACB populations on 5 levels: individual, interpersonal network, community, institutional/health systems, and structural. This is outlined in Figure 1 below.

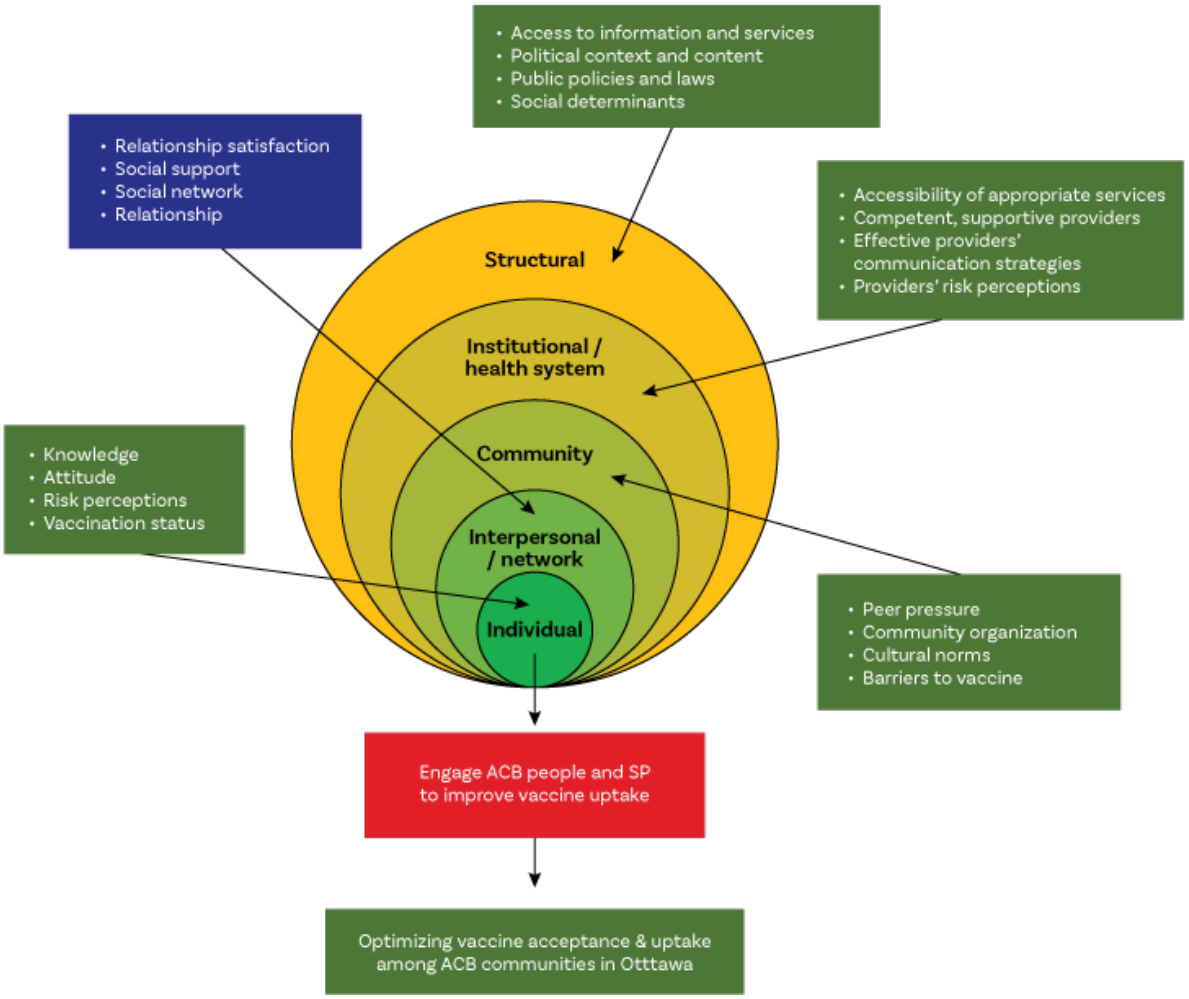


Figure 1: Socio-ecological model (SEM) as it applies to the ACB community vaccine acceptance (AVA) Project

2. Intersectionality

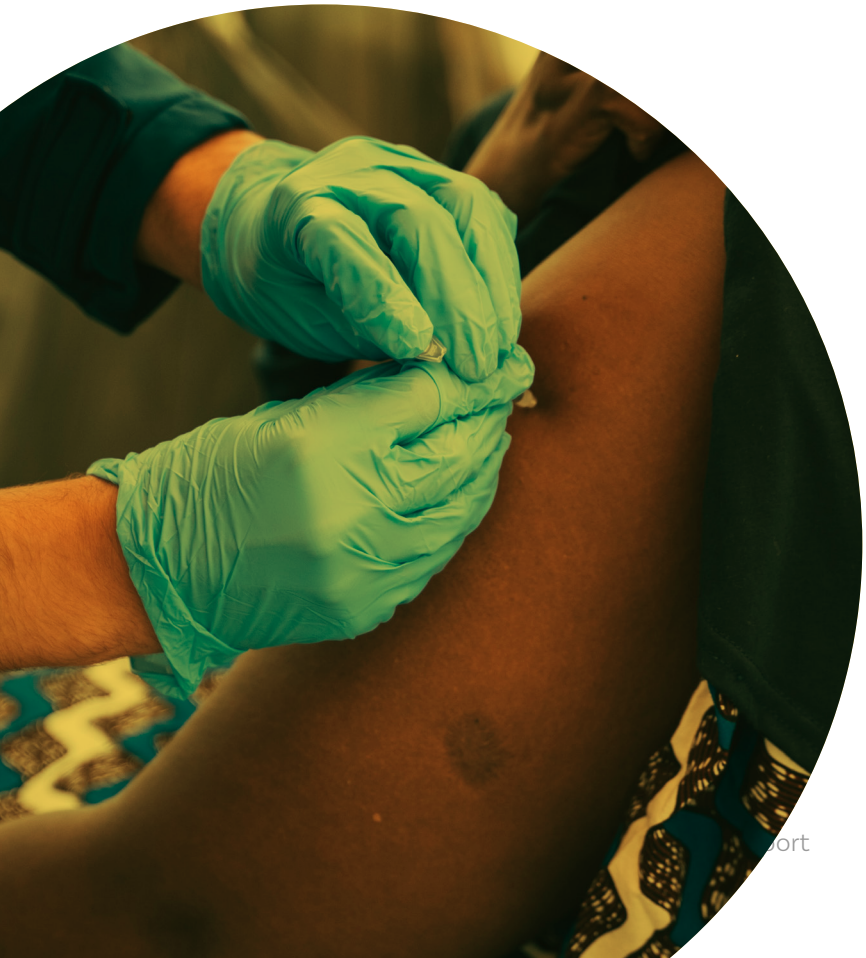
Intersectionality is an analytical tool used in equity work to understand and interpret the complexity of the world around us. It emphasizes that health issues are influenced by broader social factors and do not occur in isolation, but rather, they intersect and mutually-enhance their negative impacts on health outcomes.

3. Community-based participatory research (CBPR)

Community-based participatory research principles were utilized in this study as a means of mobilizing social action to address community needs for creating change at multiple levels. Critical to CBPR is the work of Paulo Freire, an educator from Brazil, who published the book, "Pedagogy of the Oppressed" (1970). Central to his work is the idea that we all have a responsibility to produce and transform reality:

- See a situation affecting you or others,
- Analyze the situation, including its root causes (socio-economic, political, cultural, etc.)
- Act to change this situation, following the precepts of Social Justice

CBPR creates an environment of empowerment and transformation for those involved. In the AVA project, these principles were integrated throughout the project implementation using community -driven mechanisms such as the Project Advisory Committee (PAC), and enacted by Peer-Equity Navigators (PENs).



THE RESEARCH PROCESS: METHODOLOGY

To implement this project, we used a three-phase approach as shown in figure 2 below.

Key project activities were organized under five components which overlap the phases.

These components were: engagement and mobilization (to meet objectives 1 & 3), innovative research and data generation (to meet objective 2), capacity building, collective empowerment (to meet objectives 3 & 4), and knowledge mobilization activities (to meet objectives 3, 4 & 5).

Guided by the socio-ecological model (SEM), intersectionality and community based participatory research (CBPR) frameworks outlined above, this research used a mixed-methods design to examine the following issues and questions: How do ACB people understand their vulnerability to COVID-19 infection, especially in relation to vaccination? What are the individual, community and structural barriers/facilitators that promote vaccine uptake and access to inclusive services?

This aspect of the research focused on understanding health and vaccination -related needs, priorities and ACB members' experiences accessing health and vaccine-related services. We also explored the perspectives of service providers and decision makers regarding: (a) how they understood ACB communities in relation to health and vaccine uptake; (b) service availability and accessibility for the ACB community related to vaccination and health; (c) how (or the extent to which) community-based service providing agencies (may) engage ACB people; and (d) how current policy interventions may promote health and vaccine uptake among ACB people.

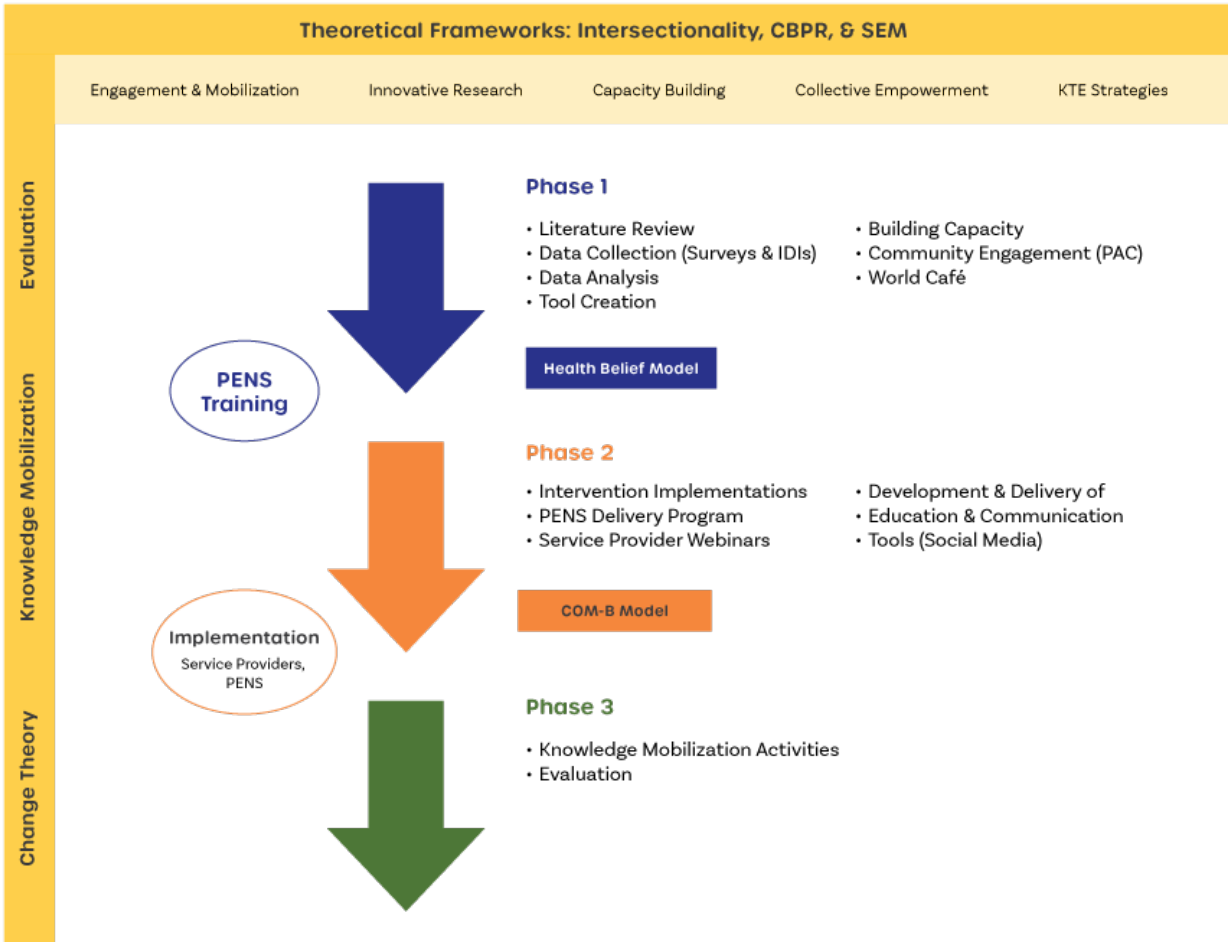


Figure 2: A diagram depicting the theoretical framework used for the AVA Project.

Data collection

Data for this study were collected through several channels:

1. A robust Scoping Review
   - Sixty articles were systematically analyzed with a focus on the ACB community and vaccine uptake in high-income countries.
2. Quantitative data
   - ACB community member survey about their knowledge of COVID-19 and COVID-19 vaccines
   - ACB Service provider survey about providing COVID-19 vaccines and services to ACB communities
3. Qualitative data
   - Focus Group Discussions (FGDs) with ACB service providers
   - In-depth Individual Interviews (IDIs) with service providers
4. Peer Equity Navigators (PENs) program

Scoping Review

A robust scoping review was conducted to understand the reasons behind low vaccine uptake in ACB populations in high-income countries, resulting in 9378 articles found in eight databases: MEDLINE(R), Embase, CINAHL, APA PsycInfo, Cochrane Central Register of Controlled Trials, Cochrane Database of Systematic Reviews, Allied & Complimentary Medicine Database, and Web of Science.

Overall, 60 articles were analyzed with a focus on the ACB community and vaccine uptake in high income countries. This helped to guide the questions for this study and defined concepts related to low vaccine uptake in ACB communities within existing literature.

Quantitative Surveys

Two surveys collected information on the perspectives ACB Community Members and ACB Service Providers had regarding different aspects of COVID-19 vaccination.

For example, when surveying ACB community members, we sought to understand their:

- Vaccination status
- COVID-19 vaccination knowledge
- COVID-19 risk perceptions
- COVID-19 vaccination accessibility
- Sources of information on COVID-19 vaccines

In total, 345 ACB community members responded to this survey.

For the second survey taken by ACB Service Providers, we sought to understand their:

- Workplace characteristics and capability of addressing COVID-19 misinformation
- Client characteristics and their trust levels in healthcare systems
- Perceptions of their clients' risk of COVID-19 and negative health outcomes
- COVID-19 vaccination communication strategies and training

In total, 96 ACB Service Providers responded to this survey.

Due to the ACB community being considered a hard-to-reach population, we utilized a venue-based method to sample ACB individuals in Ottawa. Venue-based sampling is a systematic sampling approach used in public health research to collect information from hard-to-reach populations, which can reduce bias and increase homogeneity within a sample through randomization procedures[15].

We recruited our participants in several venues such as ethnic grocery stores, community centres, churches, mosques and barber shops.

The data was collected from March 30 – December 31, 2022 and descriptive statistics were used for the analysis.

Qualitative Data Tools

Focus group discussions (FGDs) and in-depth interviews (IDIs) were the qualitative tools used in this study. Participants were informed that the FGDs and IDIs were voluntary and they were recruited through the Peer-Equity Program (see below).

Forty-nine (49) ACB community members participated in six focus group discussions (FGDs)while individual in-depth interviews were held with 22 ACB SPs.

The Peer Equity Navigators (PENs) Program – A Peer-led Intervention

The PENs program is an innovative community-based participatory intervention developed by Dr. Josephine Etowa. Specifically, it is a peer-led educational initiative aimed at engaging ACB community members to increase awareness of and access to COVID-19 vaccine clinics. PENs were trained in 12 modules focused on critical health and racial literacy, cultural competency, COVID-19 and ACB communities, and community engagement strategies. They also received 6 weeks of practicum training within service organizations such as OPH, SWCHC, ACO, and SOECHC

Staff working at these clinics preceptor trained PENs, who then shared information with ACB community members to ultimately mobilize them to access vaccination services. While OPH has a community champions program to increase vaccine uptake, the PENs serve as an extension of that program, enabling a reach beyond the scope of the program (which was Francophone ACB communities).

Specific activities related to the PENs program included the:

- Development of training/educational materials for the PENs program
- Establishment of PEN offices in community settings to increase their visibility
- Recruitment and training of PENs on key topics, e.g. critical racial and health literacy, community engagement
- Working with partner organizations to support and mentor PENs
- Improvement of evidence-based vaccination communication between immunization stakeholder groups (i.e., health planners, health providers) and ACB communities to promote vaccine uptake

Summary of PENs' assessment of their training

The PENs that completed the training program reported high levels of change in knowledge for three key training areas: on the social determinants of health, critical health literacy, and critical racial literacy. They also felt very prepared or extremely prepared to talk to their peers about health promotion and health literacy, and reported that other parts of the curriculum, such as the modules on policy and racism, were very useful and extremely useful.

Outcomes of the PENs Program Intervention

- 11 PENs held 56 events* between September 16, 2022 and January 28, 2023. These events were either in-person or online. For example, figure 3 and 4 below shows some of our Peer Equity Navigators in action (wearing orange shirts), where they were engaging community members at a mall and in a community setting respectively.
- Community participants the PENs engaged: ACB people, Francophones, seniors, Muslims, Students/Youth, Women, Immigrants.

* Host agencies: SWCHC – 11 times, OPH – 5 times, Restore Medical Clinics – 4 times , ACO – 5 times

*Formats: 25 in-person events, 26 online events

*Venues: 12 events in a Door-to-door/mall setting, 11 events in Faith-based settings, 10 events at clinics, 7+ events on social media, 7+ events which engaged Friends/Family, 3 large community events, and 3 events in university settings

An estimated total of 1,500 people were engaged thanks to our Peer Equity Navigators.

Figure 3: Peer-equity navigators (in orange) in action at a mall.

Figure 4: A Peer-Equity Navigator (in orange) in action in a community setting.

Characteristics of Study Participants

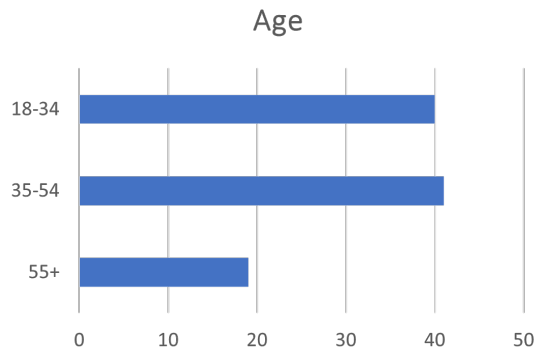
Quantitative Overview

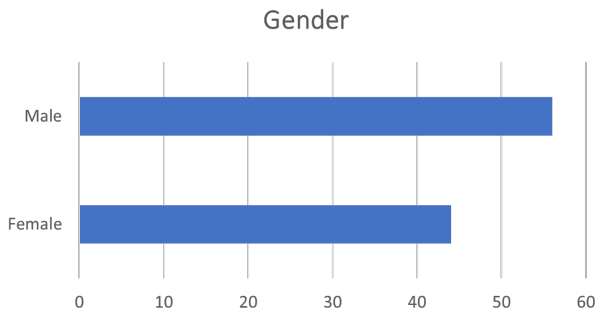
Data was collected through two surveys:

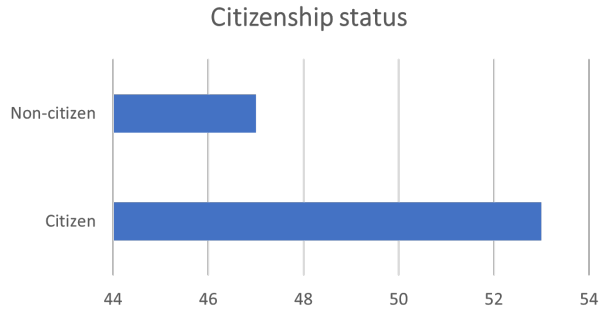
- An ACB Community Members survey, where 630 community members were initially recruited and 345 responded, for a response rate of 54.7%
- An ACB Service Providers (SPs) survey, where 171 ACB service providers were initially recruited and 96 responded, for a response rate of 56.1%

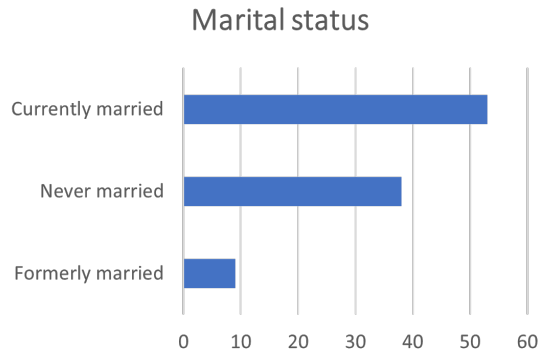
Demographic characteristics of ACB Community Members who responded to our survey

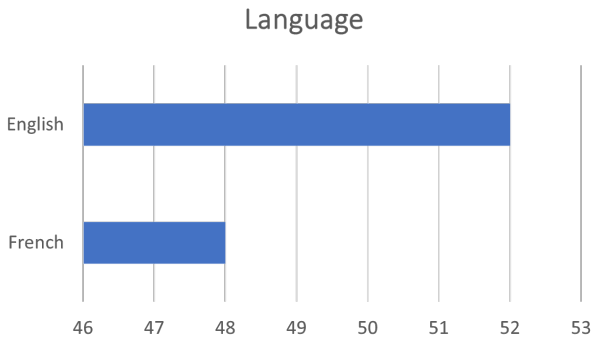
- Almost one in five respondents (19%) was 55 years of age or older
- 56% were male and 44% were female
- Half of respondents were Francophone (48%) and married (53%)
- 53% were Canadian citizen; 56% had bachelor's degree or higher

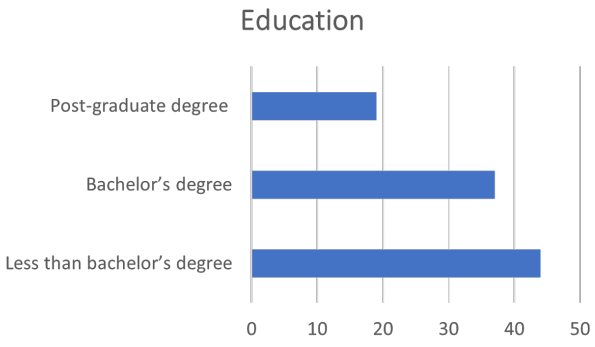






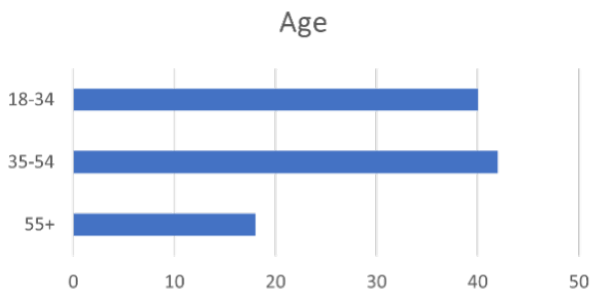


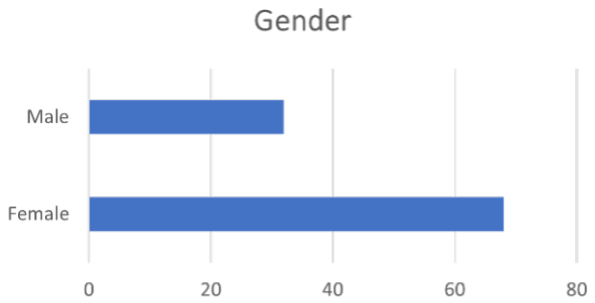


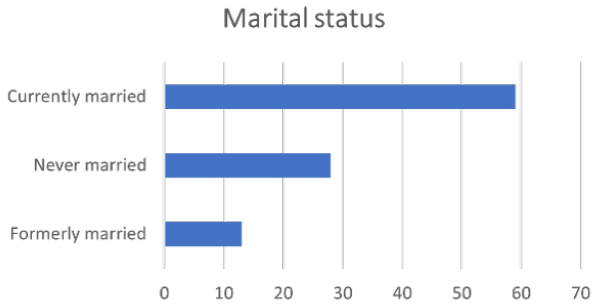


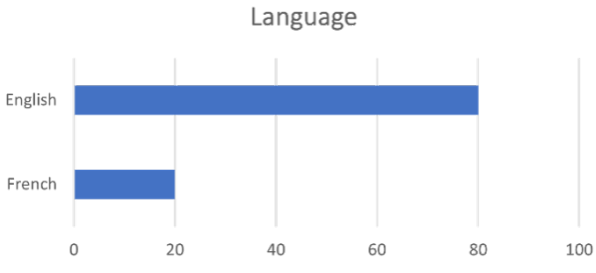
Demographic characteristics of ACB Service Providers who responded to our service provider survey:

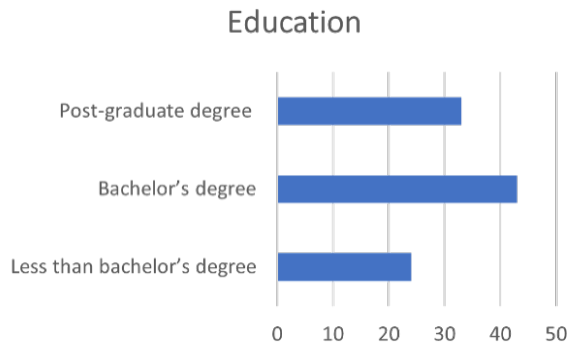
- Almost one in five respondents (18%) were 55 years of age or olde
- 68% were female, 32% were male
- One in five respondents were francophone (20%), and 15% were never married
- The majority of respondents (72%) had a bachelor's degree or higher
- 17% were community leaders; 32% worked in healthcare; 12% were counsellors; 26% were social workers

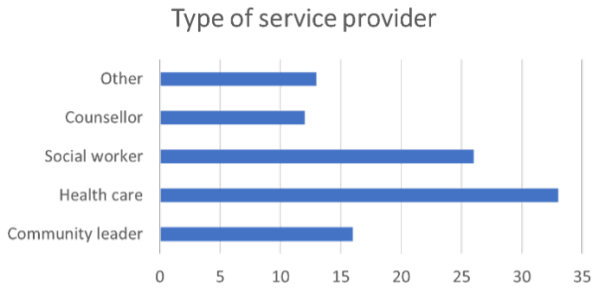












Qualitative Overview

We conducted six focus group discussions (FGDs) with 49 participants, comprised of 23 ACB community members, 14 ACB Service Providers (SPs) were in healthcare and policy sectors, and 12 participants selected 'not applicable'. Four FGDs were in English, and two were in French.

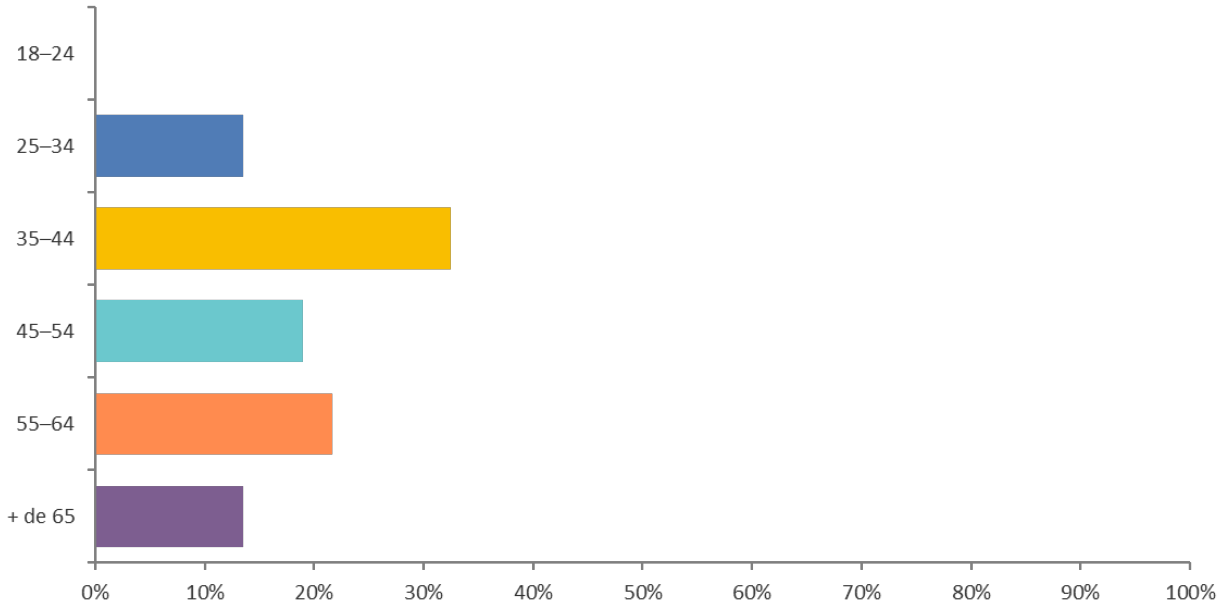
A World Cafe was also held which included 27 participants.

We additionally held 22 In-depth Individual interviews (IDIs) with ACB SPs.

Demographic Characteristics:

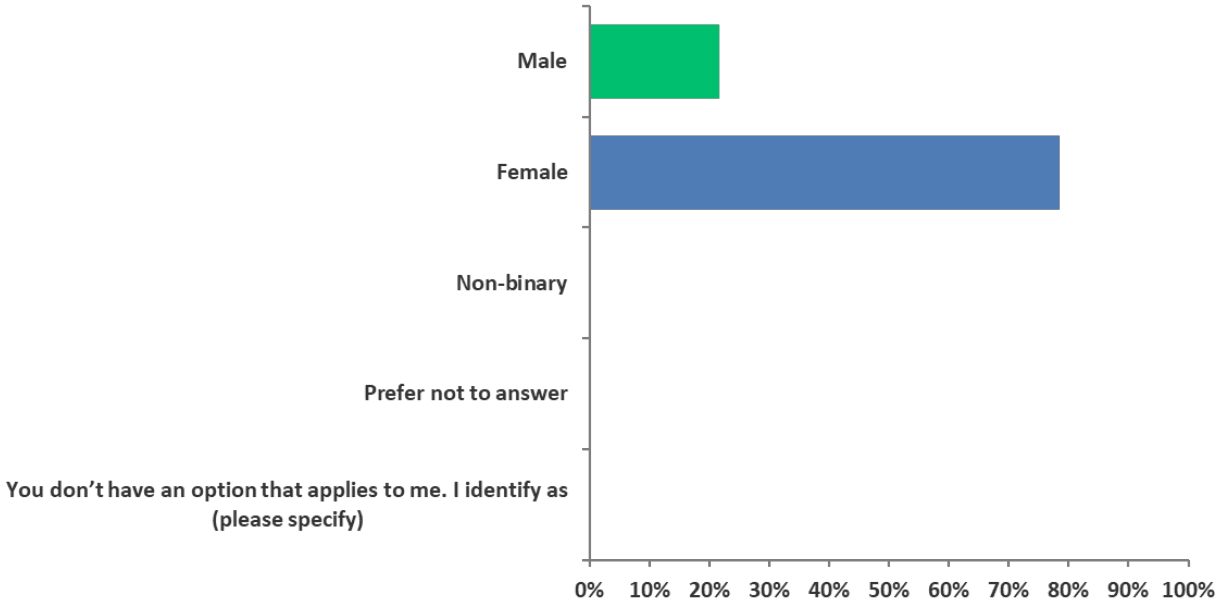
Age:

- 33% of participants were aged 35-44
- 22% of participants were aged 55-64



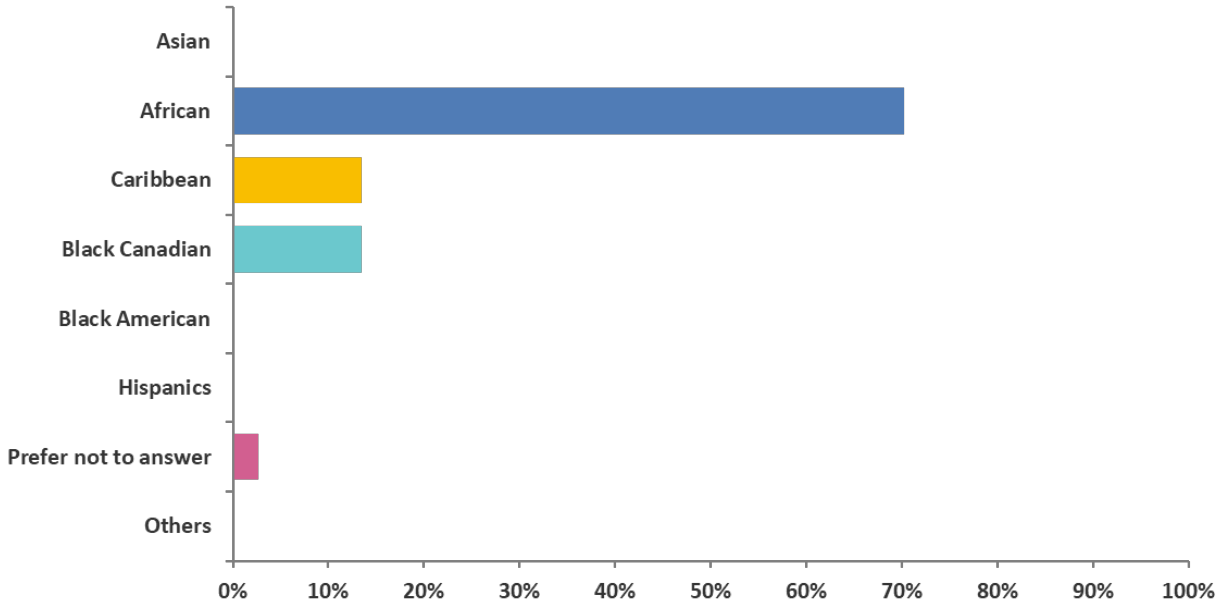
Gender:

- Over 80% of the participants were female



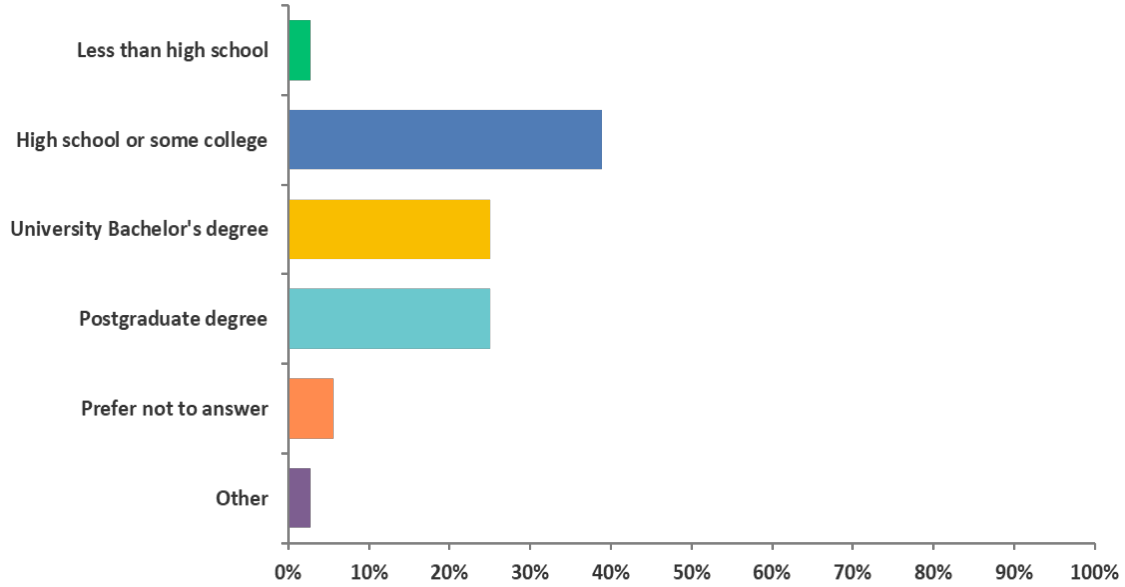
Racial Background:

- 70% were African
- 15% were Caribbean and Black
- 5% preferred not to answer



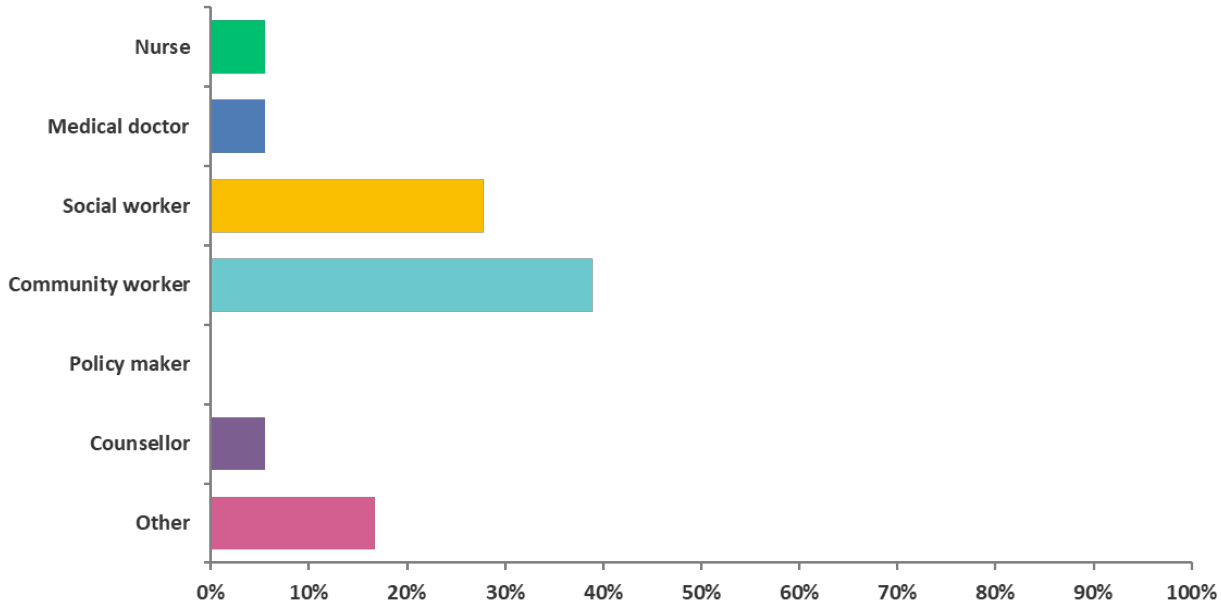
Education:

- 40% of participants had a high school diploma
- 25% of participants had a university degree
- 25% of participants had a post-graduate degree



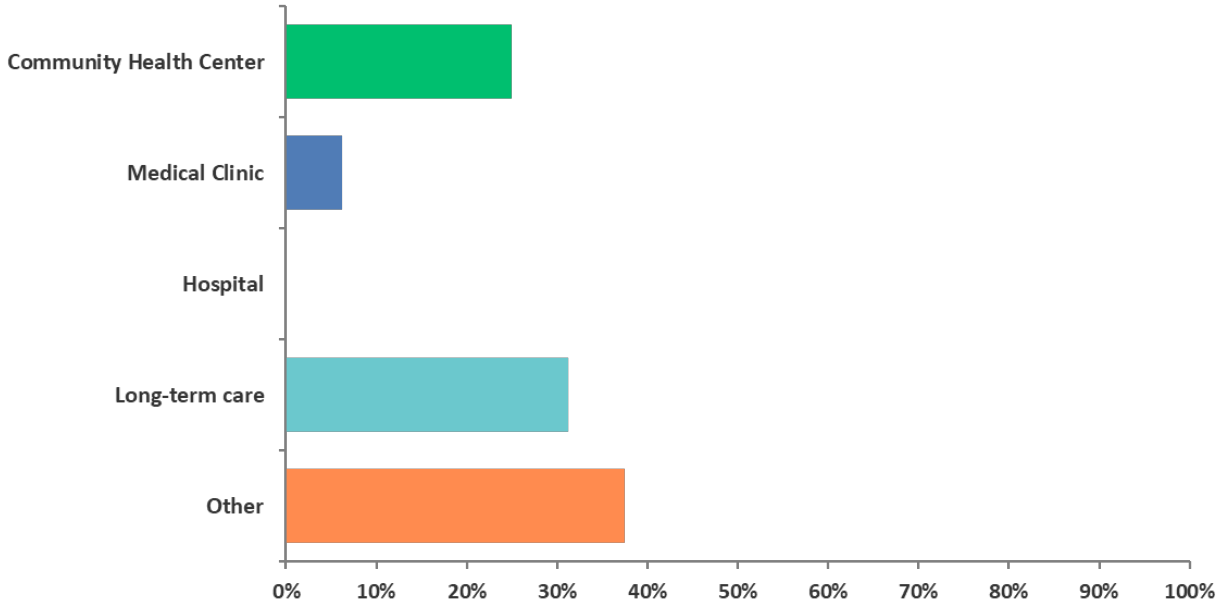
Profession:

- 40% were community workers
- 30% were social workers
- 7% worked in healthcare (as nurses or doctors – an equal distribution)



Work Sector:

- 25% worked in a community health center
- 30% worked in long-term care
- 40% worked in other sectors



In-Depth Interviews

22 service providers (SP) participated in In-Depth interviews

Demographic characteristics:

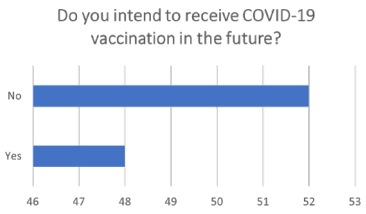
- 36% were healthcare providers; 41% were decision makers; 23% were community service providers
- 55% were ACB; 32% were Non-ACB (White); 14% were Non-ACB (other)
- 27% were male and 73% were female
- 59% had graduate-level degrees

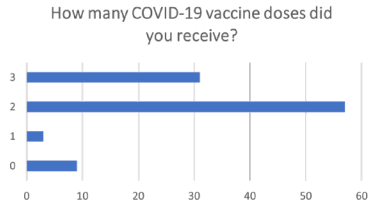
RESULTS

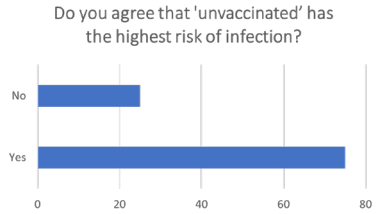
Here are the results from our four data sets: the ACB community member survey, the ACB service provider survey, focus group discussions, and in-depth interviews.

ACB Community Member Survey Results

Vaccination Status

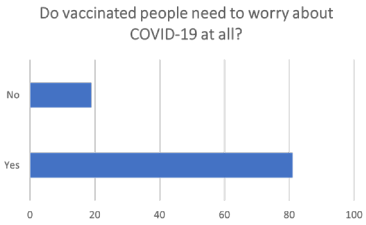


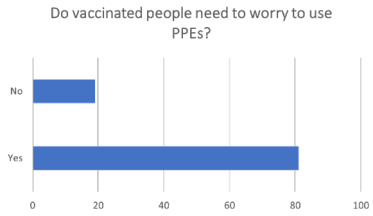


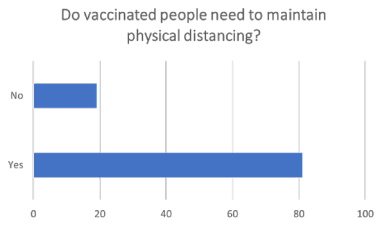


- 75% of the respondents had an opinion that being 'unvaccinated' has the highest risk of infection.
- 9% of respondents did not receive any COVID-19 vaccination dose.
- Half of respondents (48%) were willing to receive COVID-19 vaccines in the future.

COVID-19 Vaccination Knowledge

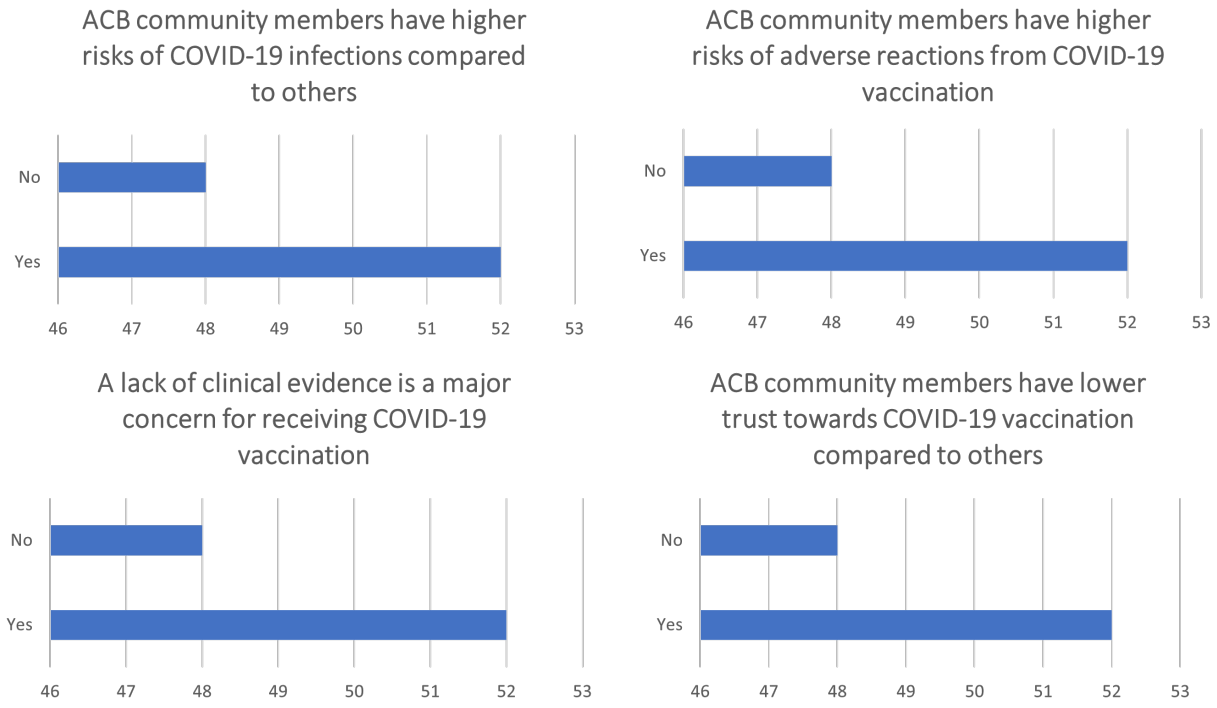






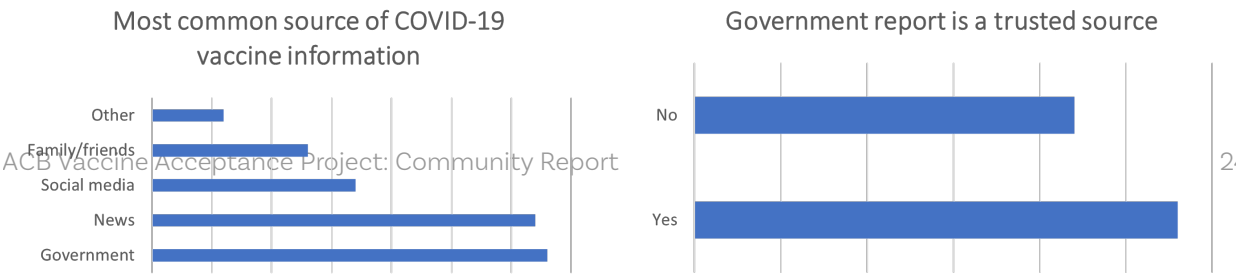
- 80% reported that vaccinated people still need to worry about COVID-19.
- 85% reported that vaccinated people still need to use personal protective equipment.
- 81% reported that vaccinated people still need to maintain physical distancing.

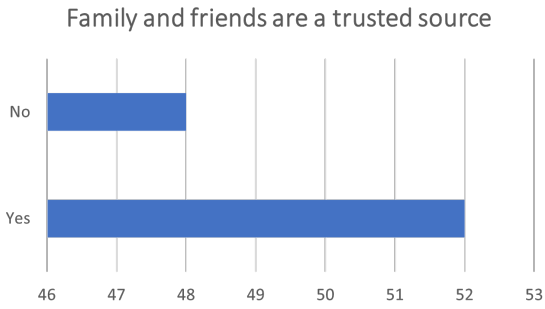
COVID-19 Vaccination Risk Perceptions

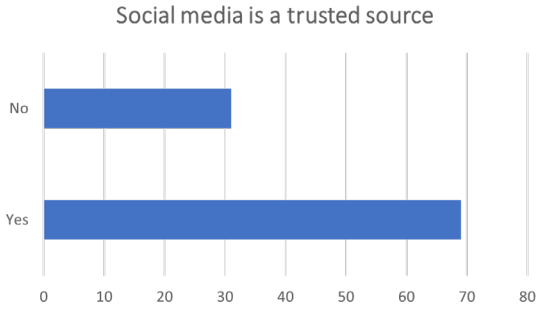


- More than one in four respondents (29%) reported that ACB community members have higher risks of COVID-19 infections compared to other. Similarly, 25% also report that ACB community members have higher risks of adverse reactions from COVID-19 vaccination.
- About half of respondents (52%) reported that a lack of clinical evidence is a major concern for receiving COVID-19 vaccination.
- Slightly less than half of respondents (47%) claimed that ACB community members have lower trust towards COVID-19 vaccination compared to others.

Information Source

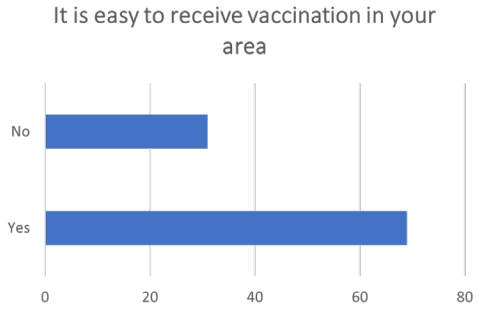


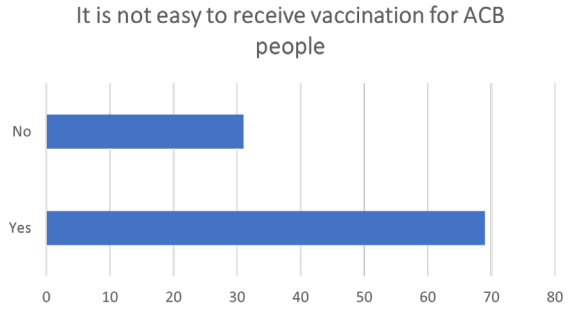


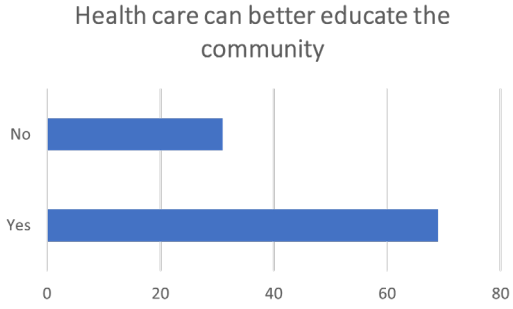


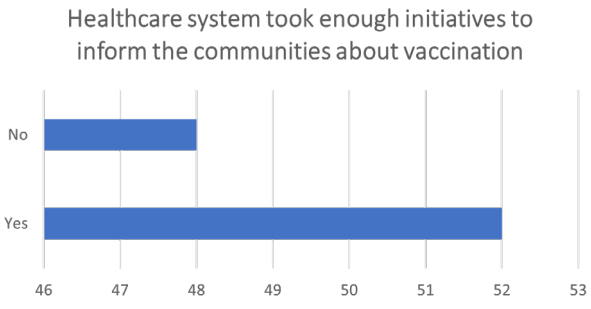
- Government report (33%) was the most common source of COVID-19 vaccination information followed by news (32%), social media (17%), family and friends (13%), and other (6%).
- 56%, 41%, and 29% reported that government reports, family and friends, and social media were trusted source of information about COVID-19 vaccination, respectively.

COVID-19 Vaccination Accessibility





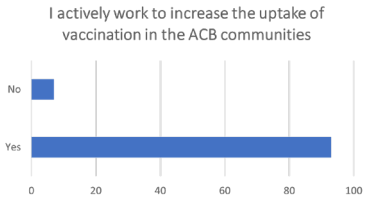


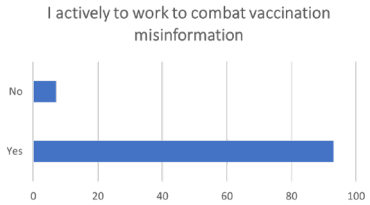


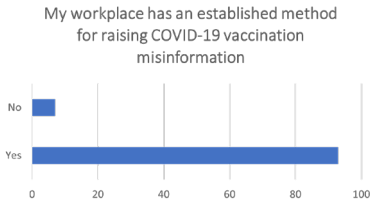
- 28% reported that it was not easy to receive COVID-19 vaccines in their area. Also, about three in five respondents (61%) had a perception that it was not easy for ACB people to get a vaccine.
- 69% reported that health care can better educate people in ACB communities.
- Slightly less than half of respondents (48%) did not think that healthcare system took enough initiatives to inform the communities about vaccination.

ACB Service Provider Survey Results

Workplace Characteristics

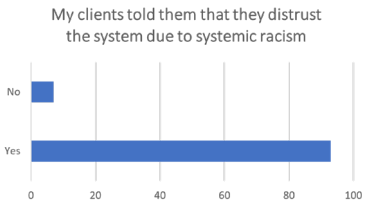


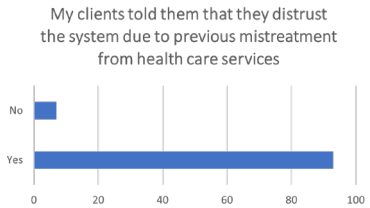


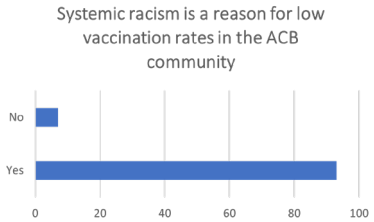


- 71% of service providers reported that they actively work to increase the uptake of vaccines in the ACB communities.
- 78% reported that they actively to work to combat vaccination misinformation.
- 87% reported that their workplace has an established method for raising COVID-19 vaccination misinformation.

Client Characteristics

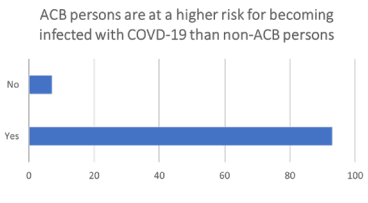


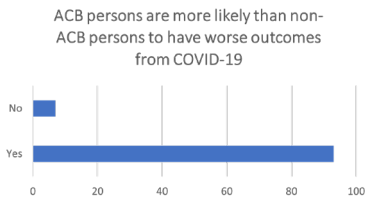




- 68% of service providers reported that their clients told them that they distrust the healthcare system due to systemic racism.
- 70% reported that their clients told them that they distrust the healthcare system due to previous mistreatment from health care services.
- More than four in five service providers (81%) reported that systemic racism is a reason for low vaccination rates in the ACB community.

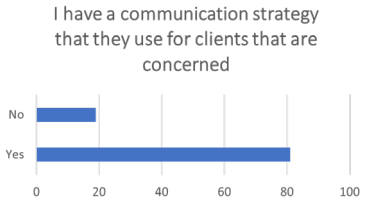
Service Providers' Risk Perceptions

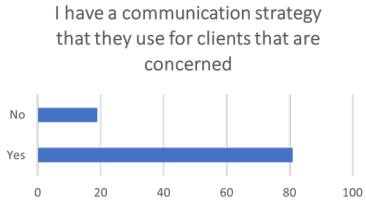


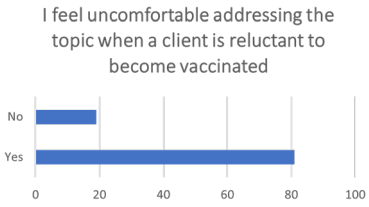


- 71% of service providers reported that ACB persons are at a higher risk for becoming infected with COVD-19 than non-ACB persons.
- 74% reported that ACB persons are more likely than non-ACB persons to have worse COVID-19 outcomes
- 83% reported that ACB community members have a low rate of vaccine uptake.
- 93% believed that they should intervene by improving vaccination rates in communities with low uptake.

Communication Strategies







- 74% had a communication strategy that they used for clients that are concerned about getting vaccinated.
- 70% had different communication strategies based on the client's level of concern about being vaccinated.
- 43% feel uncomfortable addressing the topic when a client is reluctant to become vaccinated.
- 81% reported that they would like to have additional communication training.

Focus Group Discussion Results

In total, there were six focus-groups discussions held with 49 ACB SPs. We wanted to better understand the impacts of racism at different levels of the socio-ecological model, gauge their knowledge and misconceptions about COVID-19, explore the effects of COVID-19 misinformation, illustrate their thoughts on communications strategies and barriers for ACB communities, and more.

The results below are divided into the following main themes, which also included sub-themes. Namely, the participants were engaged in discussions regarding:

i. Racism (interpersonal, community, institutional impacts)

ii. Knowledge & Misconceptions

iii. COVID-19 Misinformation

iv. Communication (strategies & barriers)

v. Alternative remedies

vi. Agency and community resilience

Racism (interpersonal, community, institutional impacts)	The theme of racism was observed at several levels of the socio-ecological model (SEM) that include interpersonal, community, and institutional impacts. The following quotes from participants are examples of racism at these levels within the SEM.
Theme 1A: Racism - Interpersonal Impact	Participants shed light on the role racism plays on the power dynamic between provider and patient: "*Because of racism, it's hard to interact well with health care professionals. So, when you know that the doctor might be, or that the nurse is a little bit racist about you, I'm definitely not going to go and ask for the services. Then, even the health professionals, sometimes, they are not very friendly. Honestly, they're not very friendly and especially, for example, a person who, is it, can we talk about racism if there's a language barrier?*"
Theme 1B: Racism - Community Impact	Racism can impact the care ACB community members receive from various healthcare providers: "*But if they take sensitivity training, it can help. It can help so that the other one doesn't feel. Yes, because often people are not aware that the actions, the things they say, it is considered or perceived as racist. So, if the person can have training, they can think differently or speak differently. That can help. In the networks...*"

Theme 1C: Racism – Institutional Impact	This participant reflected on the impact of historical trauma and the ongoing systemic effects that racism play in our society: "*On this theme as well, like what I tell on the vaccines, like looking at the history of Black racism and just the healthcare, most Black people were used as sacrificial lambs in the past, took vaccines. So, it's very, very hard right now to convince a Black person to get a vaccine because they don't know, they don't trust them to say they are getting the same vaccine. Even for me, like when I went to get the vaccine and I find the vaccine is already in a needle, I'm not seeing where it is coming from, honestly I've questioned that 1000 times. I am seeing a needle that is saying it's Pfizer, the medicine is already in the needle, it's in the syringe. I didn't see the bottle. How am I sure that that's the same vaccine that's being given to my next White neighbour to me? So, when you look at those things, they are the things that make people to distrust even the healthcare system itself. If in the past, I know my ancestors have been used as sacrificial lambs to developing a vaccine, why can I not think even this time they are able to do the same. It's the same people, nothing has changed*"

Theme 2A: Knowledge and Vaccine Protection	Knowledge had several subthemes observed by participants during the FGDs. These include: vaccine protection, cause of COVID-19, and misconceptions. Here participants expressed some knowledge gaps about vaccine protection: "*Yeah, for me, what I can say, when I look, I'm from Africa, when I look back in Africa, people they didn't get, a lot of people they were not vaccinated. And people were not dying like the way we are dying here. So, we are getting vaccinated but people, what is the contrast. Like people there, they are not vaccinated, they are not dying like the way people are dying here.*" "*Because apparently it's not the same virus. It's not the same virus. Here people are dying, people were dying like flees but in Africa, we were expecting people to die more than here because of hygienic conditions and so on in the healthcare system. But it was proven that we did get to … more to what we were waiting for, for Africa. That's mean that we have, is it, we're still concerned by the virus itself. Is it the same which we are, which is infected Africa that we have, we are, we have here?*"
Theme 2b: Knowledge – Cause of COVID-19	Here a participant expressed knowledge gaps about the cause of COVID-19 stemming from the environment and accuracy of the clinical trials to create the vaccine: "*I don't know if it's the heat, but my question kind of bounces off of the observations that you made as soon as we started, particularly with respect to the North American population. If the North American population has had a great catastrophe in relation to that, and we know very well that it's, well, we think it's related to the environment, do you think that the African environment is better than the American environment for black people?*"
Theme 2c: Knowledge – Misconceptions	This participant expressed some knowledge gaps regarding the approval process of COVID-19 vaccines and concern with the accuracy of the clinical trials to create them: "*Personally, I was skeptical because the time, even now, I sound a bit like a scientist, the research time they took to get the vaccine out, it's very, very short and everyone, that's why now, we say, was the trial really, at the level, the clinical trial was already well done? Were they able to really, the study was well, well dosed without taking the risks?*"
Theme 3a: COVID-19 Misinformation – News Media	Here is an example of a participant presenting some challenges of misinformation in the news media: "*In the beginning it was very difficult because the news were giving so many information, some which were not accurate and which were very confusing. And that made it, really, really, really, it was so difficult to know what's next.*"

Theme 3b: COVID-19 Misinformation – Vaccine Protection	"*Like when I hear from people, many people feel like okay, they got the vaccine, but they are dying. What the vaccine is, it's just there to protect you. It doesn't mean if you take it you won't die. You could die. They've been giving vaccines for like centuries. It's just there for prevention, but it doesn't mean you are going to die. But many people in their head, they feel that if they take this vaccine they can't die.*"
Theme 3c: COVID-19 Misinformation – Number of Vaccine Shots	"*Well, I heard if you take the fourth shot after October then you will have to take no more shots after that because the one that's coming out after October, it's one of the strongest shots that you will be getting.*"
Theme 4a: Communication Barriers	Communication was another significant theme with several subthemes such as barriers and strategies. Some of the barriers that existed were contradicting messages from the medical community and language barriers between provider and patient: "*The medical community too, they are not unanimous. They contradict each other. Europe, the U.S., Canada, the thing, they say, "You shouldn't … the three Pfizer vaccines," whatever, and they even disagree. So, like sometimes, we…*" "*There's a big language barrier too. Yeah, a lot of people don't speak French or English and so they have a hard time accessing all the services, especially when you go to the hospital and the doctor, he's just an English speaker and you're a French speaker. What do you do? You have to call someone else.*"
Theme 4b: Communication Strategies	Various communication strategies were shared among the participants that are outlined in these quotes. Participants shared some communication strategies that could help increase vaccine uptake among ACB populations were: ACB population-centered communication approaches, utilizing ACB leaders in the community, and reaching out to local African and Caribbean radio stations in the Ottawa region. "*They should support the initiative that is really targeting this population. Healthcare, whatever the system is, this Ottawa Hospital should be able to support any Black clinics or programs that would target that population of Blacks.*" "*How about you bring a neutral person, a neutral Black person who has taken the vaccine and this as testing to… oh, okay, I've taken the vaccine, this is how it is going. And then you tag along now both celebrities and the doctors. So that way there will be a variety range of group of people to look to.*"

Theme 4b: Communication Strategies **(continued)**	"*Black people we are different. We don't like to be rushed, and we don't like somebody to come and just interfere like that. So you have to kind of be friendly and introduce yourself and tell them we are here to talk about the COVID, we are here to talk about the vaccine. And talk them on… don't laugh them when you talk.*" "*But we have Caribbean radio station in the country, in Ottawa, go to a Caribbean radio station, get the word out there. We have the multicultural station right on the market. They would love to accommodate people with multicultural things, to go and talk about all of these things. So, somebody have to go and you know, talk to those people and come on the air and spread the word. You know because lots of people from all walks of life listen to that Caribbean station. They have on Saturdays one in the morning, one in the evening, one at night. So you can go there and reach the community who listen to that Caribbean station.*"
Theme 5: Alternative Remedies	Participants had various beliefs about Western medicine and its ability to provide protection against COVID-19: "This is an African reality and I believe that we have knowledge that Westerners, unfortunately, do not have, but as they are the ones who have the infused science, they always tend to simply ignore it. Then, I believe that medicine, research would have a lot to gain by getting closer to our traditions."
Theme 6: Agency and Community Resilience	Black people from across the diaspora have agency within themselves to know how to solve problems that impact them and their communities. They are also able to build agency with members in their community to find innovative solutions. What is often missing are the resources to ensure they can create sustainability of the solutions they create for themselves and future generations: "*They should support the initiative that is really targeting this population. Healthcare, whatever the system is, this Ottawa Hospital should be able to support any Black clinics or programs that would target that population of Blacks.*" "*How about you bring a neutral person, a neutral Black person who has taken the vaccine and this as testing to… oh, okay, I've taken the vaccine, this is how it is going. And then you tag along now both celebrities and the doctors. So that way there will be a variety range of group of people to look to.*"

Results from our ACB Service Provider In-Depth Interviews

In total, there were 22 in-depth interviews held with service providers (SPs) from various health, social service and faith-based organizations. These interviews explored different parts of their experience of providing care to ACB community members, as well their roles in their workplace and as community leaders amongst others. Specifically, they were asked open ended questions pertaining to the following areas:

- Their role in the workplace and their role within the organization,
- The organization's role with the ACB clients, workers and community,
- Impact of historical and current racism on the services they provide, about mistrust and mistreatment of services and how trust is built,
- Their role in community empowerment, how community messengers are supported in their service provider role or by the organization,
- Ways to improve vaccine messaging and uptake in the ACB community

The following five themes were identified during the IDIs with theSPs:

1. Racism and inequities
2. Information & messaging
3. Communication approaches
4. Service provider challenges and support
5. Community Empowerment

The results below show how each of the themes above touch each level of the socio-ecological model, which includes the individual, interpersonal, community, institutional, and structural levels.

1. Racism and Inequities: Structural examples	Structural racism has contributed to the disproportionate number of people infected with COVID-19 and the mistrust associated with low vaccine uptake in ACB communities. One SP stated the following: "*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. And so, 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.*" The failure to recognize the impacts of socioeconomic factors that are imposed through these structures led to some blaming ACB people for spreading the virus. One SP stated the following: "*There's a whole lot of mistrust between the ACB community and governmental bodies but that didn't really help that much. And so, rather than actually give the reasons why Black people were having COVID-19 more than others, the prevailing information at least from the laypeople seemed to be that Black people were having it more…I found it definitely interesting how they failed to see the socioeconomic conditions that seemed to make it more likely for Black people to have and transmit COVID-19*" The government's mandated vaccination policy reinforced these suppressive structures and further perpetuated inequities as it failed to consider the impacts of ACB workers who had fears and mistrust regarding the vaccine; it inevitably heavily impacted the ACB community with disproportionate job loss as one SP stated the following: "*We have a policy of if you are not fully vaccinated you would lose your job. Like you would be put off. And 99.9% of people who were off, are people from the ACB community. That is the impact of racism.*" For those who did get vaccinated due to the mandate rather than based on their own beliefs and or health, this may have exacerbated feelings of being treated unfairly by the system. One SP stated: "*You might have people who took the vaccine because they needed to but then are going to go tell everybody they know that I don't think it's worth it… Because they didn't feel like they did it for the right reasons… if you have someone who has gotten the vaccine and then starts telling their friends and family that I wish I didn't do it or I only did it because of this, you are causing an issue down the line…I do find that putting people in a position where they have to make a decision that has nothing to do with their own healthcare is unfair.*"

1. Racism and Inequities: Organizational Examples	These examples provide insight on the impact of racism at the organizational level. Healthcare agencies and organizations are suppose to provide fair treatment to ACB people who work within them. Problems arise when ACB people encounter unfair treatment that result in avoidance of obtaining healthcare services. *"ACB community at large I'm sure a lot of people don't even go to the doctor's office because of racism, bias, ignorance, …arrogance and white supremacy."* It was found that although some organizations had anti-racism policies before COVID-19 many did not. The City of Ottawa has an anti-racism policy but now organizations were creating their own anti-racism policies and starting to engage more with communities. One SP stated that it is a process and progress is being made within their organization, which further extended into their community efforts: *"I feel like there's a process. Now they have this policy. They have two staff. They are hiring a director. We are continuing …being present, that working differently with communities and hearing first instead of building and then that kind of grassroot approach. They want to continue doing it so hopefully that will continue. That's what I'm hoping for."* The consistency and continuity of engagement with ACB communities needs to be improved. One SP stated: *"We work very hard to build bridges that have continuously been broken because after an emergency, after something, we kind of stopped and then something else happened and we start again…what I want the most would be like a continuation of supports and services and listening in and being like adapting and hopefully a better, better health outcomes, better health outcomes in our communities, regardless of COVID."*

1. Racism and Inequities: Interpersonal Examples	These examples highlight the impact that racism has on interpersonal relationships between SPs and ACB patients. For instance, service providers have their own biases that can impact the care they provide; such as talking about vaccines with an ACB person, as one SP described their experience with co-workers: "*There is this notion that Black community they are hesitant, they have all these theories or fears or some worries when it comes and I'm not just going to bring it up to them, like it's not my business.*" Dismissal of a client based on preconceived notions can impact future healthcare seeking behavior of the client. One SP stated: "*I feel like a lot of times folks kind of like ignore it in our community at least, like ignore a lot of like 'oh like it's just a cough or it's just like a little bit of a pain' until things get like really bad and then you're, they're in a position where like you're going to have, you have to push them to go seek a health care provider because of that fear*" SP should work towards improving trust in the healthcare system through there interactions with their clients. One SP stated that one way this can be done is by being culturally humble: "*Very difficult because it's doable, its 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.*"
2. Information and Messaging Examples	Information is important for people to make informed decisions about vaccinations. During the pandemic, the following issues about COVID-19 information were expressed by the ACB community members, service providers and the general public, i) vaccine information and accuracy, ii) misinformation, and iii) too much information to effectively process. It was recommended that messaging should be more concise, relevant to key elements of COVID-19 prevention efforts. COVID-19 information was created and disseminated in several formats, including posters, flyer, text messages, social media, e-pamphlets, hosting in-person and virtual information sessions, websites etc. A main consideration was that the information needed to reach its intended audience. Many SPs also stated that their organizations provided materials in multiple languages. Here is an example of an SP used a liaison to provide accurate information: "*Yeah, we wanted to make sure that all of the information that we were giving, it was approved and it was reliable...We actually had a liaison...our go-to person so that if we had questions we could go to that person, or if we had to give suggestions...*" Having information in a client's own language was also found to be helpful in accessibility and understanding of the information. One SP stated: "*We have the ability on our website to translate most of the COVID stuff to pretty much any language that Google Translate will have. Google Translate isn't ideal but having a button that you can press to get it immediately in Arabic or you know, Mandarin or whatever is helpful.*"

2. Information and Messaging Examples **(continued)**	Initiatives to reach ACB community members included leaving flyers with churches and mosques and leaving information at the person's door. One SP stated: "*We've created things we can leave at the door if you're not home or you're not really engaging, in multiple languages.*" Information provided not only informed about the COVID-19 vaccine, but also the location of vaccination sites, thus helping to improve accessibility. One SP stated: "*We were actually giving out door handles with the closest location of the testing site. And with a map and it was in four different languages, English, French, Arabic and Somali because that was predominantly the languages in our community*" Although some SPs stated that their organizations used cultural messages, others stated it was not very often, and again others said there was none. One SP stated: "*The marginalized vulnerable communities are the most… they are suffering the most because they are not… they don't see themselves on the posters. They aren't on the television on the channel, like the… you know, they're on language, culture, tradition, religious beliefs, all these things are… there's so many different barriers so they're really being left*" Another SP stated: "*my unit is not culturally… there's nothing that is like put aside that we can do for minority.*"
3. Communication Approaches Examples **Sub-themes:** **-Initiating conversations about the vaccine** **-Building trust & rapport** **-Addressing concerns** **-Language**	The communication approaches had several subthemes based on the study findings. The subthemes are: i) initiating conversations about the vaccine, ii) building trust and rapport, iii) addressing concerns, and iv) language. Communication was manifested in two ways: 1) how the SP is received by their client and 2) how the client engages with the SP. **Communication approaches sub-theme 1: initiating conversations about the vaccine:** One SP explains how rapport can be achieved even in a busy clinical setting by multitasking: "*I make a point of it. And it doesn't have to be … sitting down at the bedside for half an hour chatting with them…You can kind of integrate some of that in your practice…it's all about multitasking… so as I'm doing the blood pressure, I'll ask, 'Oh, are you from Ottawa originally? Where are you, you know, where are you from?' 'Oh no, I'm from, you know.' 'Oh, you're kidding. Oh, I was there last summer,' you know, whatever, right… a little chat… that's really important because that's a person in that bed… and I think that mind body connect is really important … it doesn't have to take a long time.*"

3. Communication Approaches Examples **Sub-themes:** **-Initiating conversations about the vaccine** **-Building trust & rapport** **-Addressing concerns** **-Language** **(continued)**	One SP described electronic prompts to ask the client about their vaccination status, as being helpful: "*I think that has been quite effective, making it in place or making it as part of the whole general health promotion and that way people are not as turned off by it as they would be if for instance, we just, a session geared towards vaccination by itself*" Despite the initiation of vaccination conversations being generic, it is important to give the clients choices about having the discussion, as one SP described. Despite the initiation of vaccination conversations being generic, it is important to give the clients choices about having the discussion, as one SP described: "*I ask just generically, so have you been vaccinated for COVID? And then sometimes they will say no I haven't. And then at that point, I give them the option, would you like to discuss this now? Because most times, I find it's helpful when they feel like they have a choice. And so rather than just go right into it and give them all the reasons why they should be vaccinated, 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.*" Not having communication strategies geared towards ACB people may be ineffective, as one SP described how it was the ACB frontline workers that showed the most negative impacts, such as job loss for not getting vaccinated: "*We do not have specific communication strategy with this community but as I said, 99.9% of frontline staff are people like in the ACB communities…do I feel this is effective, somehow, maybe not.*" **Communication approaches sub-theme 2:,: building trust and rapport** Communications reflect the client's needs, so it is important to first listen to the client and understand any concerns they may have. The conversations should be non- judgmental and take place in an open and comfortable setting. Using narratives about SP's personal experiences was also found to be helpful: "*you had to really also learn to be a really good listener and be respectful because everybody's going to have differing opinions".* Being genuine about yourself as a SP helps build trust with clients. Having a relaxed informal engagement with the addition of humor also helps build trust:

3. Communication Approaches Examples

Sub-themes:

-Initiating conversations about the vaccine

-Building trust & rapport

-Addressing concerns

-Language

(continued)

"*There's an informality that I like to use as a tactic to bring in, to build on the trust for my clients -asking them more, not personalized questions but coming from a space where I'm also trying to just get to know them rather than thinking that I already know who they are but getting them to build and describe their own identities by themselves. And from there kind of just working with that. I like to use a lot of humour as well…Helps them feel more relaxed…I don't always start with a pressing issue that they might …be having.*"

It is important to acknowledge clients' concerns while providing them with the information they need to make an informed decision. One SP stated:

"*My approach is always to hear them out and why they have that mistrust and acknowledging that they have a point and I know where it's coming from. But then also, showing them that we also live in a society where we have to kind of learn what's going on around us.*"

It is also important to acknowledge what is known and remains unknown, especially given the novel and changing nature of COVID-19; being open and transparent in conversations is important for building trust. One SP described how being open about what is currently known helped clients be more receptive to change:

"*They are adults and so they do understand that this is something new, and so I always frame it as, 'and so at this point', or 'at this time' these are the recommendations based on the available evidence we have.*"

Communication approaches sub-theme 3:: addressing concern

Health literacy to a crucial factor to increase one's ability to make informed decisions. Having discussion with SPs is an opportunity for patients to gain access to more health information.

One SP stated:

"*People did want to know more about the vaccine, how it was developed, how it was safe, why. There were a lot of questions around that. So, yes, health literacy was a big piece. How it's going to affect me, you know, yes you can take it if your pregnant. It's not going to lead to infertility…these were the kinds of questions that we would have conversations about to help raise health literacy. We still have those conversations.*"

Concerns cannot be addressed without understanding them within the clients' context. For example, one SP describes how concerns of vaccine side effects could impact their clients' daily life and how practical solutions could be provided to support their needs:

3. Communication Approaches Examples

Sub-themes:

-Initiating conversations about the vaccine

-Building trust & rapport

-Addressing concerns

-Language

(continued)

"*I'm a single mom with three kids, I can't afford to be sick after getting the vaccine shot, I've got to feed my kids… it's possible, you could have side effects from the vaccine. It's not common. But you know, we are seeing it…So what can we do to help you with that? Can we give you some food? Can we prepackage lunches for you? Like for your kids, not that you can't do it, do you have a neighbour or a friend that could baby sit? Can we give you some babysitting money so that you can be unwell for 24 hours? So the concerned people were all about connecting to the information from a trusted resource with their practical supports they needed to be able to take that step" AVA-SP-007*

Other SPs described how they provide rationales for getting vaccinated or the consequences of not getting vaccinated. One SP stated the consequences when COVID-19 vaccination was mandatory for work and travel:

"*Mentioning how much income disparity and not taking the vaccine could bring on how it could increase poverty, especially at the time when they are not vaccinated, you can't work, you can't travel, you couldn't do anything. So, that was a lot of what I was doing, for those that didn't want. Like why do you want to… as somebody from ACB community who already have limitations around racism, around their lived experience, around ACB, why do you want to have additional limitation around not being vaccinated and not being qualified to work or to travel even.*"

Communication approaches sub-theme 4:: language

Although language can be a barrier to communication several initiatives have helped including having diverse staff that speak multiple languages, having translation services, and having family members translate. One SP describes how rapport can be built in an acute care setting even when a translator isn't available:

"*I think there's universal languages, right. Like smiling and, I don't know. I use touch a lot… like holding the hand and, you know. So that goes a long way and I think just, if I, you know, if it's cool in the, in the unit I might bring a warm blanket and kind of tuck them in, make them nice and cozy. And so things like that where people feel that they're care for.*"

Language includes cultural nuances and goes beyond the words spoken. One SP describes how the lack of training in culturally sensitive language can negatively impact ACB clients. SPs must also be cognizant of how they speak to and about their clients, including awareness of microaggressions:

"*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. And that's a blanket, that covers also in this respect. So, with ACB community inclusive we are expected to listen to them. 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, they are marked as being difficult. If their request is around… they want to check the treatment that we are offering them, but they are requesting for some other accommodation that they value. Maybe their religion or culture, then we see them as being difficult. So I see that a lot.*"

3. Communication Approaches Examples **Sub-themes:** **-Initiating conversations about the vaccine** **-Building trust & rapport** **-Addressing concerns** **-Language** **(continued)**	Religion has a large role within the culture of ACB people in general, yet having these conversations in a healthcare setting can seem inappropriate and is therefore limiting to understanding the concerns of their clients. One SP stated: "*There's always that tendency for them to tell you, I don't need the vaccine, God will save me. And for some people, that was... 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. And so finding that the one thing which they held dear, which was their religion, was not, was just shoved under the rug, and under the carpet, 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.*"
4. SP Challenges & Support **Sub-themes:** **-New and Challenging information** **-Proposed SP Training**	In the Service Provider Challenges and Support theme, two new sub-themes emerged fromthe data: i) new and challenging information, and ii) Proposed SP Training. These examples are highlighted below **Challenges & Support sub-theme 1: New and Challenging Information** Due to the novelty of the situation information was changing and could be confusing. New and changing information created challenging conversations with clients: "*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. But it's definitely challenging when patients come in and you're telling them something new that, oh I thought you meant, I thought you said 'one dose will be effective. Oh now we need two doses, oh now we need a booster dose.' So it's, it definitely makes for challenging conversations*" Some SPs felt that there was too much information to effectively process, especially given their busy schedules. One SP stated: "*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, in emails, you know, possibly, possibly. And 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 and I won't say COVID fatigue. I mean I think it's fatigue from nursing shortage, from this and that. So yeah, I mean how up to date am I and how much am I seeking, you know, new information*" New and changing information, not only increased the work and stress of SPs but also impacted the ability to keep the community up to date. One SP stated:

4. SP Challenges & Support **Sub-themes:** **-New and Challenging information** **-Proposed SP Training** **(continued)**	*"The provincial guidelines changing every week… I was working in crisis every day. Not only were… who can get vaccinated changing like by day, but where can I actually vaccinate my clients. Where can I take them? Where can I make it accessible for them to go? That message was changing like every hour to the hour,…So, 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. ..So, extremely challenging."* Some workplaces created summaries or videos for SPs with an additional information sheet, so that information could be mobilize more quickly, while other SPs were expected to find their own information. Other methods by which SPs were informed included being provided key messages, having weekly emails, being provided information by their director and reviewing the public health website. SPs also relied on each other: *"If you didn't have an answer we then sought out that information from a nurse, or a physician or whoever was with us"* *"Working as a team, right. They go over and, you know, you've got a rapport with some of the regular doctors on the unit and, yeah, I mean they might consult one of those that, you know, was, you know, that's liked, or you know. They knew would be open to taking a few minutes with them."* *"So it's evidence-based, we had Public Health nurses come in and talk to us. Like it had to be current and Public Health based"* Learning from ACB community members including resident leaders and ambassadors was also important to learn the people's needs. One SP stated: *"We have continually invested in our community ambassador and resident leader PENs process of really learning from them what works, like where do you go, why are you believing this and you know, so really that two-way communication around okay, this is what we think we need to do, do we need to create more magnets, but what do you think, what are you hearing? What's happening in the community?"* **SP Challenges & Support sub-theme 2: Proposed SP Training** For many the pandemic brought to light the mistrust that was felt by ACB populations. One SP stated: *"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. You know, these are very problematic in some people's lives, for very good reason."*

4. SP Challenges & Support **Sub-themes:** **-New and Challenging information** **-Proposed SP Training** **(continued)**	Although some SP stated that they did not feel the need for additional training to improve vaccine uptake in ACB communities, many did feel that there was a need. Suggested training included Afrocentric knowledge, how to navigate religious and faith based conversations regarding vaccines, self- awareness and reflection training to help with discussions with people with opposing views, understanding the impacts of color blind approaches, cultural sensitivity, anti-racism and racial equity training, better understanding of the barriers and realities of vaccine uptake by ACB people, conflict resolution, training in medical jargon for non-medical SPs to better understand terminology used regarding vaccines, more training on the social media that is impactful to ACB communities, and practical training such as how to set up a vaccination site and information on relevant policies. For example, one SP described the need to learn more about why people choose not to get vaccinated: "*I think there is room for us to learn more about why people choose not to take a vaccine. I think we're doing a very good job about disseminating information about the vaccines but …I think we're not really understanding the reasons behind people's decisions… is room for us to better understand why people are making the decisions they are making despite having the information about the vaccines.*" Another SP described the importance of understanding the impacts of a color-blind approach: "*I know that Canada, especially in Canada, it's well documented that the approach of service providers, especially healthcare service providers have been a colour-blind approach. You know, I mean, in certain ways it worked, but now we're beginning to find more and more that it doesn't always work. Sometimes you need to implement some type of approach that's more relevant to the population that you're trying to reach. So if we can get more training on that, that would be great.*" The need for Afrocentric training was described by one SP: "*There has been a lot of situations like that, you know where generally you see members of ACB community, they go to the hospital… when it's acute, because the level of treatment is perceived differently … Even assessment of pain and the, you know, the prognosis model is Eurocentric. So, it doesn't give the same thing to Blacks, so it's a challenge…opportunities for healthcare workers or institutions to get training around Afrocentric lens of healthcare.*" SPs also need to be mindful of their own biases and reactivities. One SP stated: "*I need to be aware of myself. Self awareness, mindfulness, self-regulation, learning how to stay calm, stay present. People escalate, they get upset, they get afraid. So I need to calm myself down and not react to that and blame the client. But there's a lot of blaming the client that goes on, right?*"
5. Community Empowerment	The community empowerment theme was analyzed in three layers of the SEM: structural, organizational, and interpersonal. For the organizational layer, several sub-themes emerged: i) partners and messengers, ii) community outreach, iii) dedicated paces, iv) access, and v) initiatives

5.a) Community Empowerment – Structural Examples	Here are some examples of what we heard under the Community Empowerment theme from the Structural layer of the SEM: One SP stated that government officials should engage more with the ACB community, not only to gain a better understanding of their needs, but also to highlight their importance: "it's like sending the system to Mayor, but not the Mayor themselves. Does that mean that you're not good enough for my community? To come and speak to people." The Mayor should meet with SP and leaders within ACB communities. One SP stated: "*I really dream about and I've yet to meet the new Mayor. But that's something I will probably want to encourage for purposes of our city and for the future. We don't know what else comes up.*" Improve infrastructure with a centralized location for information and resources that is rooted within Black communities, as one SP stated: "*Have a centralized place that is recognized by the city or is kind of a creation of the city and everybody knows that is the go-to place and those people then have roots within the Black community. They know who the Black leaders are. They know where to get what. That makes work, would make work a lot easier in terms for the Black people, in terms of they having a place that they know they can channel their grievances to the city and the city they know they can always reach out if they have services and interventions or communication for the Black community.*" Diversity within organizations not only helps to strengthen socioeconomic factors related to equity in employment, but also strengthens the ability to adequately serve ACB clients and communities. Here are some examples of community empowerment from the organizational layer of the SEM. It is important to have people from their own communities being part of the conversation, which also helps to build trust. One SP stated: "*They weren't going to go sign up and head on down to Public Health and go get the shot. It wasn't going to happen…And you have the people who know the community, who already can have a foot in. There's trust because you can get the door open.. But Arabic goes to Arabic. Somalian to… you know, you have to have everybody to be able to get into these communities.*" Peer navigators/ambassadors and community/resident leaders were helpful in creating a link between organizations and communities. They were able to relay the information from organizations to the community and relay the needs and concerns of ACB people back to the organizations. One SP stated: "*as part of the high priority neighbourhood work…we have sought out, found, recruited, and trained community ambassadors and resident leaders to be able to connect with and share good Public Health information with members of the ACB community.*"

5.b) Community Empowerment – Organizational Examples	Diversity within organizations not only helps to strengthen socioeconomic factors related to equity in employment, but also strengthens the ability to adequately serve ACB clients and communities. Here are some examples of Community Empowerment from the organizational layer of the SEM . It is important to have people from their own communities being part of the conversation, which also helps to build trust. One SP stated: "*they weren't going to go sign up and head on down to Public Health and go get the shot. It wasn't going to happen…And you have the people who know the community, who already can have a foot in. There's trust because you can get the door open.. But Arabic goes to Arabic. Somalian to… you know, you have to have everybody to be able to get into these communities.*" Peer navigators/ambassadors and community/resident leaders were helpful in creating a link between organizations and communities. They were able to relay the information from organizations to the community and relay the needs and concerns of ACB people back to the organizations. One SP stated: "*as part of the high priority neighbourhood work…we have sought out, found, recruited, and trained community ambassadors and resident leaders to be able to connect with and share good Public Health information with members of the ACB community.*" Organizations have also sought to pool resources and collaborate with other organizations to help strengthen ACB communities. **Community Empowerment – Organizational SEM Layer sub-theme 1: Partners and messengers** Another important initiative to help reduce barriers and improve accessibility, promotion, and outreach was partnering with other organizations. One SP stated: "*we, me and my colleague 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, trying as much as possible to be part of whatever programming they had and also making sure that our information is shared within them. Some responded. Some didn't. Some are lasting collaborations. Some were short ones.*" Partners helped to pull together resources to help remove barriers and address the needs of ACB people. One SP stated, "*partners were really creative, not only having them close but sometimes it was getting a bus and bringing people and trying to figure out all those solutions for transportation. Because people might be, well I'm at home with my kids, I've got them and they're online, in school. Like how am I going to get there with my kids? Well, okay, we're going to help look after child… so we really were open to say what are your barriers and how can we help with that. If it's having you know, supporting childcare, transportation, like what can we do? Can we come to you? In some cases we were bringing the vaccine to people. Like in the case of seniors or people that had mobility issues. So partners were really trying to be flexible to meet the needs of people and each person was different.*"

5.b) Community Empowerment – Organizational Examples

(continued)

Community Empowerment – Organizational SEM
Layer sub-theme 2: Community outreach

Community outreach, including going door to door and holding community events such as townhalls and question and answer sessions were also important initiatives in helping to empower ACB communities by addressing concerns with evidenced based material and knowledgeable professionals.

Going to communities also helped build trust and rapport. One SP described the importance of casually meeting and talking with ACB people:

"*We also tend to meet them where they gather, like in their casual meetings, these can be country specific meetings, or place of worships, to make our approach more cultural, and even to bring the vaccine in their, the way they prefer, where they spend most their time…maybe a gathering, maybe a reception that's more… meeting, dancing, so we tend to try and go and reach them where they meet. Not only to give vaccine, but also to chat with them.*"

Community Empowerment – Organizational SEM
Layer sub-theme 3: Dedicated spaces

Having specific spaces for ACB people to meet in a relaxed atmosphere about the challenges they have faced was also found to be helpful. One SP stated:

"*I strongly believe just having that space to just feel relaxed and be able to talk about what you're facing, if you feel like it, is helpful. I think it helped a lot in this case.*"

Another SP talked about how a comfortable space helps ACB people share their feelings without the concern that they will be told they are wrong:

"*if you're not in a space where you feel comfortable to discuss your personal feelings, what your views, things like that, then it's going to be hard to convince people. Right? Because if someone can tell you right off the bat that you are wrong, well how do I know you're right?*"

Community Empowerment – Organizational SEM
Layer sub-theme 4: Vaccine Access

Vaccine access was a determining factor in the ability for ACB people to get a COVID-19 vaccine. Efforts were made when the vaccine rollout began, and supplies were low to prioritize neighborhoods that were the most in need and experiencing the most illness:

"*we have …an understanding of our neighbourhoods and where they rank with respect to equity and distribution of wealth. So we know that we have neighborhoods that are much more disadvantaged than others. And so we looked both demographically but also where people live which is a nice proxy for the communities that are there as well. And so we knew that when we had vaccine that we had to make sure that we weren't just having a universal roll out of vaccine, that we were improving access to vaccine to the communities who actually needed it the most, who are experiencing the most illness.*"

5.b) Community Empowerment – Organizational Examples

(continued)

Expanding clinic hours

Efforts were also made so that times when vaccination were available did not conflict with work. In addition, there were initiatives to educate employers about giving people time off from work to get vaccinated, which was also helpful. One SP stated:

We didn't want them to be penalized that they had to take time off work to get vaccinated. So we tried to schedule hours that would compensate for that, people who work shifts and that type of thing. And that did increase uptake, I know that."

For those who did have conflicts with their schedule that made vaccination difficult, some organizations had initiatives to address these barriers. One SP stated:

"*if someone will say, you know, "I want to get vaccinated but I'm working fulltime, like how can I make that happen?" We're like, "Okay, 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.*"

More flexibility to access vaccine clinics

Despite efforts to increase the hours that clinics were open, there needed to be more consideration to the communities and their routines to increase availability to them. One SP stated:

"*you're opening clinics from 8:00 to 5:00. My clients work midnight to 8:00. Right, they need to sleep. Right? Then they have children and childcare and they need transportation. Right? So, all these barriers that we illicit and create*"

There were also issues with booking the vaccine and giving short notice for appointments, especially at the beginning of the vaccine roll out. One SP stated:

"*I think that whoever is holding the mandate of the vaccines has to come up with a better way to make it accessible for everyone. I don't think it's as accessible as they seem to believe it is… It is difficult*"

Furthermore, an SP expressed concerns about inaccessibility caused by the electronic booking system and those who could potentially have difficulty such as the elderly, those with cognitive decline or due to language barriers:

"*you have any type of cognitive impairment, any dementia, it's almost impossible. So we're talking the most vulnerable people and difficulty access to it. Or the languages, right? I don't, I understand we have two official languages in the country, but we typically always offer the alternative of other languages… I don't think I ever, ever saw anyone offer a conversation… in their own language.*"

The vaccine was also not easily accessible for patients in the hospital. One SP described the process:

"*If someone requested it, I think it was only available two days a week and, and then it always seemed like it was a process to contact pharmacy and get it and then we had to make sure that the request was put in 24 hours before and then, you know, we weren't sure if the patient was still going to be an inpatient and so we never made it easy for the patient to get a vaccine*"

5.b) Community Empowerment – Organizational Examples **(continued)**	**Community Empowerment – Organizational SEM Layer sub-theme 5: Initiatives** Efforts to reduce barriers could be improved with more initiatives to match those with the funds and resources to ACB people that are in need. In addition, there should be more cooperation of programs, more infrastructure, and better preparations for when emergency situations may occur. Funding within organizations is also a barrier, not only because funding is limited, but also because it can become the focus of projects as one SP described: "*What has happened in the past is like you have budgets assigned, like you 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.*" Another barrier was that some community leaders have not been easy to reach. One SP describes the efforts to engage some spiritual leaders in the ACB community: "*I wish I could approach the spiritual leaders but that has been very difficult. Working with people they trust, and these are spiritual leaders, that, if that happened it would have a big impact. But we have tried, and again, because we have to be neutral, it has been… we haven't done much on that side… Because let's say in general, so many Christian leaders, not the majority but a big part of the Christian faith leaders have been anti-vaccine.*" In addition, another SP described how incentives to get vaccinated failed because they must be voluntary to help establish trust: "*I used to think incentive would work. You know, if you, for those who take the vaccine we have this gift card from Loblaws, but no, that's a bad idea, because it has to be voluntary".*

5.c) Community Empowerment – Interpersonal Examples	**Interpersonal interactions** SPs can empower ACB people to help each other, such as helping overcome language barriers. One SP described an example: "*You sit by that sister… she speaks Lingala and I know she's not understanding half of what I'm saying, so would you please interpret.' So that is something that excites the community.*" Community empowerment can also be increased by ACB SPs acting as role models and being out in the community and being ready to make changes, which can inspire people to be open and intentional about what they want. One SP stated: "*I think it's the boldness and being out and intentional about who we are…we know our worth and we are ready to change the current system. And all those changes that have been happening and those programs that have been created I think is bringing people awareness that we acknowledge that the healthcare system's assistance and we are ready to make that change ourselves.*" SPs have faced their co-workers not understanding the needs of ACB clients. One SP describes their experience: "*But once again it's that fight of why they need, 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* " ACB people empowering and supporting other ACB people helps the community. One SP described how the man in the household may decide for the wife if they can get vaccinated: "*it is like a control issue, it doesn't make any sense for them because they don't have the… they cannot do the decision.*"

OUTCOMES

This study has provided valuable information in the following areas:

- The issues that systemic racism plays on ACB individuals, within the community, among providers and within our healthcare systems. Various strategies have been implemented to mitigate the challenges of racism in order to improve vaccination uptake among ACB community members
- Knowledge gaps among ACB members about COVID-19 vaccines and related issues; service providers' lack of knowledge about ACB communities
- Issues in access to COVID-19 clinics and more culturally appropriate messaging

This study will or has produced the following knowledge products:

- Community Report
- Publications
- Presentations and webinars
- Promotion materials, i.e. pamphlets
- AVA Virtual Action Summit – World Café
- 12 webinars addressing key topics, i.e., critical racial and health literacy, vaccine confidence, working effectively with ACB communities, etc.

DISCUSSION

The AVA study uncovered the underlying factors for low vaccine uptake among ACB people observed from our data sets. Five cross-cutting themes emerged from our study findings: 1) knowledge, 2) racism, 3) communication, 4) access, and 5) agency. The impact of these themes on COVID-19 vaccination rates among ACB people will be discussed in detail below, first by highlighting what was found in the previous literature and seeing if they were consistent with our findings, and then explaining what were some of the unique or new findings from this project.

1. Knowledge

What were the findings from previous literature?

Previous research identified that having accurate knowledge was essential for adopting a range of preventive behaviors during the COVID-19 pandemic.

In our study, most respondents answered correctly to three questions. For example, the ACB Community Members Survey revealed that 80% reported that vaccinated people still needed to worry about COVID-19. Similarly, 85% reported that vaccinated people still needed to use personal protective equipment. These examples show that ACB members who have the right knowledge about COVID-19 vaccines lead to healthier behaviors. Conversely, there were also some knowledge gaps among some ACB members that will be discussed later in this section.

The Health Belief Model (HBM) establishes that risk perceptions can serve as an important factor that influences the adoption of health-related behaviors, including the adoption of COVID-19 vaccination. In other words, the more someone perceives a risk to their health, the more likely they are to take steps to reduce that risk.

In our study, more than one in four respondents (29%) reported that ACB community members have higher risks of COVID-19 infections compared to others. Similarly, 25% also reported that ACB community members have higher risks of adverse reactions from COVID-19 vaccination.

In addition, from other research studies, misinformation about COVID-19 vaccines played a key role in whether or not ACB people got vaccinated. Misinformation can be confused with disinformation, however, they are different yet similar concepts which can impact vaccine uptake[26]. Misinformation is wrong information released without any intentions to cause harm, while disinformation is wrong information released to counter factual information and cause harm[4,26].

Troiano's study pointed some results from their review, one of which was that Black women who had lower levels of education were less likely to accept a vaccine[22]. This can be tied to their increased susceptibility to believe misinformation. Troiano's findings can be backed with findings from a Cenat et al.[23] study where women with secondary education or less were more likely to be unwilling to get vaccinated. This in turns affects public trust in science and vaccination in general. In our study, about half of respondents (47%) claimed that ACB community members have lower trust in COVID-19 vaccination compared to others.

Moreover, in our case, misinformation was shown to prevent getting accurate knowledge about COVID-19 vaccines. Our findings showed that predominantly used social media platforms such as WhatsApp were used to disseminate misinformation. Furthermore, the presence of misinformation on social media was a predictor for the belief that vaccines were unsafe, and the prevalence of foreign disinformation was a statistically significant predictor for vaccination coverage dropping over time[27].

Regarding knowledge gaps, about half of respondents (52%) reported that a lack of clinical evidence was a major concern for receiving a COVID-19 vaccine. Overall, our study highlighted that receiving accurate information about the COVID-19 pandemic and vaccination is fundamental for adopting preventive behaviors. We will discuss this further in the next section.

What were our unique study findings?

Our study showed that service providers (SPs) play an important role in promoting the uptake of COVID-19 vaccination. The COVID-19 pandemic revealed the significant health inequities facing ACB communities as it pertains to income, housing, healthcare access, and food security. Service providers acknowledged that there are challenges in communicating with ACB people due to their lack of knowledge about the intricacies the communities face daily. Specifically, from the SP survey, 43% felt uncomfortable addressing the topic of getting a COVID-19 vaccine when a client was reluctant to do so. Despite this challenge, 81% reported that they would like to have additional communication training.

During the focus group discussions, there were knowledge gaps that emerged from service providers' belief about the vaccine's ability to provide protection, and the cause of COVID-19. This lack of knowledge led service providers to become skeptical of the COVID-19 vaccine's protection, its manufacturing process, and its link to mortality. Conversely, receiving accurate information had a positive effect with one service provider who made the decision to become vaccinated after speaking with another colleague about the nature and benefits of the vaccine.

The main knowledge gap SPs expressed during the in-depth interviews was cultural competency.

Our findings showed that SPs experienced their co-workers not exhibiting these necessary skills in practice. For example, their co-workers were not understanding why they would take more time to speak with their ACB clients who were reluctant to be vaccinated. In addition, despite the desire for further training, many SPs already found it difficult to remain up to date on the new and changing COVID-19 information, despite efforts to learn about it on their own.

Beyond the scope of cultural competency is the principle and practice of cultural humility. Our findings showed that being culturally humble is important when SPs are serving the needs of their ACB clients. In addition, it was found to be beneficial for SPs to practice self-reflection activities to better serve the needs of their clients. Reflective practices greatly improves healthcare provider skills[24].

Additionally, Curtis et al.[25] propose going beyond cultural competency to cultural safety and critical consciousness to achieve health equity, which includes critiquing power structures and challenging personal biases, privilege and cultures. In that light, critical racial literacy (CRL) could help provide people with the tools to dismantle racialized hierarchies with the goal of empowering individuals and communities through providing contextual knowledge on health inequities, the SDOH, cultural competencies, racism, community engagement, advocacy, health policies and self advocacy[7].

Finally, on the topic of filling knowledge gaps, similar to the Focus Group Discussions (FGDs), receiving positive information about COVID-19 can have a positive impact. In-Depth Interview (IDI) findings showed that the SPs who were most informed about COVID-19 vaccines were the ones that received support from within the workplace.

There were several initiatives to help SPs quickly process new and changing COVID-19 related information. For example, some workplaces provided a synopsis of key information via short videos, meetings, and regular emails.

Knowledge about the needs of ACB communities was also gained by some organizations through resident leaders and community ambassadors. The peer-led community mobilization initiative, the Peer Equity Navigation program (PENs), is an example of an intervention that can engage hard-to-reach areas within ACB communities using an intersectionality lens[28]; the use of community ambassadors and vaccination engagement teams was shown to have a positive impact on equity deserving communities as they directly provided vaccine-related information, resources, and access[29].

2. Racism

What were the findings from previous literature?

According to the American Psychological Association (APA), racism can be defined as "a form of prejudice that assumes that the members of racial categories have distinctive characteristics and that these differences result in some racial groups being inferior"[30].

Racism operates at various levels within our society – individually, interpersonally, and structurally. Within the context of low vaccine uptake among ACB people, previous studies have shown that structural racism eroded trust in vaccination among ACB people.

For instance, the Eissa et al.[19] study suggests that the lack of Afrocentric healthcare could be a form of institutional/structural racism at work, since a lack of this form of health care impedes ACB peoples' access to services like vaccination[31].

In addition, racism at the interpersonal level can negatively impact the relationship among service providers and patients and reduce their health outcomes. This can be manifested in many ways, such as healthcare providers making assumptions about ACB peoples' knowledge of vaccines or vaccination, dismissing questions or concerns people might have about the vaccine based on their distrust for the healthcare system, and others[32]. In the McClure et al.[33] study, it was pointed out that about half of the physicians in the study reported that their jobs were less satisfying because they had to explain the importance of vaccination to vaccine hesitant patients.

The WHO recommends that people get vaccinated against COVID-19. Largely consistent with this recommendation, 75% of our ACB Community survey respondents had the opinion that unvaccinated individuals had the highest risk of infection. However, despite this belief, about one in ten respondents (9%) did not receive any COVID-19 vaccination dose, while half of respondents (48%) were willing to get vaccinated in the future. Vaccine hesitancy remains rampant within ACB communities for many reasons, and systemic racism appears to be key factor in these low rates.

What were our unique study findings?

Previous studies indicate that ACB community members are often exposed to unique barriers in the context of COVID-19 pandemic – experiencing racism at different levels being one of them.

Consistently, the majority of service providers reported that their ACB clients commonly reported these barriers. For example, 68% of respondents from the ACB SP survey report stated that their clients told them that they distrust the system due to systemic racism. In addition, 70% reported that their clients told them that they distrust the system due to previous mistreatment from health care services. In response to these reactions from their clients, more than four in five SPs (81%) reported that systemic racism was a reason for low vaccination rates in ACB communities.

It has been identified that COVID-19 infections can have severe consequences, particularly among vulnerable populations. From the perspective of SPs, this pattern seems to extend to members of ACB communities.

For example, 71% of SPs reported that ACB persons were at a higher risk for becoming infected with COVD-19 than non-ACB persons. Similarly, 74% reported that ACB persons were more likely than non-ACB persons to have worse outcomes from COVID-19.

Despite these heightened risks, the majority of SPs perceived that vaccination uptake remained low among ACB people. For example, 83% reported that ACB community members have a low rate of vaccine uptake. In addition, 93% believed that they should intervene by improving vaccination rates in communities with low uptake.

In addition to our surveys, our findings from the FGDs and IDIs aligns with the literature, in that ACB members raised concerns about mistrust with the COVID-19 government mandated vaccination program.

In their effort to protect the population from COVID-19 and its deadly impact, many government agencies failed to address the fears and concerns of ACB people which led to many losing their jobs;

thus further impacting a community already disproportionately affected by the pandemic.

In addition, it was found that vaccine mandates raised concerns about furthering mistrust of the healthcare system, since ACB people who received the COVID-19 vaccination through mandates rather than based on their own beliefs, may have had their feelings of being treated unfairly by the healthcare and government systems strengthened.

In a news article by Osman34, Dr. McKenzie, CEO of policy think tank Wellesley Institute, stated, "I am not 100 per cent convinced that we have done all of the work we needed to do to ensure that the vaccine mandates were not discriminatory".

Although a lack of race-based data continues to be an issue for determining the extent of the impact of vaccine mandates on ACB people, acknowledging fears and concerns based on historical and current experiences of ACB people could have been considered to contemplate and address its impacts.

Furthermore, it is important to note that framing the issue as Black people having COVID-19 vaccine hesitancy due to their mistrust in the government and healthcare systems is problematic, in that it suggests that that Black people are the problem35. The issue should instead be reframed to ask if healthcare and government systems are trustworthy, and how they can improve their relationship with communities of color.

3. Communication

What were the findings from previous literature?

Communication can be used as a tool to curb low vaccine uptake in ACB communities, but it could also be a reason for low uptake if done the wrong way[19]. Eissa et al.[19] suggested some strategies to improve vaccine communications with ACB people. They highlight that communication combined with support could help increase vaccine uptake. In more detail, the study suggested an Afrocentric communication framework called LEAPS be used, where healthcare providers listen and learn about ACB peoples' experiences, engage and empower patients, ask and acknowledge their fears or concerns, paraphrase and provide vaccine information, and support and spark community engagement.

Adeagbo et al.'s[32] review paper pointed out a study by Fox and Choi which showed that, although racial discrimination was acknowledged, vaccine uptake did not improve. The paper also highlighted how six studies utilized culturally inclusive communication strategies by informing their educational materials with the voices of religious leaders, experts, community members and peers, which was important in increasing the rate of vaccine uptake in the ACB community.

Moreover, there are barriers to good communication, like language, and existence of diverse cultures in ACB communities and healthcare providers[32]. Kemei et al.'s[18] study illustrated that participants complained about poor communication to the ACB community with regards to COVID-19 information. One participant stated that the statements made from health authorities were confusing and they came with many inconsistencies. On the other hand, similar to Adeagbo's study, a participant from Kemei's study highlighted the lack of culturally sensitive communication, while another made a comment that the information was communicated a heavily scientific manner[18].

What were our unique study findings?

There are a variety of media channels to receive information about COVID-19 vaccination. In our ACB Community Members Survey, government reports (33%) were the most common source of COVID-19 vaccination information followed by news outlets (32%), social media (17%), family and friends (13%), and other (6%). Looking at each channel closely, we find that 56%, 41%, and 29% of respondents reported that government reports, family and friends, and social media were trusted sources of information about COVID-19 vaccination, respectively.

In response to these communications challenges experienced by ACB clients, SPs adopted innovative approaches to promote COVID-19 vaccination. For example, we found that 74% of SPs had a communication strategy that they used for clients that were concerned. In addition, 70% had different communication strategies based on the client's level of concern about being vaccinated.

SPs from the FGDs offered several innovative communication strategies for health agencies to adopt when engaging with ACB community members:One key tactic is to incorporate a

population-centered approach to engender a genuine care for the community. Additionally, utilizing communication channels already thriving within ACB communities, such as using ACB radio stations within the Ottawa and National Capital region, was suggested.

Several SPs from the IDIs stated that the organizations had limited/no cultural messaging tools or funding.

Limited vaccination messaging contributes to disparities in vaccination rates, with language barriers and lack of culturally targeted educational information impeding its effectiveness[36].

Messaging is closely related to vaccine access, in that if the information is not received or understood, it cannot serve the purpose of supporting evidence-informed decisions necessary for vaccine uptake. For instance, Gates et al.[37] found that it was difficult to evaluate the effectiveness of interventions which aimed to improve health equity related to vaccination based on previous literature; it is therefore important to listen to ACB people consistently and not only in times of crisis.

Our findings showed that several organizations made efforts to reach ACB people through various methods of communication that were found to be widely used within ACB communities. However, it was challenging to gain access to some platforms such as WhatsApp, which further emphasizes the need to establish relationships with gatekeepers within ACB communities, such as trusted community leaders, which can help engage ACB communities in public health campaigns[38].

Educating ACB communities requires being responsive to the ways ACB people will consider and understand the message, such as through trusted sources, including religious leaders, charitable organizations, family, friends, and religious establishments[38].Trusted sources of information influence vaccination motivation, and although trusted voices can be useful in messaging campaigns, genuine collaborations with the integration of community leaders and organizations should be included in the planning and implementation of public health interventions[38].

Furthermore, our findings also showed that community and resident leaders, and partnerships with other ACB-focussed community organizations, contributed to understanding the concerns of ACB people. It is important to understand the concerns within ACB communities so that they can be adequately addressed. Dhanani & Franz[39] wrote that acknowledging past unethical treatment in medical research and emphasizing current preventions and safeguards against mistreatment was significantly associated with less vaccine hesitancy; these effects were not observed related to information on the general safety of the vaccine or the role it played in reducing inequities.

Organizations also used several different types of mediums to communicate, from traditional paper flyers and posters to electronic text messaging and virtual meetings, etc. It is important to bring the message to where people live and congregate[38].

In addition, several organizations also made efforts to translate materials into more than French and English, but also other languages spoken within ACB communities.

Furthermore, they used methods such as liaisons and ACB member consultations to ensure that the messaging was accurate and appropriate for their communities.

Our findings also showed that culturally appropriate messaging, such as being more Afrocentric and including ACB images in visual campaigns, was also believed to be effective in reaching ACB people.

Afrocentricity goes further than including ACB people in graphics and images. It involves SPs placing ACB people at the center of their work, including being respectful and acknowledging concerns through a cultural lens based on values, beliefs, identified barriers, and the impacts of current and historical anti-Black racism.[19] Our findings are consistent with the Cunningham-Erves et al.[40] study which stated that culturally appropriate messaging would increase vaccination rates among African Americans.

In addition, messaging that is culturally and linguistically tailored may improve its reception and promote vaccination in Black and other racialized communities[36]. It is also important to address vaccination concerns within messaging campaigns, and it is therefore necessary to first identify the reasons behind low vaccine uptake in ACB communities. These messages should be tailored to the communities with the acknowledgement that all communities are not the same,[38] and do not necessarily have the same needs.

4. Access

What were findings from the previous literature?

Social inequities impact people's ability to access necessary opportunities or services like health care[18,41]. These inequities are often seen in racialized communities, thus impacting ACB people's access to necessary health care services[18].

The Kemei et al.[18] study explains ACB communities' experiences of access to COVID-19 vaccination and care during the heat of the pandemic. The study highlighted that participants reported experiences of anti-black racism, discrimination, lack of Afrocentric care that hindered their communication and interaction with health care staff and thus their access to COVID-19 information and care. Conversely, these experiences could have enabled other forms of wrong information to be more accessible such as misinformation and disinformation, thus increasing COVID-19 cases[18].

A report by Castillo et al.[42] from The Ottawa Hospital Research Institute highlighted some barriers to accepting COVID-19 vaccination among ACB people in Canada. In the study, some of the main factors that hindered access were ignorance about the importance of the vaccination, and they mentioned that the ignorance stemmed from misinformation and disinformation, just like in the Kemei et al. study.

Another barrier to access they found was anti-Black racism. They pointed out that racism can work in multiple ways to hinder access. For instance, from the provider end, not providing culturally sensitive care to patients, or not responding adequately to the need for vaccines in the ACB community reduced access for the ACB community[42]. Similarly, racism was associated with mistrust of the health system, thereby making ACB people hesitant to receive available care[42].

What are our unique study findings?

The Health Canada Act stipulates that Canadians should have "reasonable access" to insured hospital and doctor services. In this context, it is concerning that 28% of ACB community members reported that it was not easy to receive COVID-19 vaccines in their area.

About three in five respondents (61%) had a perception that it was not easy for ACB people to get vaccinated. A large proportion of respondents to our ACB Community Members Survey believed that the situation can be improved in several important ways. For example, 69% reported that healthcare organizations can better educate people in ACB communities. Similarly, slightly less than half of respondents (48%) did not think that the healthcare system took enough initiatives to inform the communities about vaccination.

SP respondents from our ACB Service Providers Survey acknowledged that communication challenges played a role in limiting access to vaccine information for ACB communities. For instance, only 48% of SPs stated that their workplace used culturally sensitive messaging. This challenge may play a role in ACB members' access to culturally appropriate care. Despite this challenge, 81% of SPs would like to have additional communication training.

SPs from the FGDs provided various strategies for ways that ACB community members can better access COVID-19 vaccines, namely that: healthcare agencies and funders need to be mindful that ACB members exhibit community resilience but often lack the proper resources and encounter insurmountable funding challenges to find proper solutions. It is imperative that ACB interventions are population-centered, acknowledge ACB traditions for healing and restoration, and engage Black leaders to be part of the decision-making which inform the policies that seek to improve ACB health outcomes.

The pandemic brought to light inequities in vaccine acceptance as well as vaccine access; understanding the barriers and facilitators of vaccine access is critical to improving vaccine uptake[43].

The initial vaccine rollout was held in large, centralized vaccination sites with a focus on immunizing as many people as possible. These locations created access barriers, such as a lack of reliable and affordable transportation[39].

Furthermore, despite efforts to accommodate work hours, our findings also showed that the hours of operation for these vaccination sites were not accessible for many ACB people, especially those that did not have traditional work schedules and other responsibilities. In addition, too short notice was often given for appointments and notifications of vaccine availability, particularly during the beginning of vaccine rollout. This made it particularly difficult for those who had family and work obligations to get access to COVID-19 vaccines. Additionally, the COVID-19 vaccine was not easily accessible for hospitalized patients.

The SPs reported that they had concerns about technology-based vaccine access solutions for their clients such as the elderly, people with cognitive decline, and language-based issues, but they also stated they encountered technical issues booking their own vaccination. In addition, poor internet connections could also be time consuming and frustrating[38] and relying on a web-based vaccination booking system is a disadvantage to those in communities with less access to technology[36].

To mitigate these inequities, several initiatives were implemented, including prioritizing neighborhoods that were the most in need during vaccine rollout. Prioritizing those most in need was necessary to improve vaccination rates in Black populations[38]. Furthermore, vaccine clinic hours were extended to try and accommodate people's work schedules, and initiatives to educate employers about the importance of allowing their staff to get vaccinated were also implemented.

After the initial mass immunization campaigns began to wane, more vaccination sites moved into communities. Our findings showed that it was beneficial to go directly into the community, to go door to door to deliver information, have clinics and information hubs right in the communities, and to build relationships within the community through attending events and talking with people. Meeting ACB and other racialized people where they lived and congregated, such as through churches or using mobile clinics was helpful to increase vaccine uptake[36].

There is an ongoing need to continue to make vaccines accessible not only by location, but also through outreach and education to address racial and ethnic gaps[38]. Furthermore, education is not simply providing the information, but also ensuring that it is understood, including how to navigate the complexities within the healthcare system[19].

5. Agency

What were the findings from the previous literature?

Studies have shown that when patients are involved in decision making regarding their healthcare, it leads to better health outcomes[44-46]. This concept is akin to community empowerment in ACB communities. As we discussed earlier under the findings on Racism, institutionalized/structural racism could act as a barrier to receiving health care services, such as vaccine uptake, because it can

prevent the empowerment of ACB peoples[47]. When ACB people do not believe they have a say in their health or healthcare due to experiences of racial discrimination, it could impact their perception of healthcare system[47]. Similarly, as earlier stated under our findings on Communication, empowering ACB communities is in line with the LEAPS initiative which was shown to improve vaccine uptake. Therefore, community empowerment is necessary to increase vaccination uptake.

Empowerment can be achieved by educating community members on the vaccine and effects of the disease, which builds agency through enabling ACB people to make informed decisions about their own health[35]. People in authority, like the state and government, also have a role in empowering people through the laws they make, because these could provide opportunities for ACB people who are more knowledgeable about the vaccine and the disease to help other ACB people[35].

Another way to empower the community, as suggested by Dada et al.[35], is by creating empowered equity task forces who ensure the right information is tailored to the community and aid the community in other ways by providing relief to their basic need, and by empowering already existing community organizations. Empowerment, as seen from a participant's comment in Harris et al's[48] study, could look like ACB people who received the vaccine telling others to get theirs.

What are our unique study findings?

Having access to resources necessary to make informed decisions about healthcare is paramount to exercising agency. Our findings showed that many organizations and SPs did not have messaging tailored to their ACB clients, and this could have helped improve health literacy and increase trust in the vaccine and healthcare system[38].

Our findings showed that several organizations collaborated with ACB community members and partnered with community- based organizations. This is important not only to build trust, but it is also important for racialized community members to identify problems and co-create solutions in order to strengthen community capacity and build agency[7]. Organizational engagement can also help empower community members[38].

In addition, listening to communities' voices and reducing implicit bias can increase trust in the healthcare system[36].

ACB communities need to be included in all aspects of healthcare and to capitalize on strengths in their communities,

such as working with faith leaders and peer-led initiatives like the PENs program to promote empowerment and independence[28].

Finally, our finding showed that some organizations have increased the amount of ACB staff to help increase engagement with ACB communities. Internationally trained professionals also helped in some vaccination clinics, although they remained underutilized. Greater racial and ethnic diversity of health professionals would improve access and quality of healthcare services for ACB people[36].

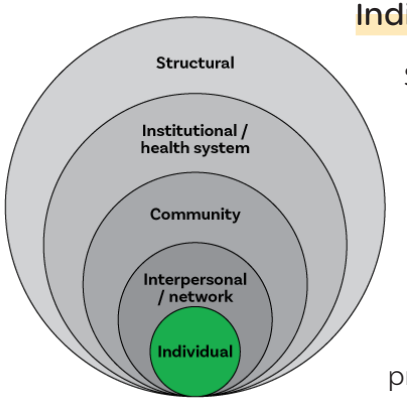
RECOMMENDATIONS

Our key research findings were shared at the AVA Action Summit on February 21, 2023.

The research team hosted a virtual event with 50 project stakeholders that included ACB community members, healthcare leaders, policy-makers, researchers, University of Ottawa faculty members, and faith-based leaders. There were several virtual community tables held to discuss recommendations and action items that are needed to advance the work of increasing COVID-19 vaccination rates among the ACB community.

To address the complex nature of COVID-19 disproportionately impacting ACB communities, our leaders and community members discussed the five key cross-cutting themes (racism, knowledge, communication, access, and agency) with recommendations using the Socio-Ecological Model at various levels (individual, interpersonal relationships, community, and institutional). The following recommendations will utilize this format.

Racism

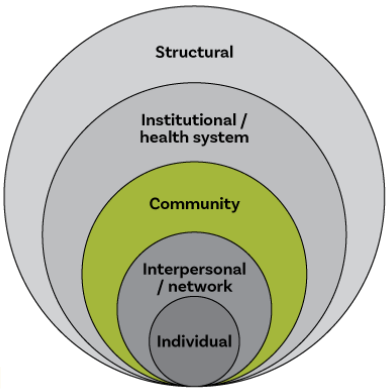


Individual Recommendations

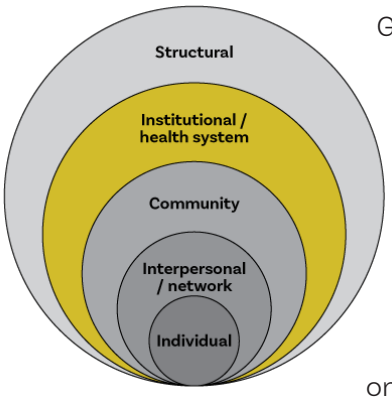
Specifically engaging ACB people to equip them with accurate knowledge about COVID-19 vaccines proved helpful to their adoption of healthy behaviors. Our ACB community members and health leaders at the AVA Action Summit recommended the development of an ACB repository of information that hosts knowledge around vaccine uptake to build on layers of knowledge. There should be deliberate outreach to ACB service providers to manage and evaluate this repository, and funding provided at the federal level.

Community Recommendations

Strengthen ACB community capacity to collect and manage race-based data. This data should be accessible to community members in various formats (print, online) and multiple languages.



Organizational Recommendations



Governmental and health agencies should collaborate with ACB community organizations that can provide advice on better ways to reach the community. An example of this approach is observed at the City of Ottawa where an anti-racism policy is followed.

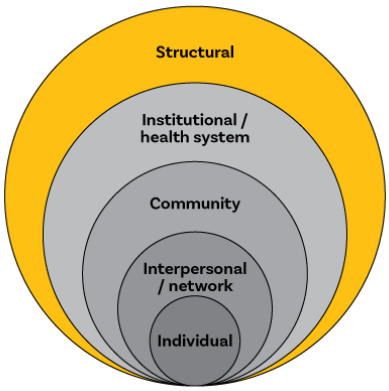
Anti-racism actions should include a multilevel approach including dedicating funding, resources, and supports with policy and organizational interventions; transparent and accountable mechanisms for sustainable change; tailored, mandatory, and ongoing staff education; and meaningful long-term relationships with Black and other racialized communities[49].

Furthermore, addressing inequities requires a focus on structures that create mistrust[38]. Utilizing and supporting community-based participatory research (CBPR) also helps to promote confidence in COVID-19 vaccines as well as equitable access, as barriers could be reduced through funding and structural mechanisms within the healthcare system[38].

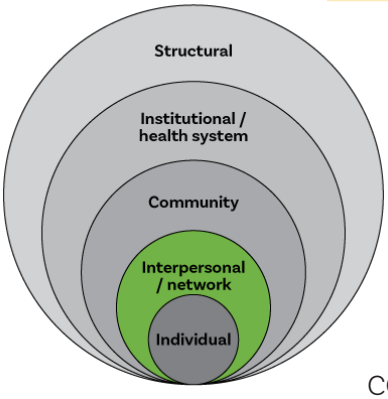
CBPR also strengthens mutual learning between ACB communities and those that provide services to them; by co-constructing knowledge, change is more likely to occur since actions are linked to local context and experiences within the communities while strengthening engagement and meaningful collaborations[28].

Structural Recommendations

Governmental and health agencies should employ ACB people to be leaders within these institutions to advise, manage and build population-focused interventions for the community.



Knowledge



Interpersonal Recommendations

Provide fact sheets and resources for service providers to better understand the experiences of the ACB communities they are caring for. Employ cultural sensitivity frameworks into the knowledge resources.

Community Recommendations

ACB leaders need to empower our communities with various sources for where they can obtain accurate information about COVID-19 vaccines. This will help bust myths circulating in the community with the goal of increase vaccination uptake.

Communication

Individual Recommendations

Encourage proactivity among ACB members to get vaccinated using a peer-led approach similar to the PENs program.

Interpersonal Recommendations

There are several strategies to improve both service provider and patient experience when sharing information regarding COVID-19 vaccines.

For service providers, integrating cultural sensitivity messaging as a part of their mandatory training will empower them with the tools to better engage and respect ACB people.

Utilizing a culturally sensitive approach will help dismantle the power dynamic that exist between service provider and patients to ensure that safe, effective and respectful dialogue can occur between both parties.

Community Recommendations

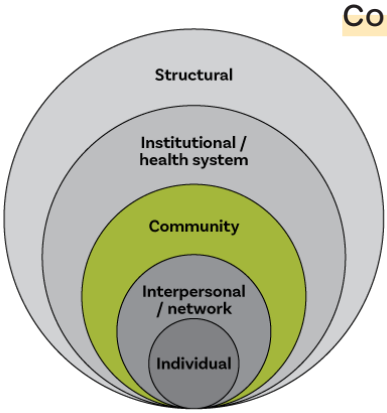
To improve capacity building, there should be an increase in the number of PENs in the community and training modules given. Additionally, PENs should be allowed to work within various health agencies such as Ottawa Public Health to ensure proper communication strategies are led by ACB people. Lastly, there should be more community events to engage different generations of ACB people.

Organizational Recommendations

There should be great efforts made to ensure that knowledge mobilization products reach the community members in formats and languages they can understand.

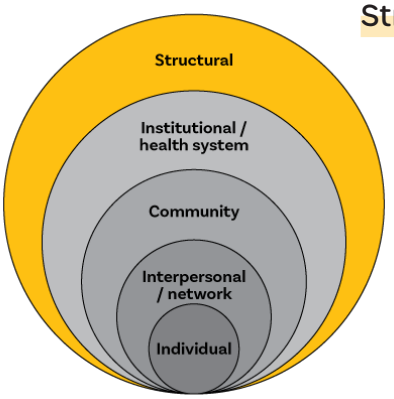
Access & Agency

Community Recommendations

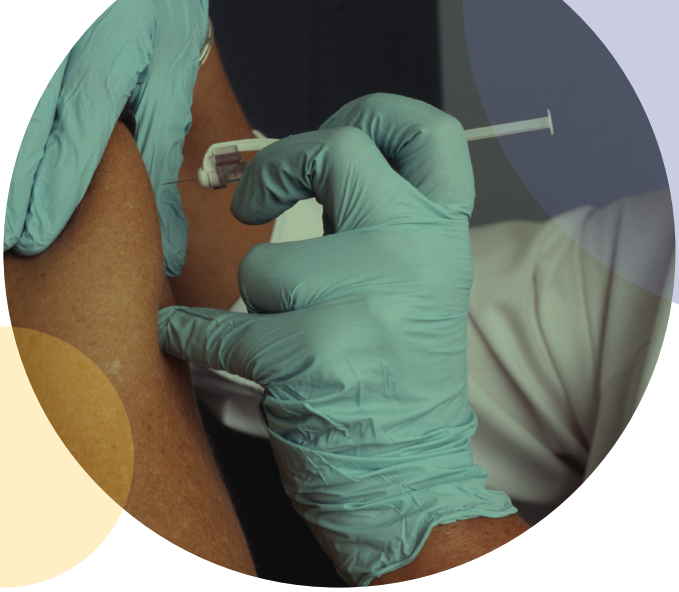


There is a great need to re-evaluate community vaccine hubs and focus on providing quality care, rather than the quantity of spaces available. There should be a focus to ensure spaces are Afrocentric in nature and utilize a health equity lens.

Structural Recommendations



Within our health agencies and governmental institutions, there needs to have better and more equitable funding channels to carry out these changes.



CONCLUSION

In conclusion, all these recommendations and action items were provided by ACB members, researchers, policy makers and healthcare leaders with the goal of continuing the work of decolonizing our healthcare systems and structures and re-center it based on ACB population needs.

In order for these action items to become a reality, it will require robust and consistent funding of race-based data collection in a systematic way across health and government sectors, as well as meaningful and respectful collaborative work and partnerships at the community, public health and governmental levels.

REFERENCES

1. Government of Canada. Vaccination Coverage Goals and Vaccine Preventable Disease Reduction Targets by 2025 [Internet]. 2022 [cited 2023 Apr 21]. Available from: <https://www.canada.ca/en/public-health/services/immunization-vaccine-priorities/national-immunization-strategy/vaccination-coverage-goals-vaccine-preventable-diseases-reduction-targets-2025.html>

2. Frank K, Armin R. Canadians' Willingness to get a COVID-19 vaccine when one becomes available: what role does trust play? 2020.

3. Griffith J, Marani H, Monkman H. COVID-19 Vaccine Hesitancy in Canada: Content Analysis of Tweets Using the Theoretical Domains Framework. Journal of Medical Internet Research. 2021 Apr 13;23(4):e26874.

4. Kaida A, Brotto LA, Murray MCM, Côté HCF, Albert AY, Nicholson V, et al. Intention to Receive a COVID-19 Vaccine by HIV Status Among a Population-Based Sample of Women and Gender Diverse Individuals in British Columbia, Canada. AIDS Behav. 2022 Jul;26(7):2242–55.

5. Gerretsen P, Kim J, Quilty L, Wells S, Brown EE, Agic B, et al. Vaccine Hesitancy Is a Barrier to Achieving Equitable Herd Immunity Among Racial Minorities. Frontiers in Medicine [Internet]. 2021 [cited 2023 Mar 28];8. Available from: <https://www.frontiersin.org/articles/10.3389/fmed.2021.668299>

6. Etowa J, Demeke J, Abrha G, Worku F, Ajiboye W, Beauchamp S, et al. Social determinants of the disproportionately higher rates of COVID-19 infection among African Caribbean and Black (ACB) population: A systematic review protocol. J Public Health Res. 2021b;11(2):2274.

7. Etowa JB, Roelofs S, Beauchamp S. Advancing Health Equity through Critical Racial Literacy in Health Research and Practice-Forthcoming.

8. Baidoobonso S, Kaida A, Etowa J, Osuji J, Ogunleye A, Azangtsop L, et al. Increased frequency of experiencing multiple forms of discrimination in healthcare settings during the COVID-19 pandemic among African, Caribbean, and Black (ACB) people across Canada. Journal of the International AIDS Society. 2022;25:209–10.

9. Lavoie K, Gosselin-Boucher V, Stojanovic J, Gupta S, Gagné M, Joyal-Desmarais K, et al. Understanding national trends in COVID-19 vaccine hesitancy in Canada: results from five sequential cross-sectional representative surveys spanning April 2020–March 2021. BMJ Open. 2022 Apr 4;12(4):e059411.

10. Latkin CA, Dayton L, Yi G, Konstantopoulos A, Boodram B. Trust in a COVID-19 vaccine in the U.S.: A social-ecological perspective. Soc Sci Med. 2021 Feb;270:113684.

11. Wong LP, Alias H, Danaee M, Ahmed J, Lachyan A, Cai CZ, et al. COVID-19 vaccination intention and vaccine characteristics influencing vaccination acceptance: a global survey of 17 countries. Infectious Diseases of Poverty. 2021 Oct 7;10(1):122.

12. Daly M, Robinson E. Willingness to Vaccinate Against COVID-19 in the U.S.: Representative Longitudinal Evidence From April to October 2020. American Journal of Preventive Medicine. 2021 Jun 1;60(6):766–73.

13. Dabone C, Mbagwu I, Muray M, Ubangha L, Kohoun B, Etowa E, et al. Global Food Insecurity and African, Caribbean, and Black (ACB) Populations During the COVID-19 Pandemic: a Rapid Review. J Racial and Ethnic Health Disparities. 2022 Apr 1;9(2):420–35.

14. Etowa J, Hyman I. Unpacking the health and social consequences of COVID-19 through a race, migration and gender lens. Can J Public Health. 2021 Feb;112(1):8–11.

15. Muhib FB, Lin LS, Stueve A, Miller RL, Ford WL, Johnson WD, et al. A venue-based method for sampling hard-to-reach populations. Public Health Rep. 2001;116 Suppl 1(Suppl 1):216–22.

16. World Health Organization (WHO). Ten threats to global health in 2019 [Internet]. [cited 2023 Jan 10]. Available from: <https://www.who.int/news-room/spotlight/ten-threats-to-global-health-in-2019>

17. Ezezika O, Girmay B, Adedugbe T, Jonas I, Thullah Y, Thompson C. Examining the barriers, facilitators and attitudes towards COVID-19 vaccine and public health measures for black communities in Canada: a qualitative study protocol. BMJ Open. 2022 Dec 1;12(12):e063528.

18. Kemei J, Tulli M, Olanlesi-Aliu A, Tunde-Byass M, Salami B. Impact of the COVID-19 Pandemic on Black Communities in Canada. Int J Environ Res Public Health. 2023 Jan 15;20(2):1580.

19. Eissa A, Lofters A, Akor N, Prescod C, Nnorom O. Increasing SARS-CoV-2 vaccination rates among Black people in Canada. CMAJ. 2021 Aug 9;193(31):E1220–1.

20. Viswanath K, Bekalu M, Dhawan D, Pinnamaneni R, Lang J, McLoud R. Individual and social determinants of COVID-19 vaccine uptake. BMC Public Health. 2021 Apr 28;21(1):818.

21. Canada PHA of. COVID-19 vaccination coverage by ethnicity: Insight from the Canadian Community Health Survey (CCHS) [Internet]. 2022 [cited 2023 Mar 27]. Available from: <https://www.canada.ca/en/public-health/services/immunization-vaccines/vaccination-coverage/covid-19-vaccination-coverage-ethnicity-insight-canadian-community-health-survey.html>

22. Troiano G, Nardi A. Vaccine hesitancy in the era of COVID-19. Public Health. 2021 May 1;194:245–51.

23. Cénat JM, Noorishad PG, Moshirian Farahi SMM, Darius WP, Mesbahi El Aouame A, Onesi O, et al. Prevalence and factors related to COVID-19 vaccine hesitancy and unwillingness in Canada: A systematic review and meta-analysis. Journal of Medical Virology. 2023;95(1):e28156.

24. Koshy K, Limb C, Gundogan B, Whitehurst K, Jafree DJ. Reflective practice in health care and how to reflect effectively. International Journal of Surgery: Oncology. 2017 Jun 15;2(6):e20.

25. Curtis E, Jones R, Tipene-Leach D, Walker C, Loring B, Paine SJ, et al. Why cultural safety rather than cultural competency is required to achieve health equity: a literature review and recommended definition. International Journal for Equity in Health. 2019 Nov 14;18(1):174.

26. Kemei J, Alaazi DA, Tulli M, Kennedy M, Tunde-Byass M, Bailey P, et al. A scoping review of COVID-19 online mis/disinformation in Black communities. J Glob Health. 12:05026.

27. Wilson SL, Wiysonge C. Social media and vaccine hesitancy. BMJ Global Health. 2020 Oct 1;5(10):e004206.

28. Etowa J, Beauchamp S. Addressing Health Equity Through Peer Equity Navigation (PEN) Program and Community-Based Participatory Research (CBPR). AJBSR. 2022 Aug 9;16(6):638–41.

29. City of Toronto. Toronto City Council acknowledges ongoing positive impacts of Vaccine Engagement Teams, community ambassadors [Internet]. City of Toronto. City of Toronto; 2022 [cited 2023 Apr 19]. Available from: <https://www.toronto.ca/news/toronto-city-council-acknowledges-ongoing-positive-impacts-of-vaccine-engagement-teams-community-ambassadors/>

30. Racism, bias, and discrimination [Internet]. <https://www.apa.org>. [cited 2023 Mar 28]. Available from: <https://www.apa.org/topics/racism-bias-discrimination>

31. Stanley J, Harris R, Cormack D, Waa A, Edwards R. The impact of racism on the future health of adults: protocol for a prospective cohort study. BMC Public Health. 2019 Mar 28;19(1):346.

32. Adeagbo M, Olukotun M, Musa S, Alaazi D, Allen U, Renzaho AMN, et al. Improving COVID-19 Vaccine Uptake among Black Populations: A Systematic Review of Strategies. International Journal of Environmental Research and Public Health. 2022 Jan;19(19):11971.

33. McClure CC, Cataldi JR, O'Leary ST. Vaccine Hesitancy: Where We Are and Where We Are Going. Clinical Therapeutics. 2017 Aug 1;39(8):1550–62.

34. Osman L. COVID-19 vaccine policies hampered by lack of demographic data, advocates warn - National | Globalnews.ca [Internet]. 2021 [cited 2023 Apr 19]. Available from: <https://globalnews.ca/news/8359628/covid-vaccine-demographic-data/>

35. Dada D, Djiometio JN, McFadden SM, Demeke J, Vlahov D, Wilton L, et al. Strategies That Promote Equity in COVID-19 Vaccine Uptake for Black Communities: a Review. J Urban Health. 2022 Feb 1;99(1):15–27.

36. Bazan IS, Akgün KM. COVID-19 Healthcare Inequity: Lessons Learned from Annual Influenza Vaccination Rates to Mitigate COVID-19 Vaccine Disparities. Yale J Biol Med. 2021 Sep 30;94(3):509–15.

37. Gates A, Rahman S, Sim S, Pillay J, Ismail SJ, Tunis MC, et al. Health inequities related to vaccination: An evidence map of potentially influential factors and systematic review of interventions. Vaccine. 2021 Jun 29;39(29):3825–33.

38. Njoku A, Joseph M, Felix R. Changing the Narrative: Structural Barriers and Racial and Ethnic Inequities in COVID-19 Vaccination. Int J Environ Res Public Health. 2021 Sep 20;18(18):9904.

39. Dhanani LY, Franz B. An experimental study of the effects of messaging strategies on vaccine acceptance and hesitancy among Black Americans. Prev Med Rep. 2022 Apr 13;27:101792.

40. Cunningham-Erves J, Brandt HM, Sanderson M, Clarkson K, Lee O, Schlundt D, et al.

Development of a Theory-Based, Culturally Appropriate Message Library for Use in Interventions to Promote COVID-19 Vaccination Among African Americans: Formative Research. JMIR Form Res. 2022 Jul 28;6(7):e38781.

41. Fante-Coleman T, Wilson CL, Cameron R, Coleman T, Travers R. 'Getting shut down and shut out': Exploring ACB patient perceptions on healthcare access at the physician-patient level in Canada. International Journal of Qualitative Studies on Health and Well-being. 2022 Dec 31;17(1):2075531.

42. Castillo G, Ndumbe-Eyoh S, Crawshaw J, Smith M, Trehan N, Gauvin FP, et al. Factors affecting COVID-19 vaccination in Black communities in Canada: a behavioural analysis (September 17th, 2021). 2021; Available from: file:///C:/Users/gosan/Downloads/Blackcommunitiesandvaccineconfidence-Sep172021.pdf

43. Marques MD, Sheel M. Addressing the social inequities of vaccination: an imperative to close the gap. The Lancet Global Health. 2023 Feb 1;11(2):e173–4.

44. Vahdat S, Hamzehgardeshi L, Hessam S, Hamzehgardeshi Z. Patient Involvement in Health Care Decision Making: A Review. Iran Red Crescent Med J. 2014 Jan;16(1):e12454.

45. Krist AH, Tong ST, Aycock RA, Longo DR. Engaging patients in decision-making and behavior change to promote prevention. Stud Health Technol Inform. 2017;240:284–302.

46. Bombard Y, Baker GR, Orlando E, Fancott C, Bhatia P, Casalino S, et al. Engaging patients to improve quality of care: a systematic review. Implementation Science. 2018 Jul 26;13(1):98.

47. Ojikutu BO, Bogart LM, Dong L. Mistrust, Empowerment, and Structural Change: Lessons We Should Be Learning From COVID-19. Am J Public Health. 2022 Mar;112(3):401–4.

48. Harris OO, Perry TE, Johnson JK, Lichtenberg P, Washington T, Kitt B, et al. Understanding the concept of trust and other factors related to COVID-19 vaccine intentions among Black/African American older adults prior to vaccine development. SSM - Qualitative Research in Health. 2023 Jun 1;3:100230.

49. Hassen N, Lofters A, Michael S, Mall A, Pinto AD, Rackal J. Implementing Anti-Racism Interventions in Healthcare Settings: A Scoping Review. International Journal of Environmental Research and Public Health. 2021 Jan;18(6):2993.

50. VaccinesWork. Immunisation and covid-19 at the 73rd World Health Assembly. Gavi, the Vaccine Alliance [Internet]. 2023. Available from: <https://www.gavi.org/vaccineswork/immunisation-and-covid-19-73rd-world-health-assembly>

51. Statistics Canada. (2021). Table 13-10-0809-01 Canadians' health and COVID-19, by region, age, gender and other characteristics, inactive. DOI: <https://doi.org/10.25318/1310080901-eng>.