



Rapid Review Update 1: What is known about reasons for vaccine confidence and uptake in populations experiencing inequities?

Prepared by: The National Collaborating Centre for Methods and Tools

Date: February 14, 2024

Suggested Citation:

National Collaborating Centre for Methods and Tools. (2024, February 14). *Rapid Review Update 1: What is known about reasons for vaccine confidence and uptake in populations experiencing inequities?* <https://nccmt.ca/pdfs/res/vaccine-uptake>

Please Note: An update of this review may be available. Access the most current version of this review by visiting the National Collaborating Centre for Methods and Tools COVID-19 Rapid Evidence Service at the above link.

© 2024. National Collaborating Centre for Methods and Tools, McMaster University. All rights reserved.

The National Collaborating Centre for Methods and Tools (NCCMT) is hosted by McMaster University and funded by the Public Health Agency of Canada. The views expressed herein do not necessarily represent the views of the Public Health Agency of Canada.

The NCCMT gratefully acknowledges the contributions of the National Collaborating Centre for Determinants of Health (NCCDH) and National Collaborating Centre for Indigenous Health (NCCIH) for generously sharing their expertise in developing the research question and search strategy for the initial version of the review, as well as providing peer review of the initial version and this update.

This Rapid Review is for general information purposes only. The information provided in this Rapid Review is provided “as is” and McMaster University makes no warranties, promises and/or representations of any kind, expressed or implied, as to the nature, standard, accuracy, completeness, reliability or otherwise of the information provided in this Rapid Review, nor to the suitability or otherwise of the information to your particular circumstances. McMaster University does not accept any responsibility or liability for the accuracy, content, completeness, legality, reliability or use of the information contained in this Rapid Review.

The authors declare they have no conflicts of interest to report.

Executive Summary

Background

Vaccination is an important public health tool to protect individuals and the general population from disease. The public health sector is tasked with ensuring vaccination coverage is not only sufficient to promote herd immunity but, more importantly, equitable across communities. Literature from previous vaccination campaigns has shown that some populations may be less likely to be vaccinated. An in-depth understanding of reasons that either contribute to or decrease both vaccine confidence (i.e., a desire to be vaccinated or decision to receive a vaccination) and vaccine uptake (i.e., receiving a vaccination) is critically important in designing effective and equitable vaccine rollout strategies.

This rapid review was initially produced to support public health decision makers' response to the coronavirus disease 2019 (COVID-19) pandemic. This update identifies, appraises, and summarizes emerging research evidence to support evidence-informed decision making.

This rapid review is based on the most recent research evidence available at the time of release. The previous version was completed on April 30, 2021. This updated version includes evidence available up to November 15, 2023 to answer the question: **What is known about reasons for vaccine confidence and uptake in populations experiencing inequities?**

The populations included in this review are: Black, African, and Caribbean communities in North America; Rights holders, including First Nations, Inuit and Métis peoples in Canada and Indigenous Peoples globally; and individuals experiencing homelessness or who are precariously housed. Populations that experience racial discrimination such as Black, African, and Caribbean communities and Indigenous Peoples are more likely to report vaccine hesitancy (Willis et al., 2022; Wilson et al., 2023). People experiencing homelessness are also at higher risk of infectious diseases (Fazel et al., 2014; Lui et al., 2020; Schanzer et al., 2007). Therefore, these populations were selected to better understand their experiences and needs to improve vaccine uptake.

What Has Changed in This Version?

- New evidence related to vaccine confidence and uptake in populations experiencing inequities has emerged and is included in this update; specifically, 35 new single studies were identified: 32 related to COVID-19 and three involved vaccines for other diseases. Most evidence in the previous version came from studies focused on vaccines other than COVID-19, while most in this update now relate to COVID-19 vaccines. An [archived copy of Version 1](#) is available.
- As the body of COVID-19 evidence is now more substantial, studies examining COVID-19 vaccine confidence and uptake conducted prior to the COVID-19 vaccine becoming available in December 2020 were excluded from this update (n=7). A list of all previously included but now excluded studies is available in [Appendix 2](#).

- New evidence on vaccines for Mpox (n=1) among Black, African, and Caribbean communities in North America and more evidence on influenza vaccines (n=2) among Black, African, and Caribbean communities in North America and Rights holders, including First Nations, Inuit and Métis peoples in Canada and Indigenous Peoples globally, has been incorporated. No new evidence on other vaccines (e.g., H1N1, pneumococcal, childhood, and general) included in the previous version have been added.
- Findings from these new studies align with previous conclusions; for example, perceived safety and fear of vaccination, desire to protect family, community and self, lack of information and misinformation, and the importance of trust, as well as the importance of easing access to vaccination, continue to be important considerations related to vaccine hesitancy and uptake.

Key Points

Rights holders, including First Nations, Inuit and Métis peoples in Canada and Indigenous Peoples globally

- Across studies exploring perceptions of different vaccines, the safety of vaccines (i.e., potential side effects) was a primary concern. With COVID-19 specifically, these concerns related to the speed at which the vaccine was developed, a perceived lack of testing and efficacy, and fear of being the first to get the vaccine. The confidence in this finding is moderate (GRADE-CERQual); it is likely that this finding is a reasonable representation of the phenomenon of interest.
- A desire to protect one's family and community and, to a lesser degree, oneself from illness were motivating factors for vaccination across most studies. Some studies found increased vaccine uptake when participants believed the risk of illness was greater than the risk of vaccination. The confidence in this finding is moderate (GRADE-CERQual); it is likely that this finding is a reasonable representation of the phenomenon of interest.
- Misinformation, lack of knowledge and communication, and changing information contributed to vaccine hesitancy. Only one study identified participants as feeling well-informed resulting in vaccine confidence. The confidence in this finding is moderate (GRADE-CERQual); it is likely that this finding is a reasonable representation of the phenomenon of interest.
- Mistrust in the government, healthcare system and/or pharmaceutical companies was a primary driver of vaccine hesitancy. This mistrust was commonly related to systemic racism, historical mistreatment and discrimination. The confidence in this finding is moderate (GRADE-CERQual); it is likely that this finding is a reasonable representation of the phenomenon of interest.
- Approaches to encourage vaccine uptake included collaboration with trusted leaders and community groups, receiving information from trusted sources, providing vaccination at convenient and trusted locations, and ensuring ease of access (i.e.,

availability, transportation, time). The confidence in this finding is low (GRADE-CERQual); it is possible that this finding is a reasonable representation of the phenomenon of interest.

Black, African, Caribbean communities in North America

- Across studies, a desire to protect oneself and others from illness were motivating factors for vaccination. In studies of vaccination other than COVID-19, participants' beliefs in their susceptibility to illness and the need for vaccination played a larger role in vaccine uptake. The confidence in this finding is moderate (GRADE-CERQual); it is likely that this finding is a reasonable representation of the phenomenon of interest.
- Across studies exploring perceptions of different vaccines, uncertainty about the side effects and effectiveness of the vaccine was a primary concern. With COVID-19 specifically, these concerns related to the speed at which the vaccine was developed, a perceived lack of testing and efficacy, and fear of being tested on. The confidence in this finding is moderate (GRADE-CERQual); it is likely that this finding is a reasonable representation of the phenomenon of interest.
- Mistrust, due to historical injustices and anti-Black racism, was a consistent contributor to lower vaccine confidence and uptake, while trust in science was reported as being a contributor to increased vaccine uptake. The confidence in this finding is moderate (GRADE-CERQual); it is likely that this finding is a reasonable representation of the phenomenon of interest.
- Effective vaccine communication from a trusted messenger, which aimed to combat misinformation and address fear and uncertainty, was found to be important in vaccine confidence. Participants were more likely to follow vaccination advice if they had positive experiences with healthcare providers. Participants were also more likely to follow the vaccine decisions of trusted family, friends, or communities. The confidence in this finding is moderate (GRADE-CERQual); it is likely that this finding is a reasonable representation of the phenomenon of interest.
- Most studies identified a lack of information, misinformation, and inconsistent information as a contributing factor to vaccine hesitancy. The confidence in this finding is moderate (GRADE-CERQual); it is likely that this finding is a reasonable representation of the phenomenon of interest.
- Ease of access was highlighted as essential to support uptake; vaccines should be provided in trusted and accessible locations, and rollout should build in strategies to increase access for all. The confidence in this finding is moderate (GRADE-CERQual); it is likely that this finding is a reasonable representation of the phenomenon of interest.

Individuals experiencing homelessness or who are precariously housed

- Across studies, ease of accessibility of vaccination programs was the primary driver of vaccine uptake for both adults and youth. This included cost, location of vaccination clinics, and awareness of times and locations of clinics. The confidence in this finding is moderate (GRADE-CERQual); it is likely that this finding is a reasonable representation of the phenomenon of interest.
- Across all studies, participants identified the desire to protect oneself and others from disease as a factor contributing to vaccine uptake. The confidence in this finding is moderate (GRADE-CERQual); it is likely that this finding is a reasonable representation of the phenomenon of interest.
- Mistrust in the healthcare system, government and/or pharmaceutical companies and vaccine information was identified as contributing to vaccine hesitancy in all COVID-19 studies. However, in two studies on COVID-19 vaccines, some participants reported trust in politics and the healthcare system and another in vaccine information as influencing vaccine acceptance. The confidence in this finding is moderate (GRADE-CERQual); it is likely that this finding is a reasonable representation of the phenomenon of interest.
- All studies identified beliefs regarding vaccine safety and efficacy as contributing to vaccination decisions. In two studies, some participants were confident in the safety and effectiveness of the COVID-19 vaccine, influencing vaccine acceptance. In the remaining studies, participants who did not receive the vaccine or reported hesitancy also reported uncertainty related to the safety and effectiveness of the vaccine. The confidence in this finding is moderate (GRADE-CERQual); it is likely that this finding is a reasonable representation of the phenomenon of interest.

Overview of Evidence and Knowledge Gaps

- Uncertainty about the safety and efficacy of the COVID-19 vaccine, related to the speed of vaccine development and perceived lack of testing, was a common finding contributing to vaccine hesitancy across all populations.
- Mistrust (e.g., of the healthcare system, government, and/or pharmaceutical companies) and misinformation were identified as important contributing factors to vaccine hesitancy, consistent across all populations; however, strategies to build trust and reduce misinformation were not well described.
- Trusted messengers to deliver information about vaccinations and encourage access to vaccination was highlighted across all three populations. The characteristics of a trusted messenger were described in some studies as local leaders, doctors of the same race or ethnicity, religious leaders, and community health centers. This list was not consistent across all studies and is likely to vary across communities and populations.

- All populations identified barriers to accessing vaccines. In homeless populations, three studies reported that vaccination was a low priority compared to other needs, such as shelter and food, resulting in participants not receiving vaccinations.
- The evidence consistently shows that a one-size fits all approach is not likely to be effective. Close collaboration and partnerships with community leaders and community members at the local level is critical to not only promote vaccine confidence, but to ensure vaccines are accessible to those who wish to receive them.
- Roughly half of the studies involving Rights holders in this update focused on First Nations, Inuit, and Métis peoples in Canada; only one study focused on Black, African, Caribbean communities and two studies on individuals experiencing homelessness or who were precariously housed, took place in Canada. The themes reported in these studies were similar to those from non-Canadian sources.
- The evidence for vaccine confidence and uptake in individuals experiencing homelessness or who are precariously housed is considerably more limited than the other two populations included here. Results from studies focusing on specific Rights holders and Black communities are also not necessarily generalizable across all communities that may fall within these broad categorizations. Further research is required to ensure appropriate representation of populations experiencing inequities when making decisions about effective, equitable vaccination strategies.

Methods

A description of the development of the National Collaborating Centre for Methods and Tools' Rapid Evidence Service, including an overview of the rapid review process and rationale for methodological decisions, has been published (Neil-Sztramko et al., 2021).

Research Question

What is known about reasons for vaccine confidence and uptake in populations experiencing inequities?

Search

On November 15, 2023, the following databases were searched using key terms [vaccin*, immuniz*, confiden*, hesitan*, barrier*, uptake, coverage, safety, fear, anxiety*, attitude*, awareness, misconception, choice*, Indigenous, nativ*, aborigin*, first nation*, African American*, black*, Caribbean, minority group*, racialized, homeless, shelter, unhoused, encampment, street liv*]:

- [MEDLINE](#) database
- [EMBASE](#) database
- [Sociological Abstracts](#)
- [CINAHL](#)
- [Trip Medical Database](#)

This search builds upon the previous search (March 15, 2021) conducted in the first version of this rapid review. A copy of the full search strategy is available in [Appendix 1](#).

Study Selection Criteria

The search results were first screened for recent guidelines and syntheses. When available, findings from syntheses and clinical practice guidelines are presented first, as these take into account the available body of evidence and, therefore, can be applied broadly to populations and settings.

English- and French-language, peer-reviewed sources and sources published ahead-of-print before peer review were included. Surveillance sources were excluded.

Additional exclusion criteria have been applied to this update to refine its focus, given the substantial increase in the body of evidence. In this update, study design was limited to qualitative or mixed methods; quantitative and in-progress studies were excluded. Studies related to COVID-19 were limited to those occurring after December 2020, to account for when the COVID-19 vaccine first became available.

A full list of studies that were previously included that are now excluded, based on these revised criteria, is available in [Appendix 2](#).

	Inclusion Criteria	Exclusion Criteria
Population	a) Rights holders, including First Nations, Inuit and Métis peoples in Canada and Indigenous Peoples globally b) Black, African, Caribbean communities in North America c) Individuals experiencing homelessness or who are precariously housed	Studies that report data on "minority groups" combined, without exploring the specific perspectives of unique populations separately Studies that report on barriers or strategies from the perspective of others (e.g., healthcare providers, administrators, etc.)
Interest	Studies that explore reasons for vaccine confidence and uptake from the first-person perspective of the specific population; could include descriptions of strategies that have been successful to build vaccine confidence; could include qualitative or mixed methods studies.	Studies describing non-modifiable 'risk factors', such as sociodemographic variables collected through administrative data or cross-sectional surveys. Studies describing generic strategies to increase vaccine access or uptake that did not address specific barriers that the target population report. Studies specific to HPV vaccinations were excluded given the unique application of these vaccines. COVID-19 studies prior to December 2020 (i.e., before a vaccine became available)

Data Extraction and Synthesis

Data relevant to the research question, such as study design, setting, location, population characteristics, interventions or exposure and outcomes were extracted when reported. We synthesized the results narratively due to the variation in methodology and outcomes for the included studies.

Appraisal of Evidence Quality

We evaluated the quality of included evidence using critical appraisal tools as indicated by the study design below. Quality assessment was completed by one reviewer and verified by a second reviewer. Conflicts were resolved through discussion.

Study Design	Critical Appraisal Tool
Synthesis	Assessing the Methodological Quality of Systematic Reviews (AMSTAR) AMSTAR Tool
Qualitative	Joanna Briggs Institute (JBI) Checklist for Qualitative Research
Mixed Method	Mixed Methods Appraisal Tool (MMAT)

Completed quality assessments for each included study are available on request.

The Grading of Recommendations, Assessment, Development and Evaluations - Confidence in Evidence from Reviews of Qualitative research ([GRADE CERQual](#)) (Lewin *et al.*, 2018) approach was used to assess the confidence in the findings in qualitative research based on four key domains:

- Methodological limitations
- Relevance
- Coherence
- Adequacy

The overall confidence in the evidence (expressed as either high, moderate, low, or very low) for each outcome and in each population was determined considering the characteristics of the available evidence. A judgement of 'overall confidence is very low' means that the findings may or may not be representative of the phenomenon of interest; higher confidence reflects a view that the finding should be seen as a reasonable representation of the phenomenon of interest.

Findings

Summary of Evidence Confidence

In this update, 35 new single studies were identified. Eleven previously included studies were excluded based on revised eligibility criteria, for a total of 52 publications included in this review.

What is known about reasons for vaccine confidence and uptake in populations experiencing inequities?

Key Finding	Rights holders, including First Nations, Inuit and Métis peoples in Canada and Indigenous Peoples globally			Black, African, Caribbean communities in North America			Individuals experiencing homelessness or who are precariously housed		
	Study design	n*	GRADE-CERQual	Study design	n*	GRADE-CERQual	Study design	n*	GRADE-CERQual
Desire to protect family, community, self	Single	8	Moderate ^{1,2}	Single	12	Moderate ^{1,2}	Single	4	Moderate ¹
Perceived safety and fear of vaccines	Single	10	Moderate ^{1,2}	Single	26	Moderate ^{1,2}	Single	5	Moderate ¹
Lack of information, misinformation, need for trusted source	Single	6	Low ^{2,3,4}	Single	23	Moderate ^{1,2,3,4}	Single	4	Moderate ^{1,2}
Trust, or lack of trust, in science, healthcare, government	Single	10	Moderate ^{1,3}	Single	24	Moderate ^{1,2}	Single	4	Moderate ¹
Importance of easing access	Single	5	Moderate ³	Single	9	Moderate ^{1,2,3}	Single Synthesis	5 1	Moderate ^{1,3}

In the GRADE-CERQual approach to confidence of evidence, qualitative studies, as included in this review, provide high confidence evidence; this was downgraded to **moderate** or **low** due to concerns about:

1. Methodological limitations
2. Relevance
3. Adequacy
4. Coherence

*Values exceed the total number of studies (n=52) as some studies involved multiple populations.

Table 1: First Nations, Métis and Inuit communities in Canada and Indigenous Peoples globally: Single studies

Reference	Date Released	Study Design	Population, Setting	Summary of Findings	Quality Rating
COVID-19 Vaccine (n=8)					
New evidence reported on February 14, 2024					
Nascimento, L.G., Dubé, È., Burns, K.E., Brown, P., Calnan, M., Ward, P.R., ... Meyer, S.B. (2023). Informing efforts beyond tailored promotional campaigns by understanding contextual factors shaping vaccine hesitancy among equity-deserving populations in Canada: An exploratory qualitative study. <i>International Journal for Equity in Health</i> , 22(1), 209.	Oct 7, 2023	Qualitative	n=7 First Nations, Métis, or Inuit Ontario, Alberta, British Columbia, Saskatchewan, Manitoba, Quebec, Prince Edward Island, and New Brunswick, Canada	Semi-structured interviews were conducted to understand factors shaping vaccine hesitancy. Factors contributing to vaccine hesitancy included: <ul style="list-style-type: none"> • Fatalistic beliefs in divine will/predeterminism • Feelings of defiance toward government mandates • Fear associated with lack of testing and speed of vaccines' production • Concerns about the 'experimental' nature of vaccines and informed consent • History of oppression and discrimination • Distrust of the healthcare system 	Moderate

<p>Vázquez, E., Juturu, P., Burroughs, M., McMullin, J., & Cheney, A.M. (2023). Continuum of trauma: Fear and mistrust of institutions in communities of color during the COVID-19 pandemic. <i>Culture, Medicine and Psychiatry</i>, Advance online publication.</p>	<p>Sep 30, 2023</p>	<p>Qualitative</p>	<p>n=89 Black/African American, Latinx/Indigenous Latin American, Native American/Indigenous, Inland Southern California, United States</p>	<p>11 focus groups were conducted to understand socio-cultural and structural factors influencing vaccination.</p> <p>Fear and mistrust in institutions (e.g., government, public health) was a major theme across groups, stemming from different types of trauma: historical (rooted in colonialism, classism, and structural racism), cultural (loss of land, community leaders, and collective identity), and social (racial- and income-based inequities, law enforcement, and mistreatment in healthcare system).</p>	<p>Moderate</p>
<p>Simms, A.J., King, K.D., Tsui, N., Edwards, S.A., Mecredy, G., & Métis Nation of Ontario (2023). COVID-19 vaccine behaviour among citizens of the Métis Nation of Ontario: A qualitative study. <i>Vaccine</i>, 41(38), 5640–5647.</p>	<p>Aug 31, 2023</p>	<p>Qualitative</p>	<p>n=16 citizens of the Métis Nation of Ontario (MNO) Ontario, Canada</p>	<p>One-on-one interviews were conducted to understand vaccine behaviour among participants who had different intentions to vaccinate against COVID-19.</p> <p>Factors that improved vaccine confidence included:</p> <ul style="list-style-type: none"> • MNO’s advocacy and communication efforts • Altruism (i.e., wanting to protect others and viewing vaccines as a collective responsibility) • Feeling well-informed about the vaccine • Perceiving the COVID-19 virus as a greater risk to health than its vaccination • Influence from kin networks and trusted sources (e.g., news media, government, health organizations, health professionals) <p>Factors negatively impacting confidence included:</p> <ul style="list-style-type: none"> • Barriers with vaccine roll-out and availability • Inconsistent and unclear government communication • Public discourse with an overwhelming volume of COVID-19-related media and confusion caused by inconsistencies in reporting and misinformation • Distrust of government, politicians, pharmaceutical companies. • Perceiving vaccines as a “personal choice” and public health measures as discriminatory, lacking transparency, and violating rights, freedoms, and informed consent 	<p>High</p>

				<ul style="list-style-type: none"> Perceiving COVID-19 vaccine as a greater risk to their health than contracting the virus <p>Participants recommended Métis-led vaccine clinics, more consistent vaccine prioritization between Métis and First Nations in Ontario, and continued tailored public health messaging and services from the MNO.</p>	
Storer, D., Lafferty, L., Graham, S., Murphy, D., Rance, J., Brener, L., ... Bryant, J. (2023). Perceptions of COVID-19 vaccines: Lessons from selected populations who experience discrimination in the Australian healthcare system . <i>Health & Social Care in the Community</i> , 2023.	Aug 17, 2023	Qualitative	n=35 First Nations (aged 16-64) Darug Country, Western Sydney, Australia	<p>Peer-led interviews were conducted to investigate perspectives of COVID-19 vaccination.</p> <p>Participants were concerned about contracting COVID-19 and were willing to receive vaccination to decrease risk. Underlying health issues in communities, a shared responsibility to protect community and family, and wanting to live free of COVID-related restrictions motivated participants to get vaccinated.</p> <p>Concerns were expressed regarding speed of vaccine development and safety and lack of information about the vaccine (i.e., surrounding development, possible immune responses after vaccination, and side effects). Distrust of government and healthcare authorities drove vaccine hesitancy, with distrust directed at mainstream healthcare and governments. Aboriginal Health Services were perceived as a safer source of information and vaccines.</p>	Moderate
Sullivan, P., Starr, V., Dubois, E., Starr, A., Acharibasam, J. B., & McIllduff, C. (2023). Where past meets present: Indigenous vaccine hesitancy in Saskatchewan . <i>Medical humanities</i> , 49(2), 321–331.	Jan 5, 2023	Qualitative	NR Star Blanket Cree Nation, Saskatchewan, Canada	<p>Sharing circles were conducted to investigate factors that influence vaccine confidence.</p> <p>Six major themes emerged during discussion of factors that influence vaccine confidence:</p> <ol style="list-style-type: none"> Culture (i.e., firm beliefs in Traditional medicine and ways, vaccination being in opposition of beliefs, culture as a tool to promote vaccination) Fear (i.e., uncertainty of vaccine safety and efficacy) Government COVID-19 responses (i.e., receiving vaccine to return to work, travel, and social activities) Information consumption and exposure (i.e., engaging with misinformation on topics such as speed of vaccine development, experimentation, disease severity, and vaccine ingredients) 	High

				<p>5. Community influence (i.e., community vaccination rates and clinics, reciprocity, and influence of kin and social connections)</p> <p>6. Appeal of the antivaccine community (i.e., empathy toward vaccine hesitant by antivaccine community, emphasis of community on personal choice)</p>	
<p>van Doren, T.P., Zajdman, D., Brown, R.A., Gandhi, P., Heintz, R., Busch, L., ... Paddock, R. (2023). Risk perception, adaptation, and resilience during the COVID-19 pandemic in Southeast Alaska Natives. <i>Social Science & Medicine</i>, 317, 115609.</p>	<p>Dec 10, 2022</p>	<p>Qualitative</p>	<p>n=22 Alaska Native individuals</p> <p>Hoonah, Kake and Sitka, Alaska, United States</p>	<p>Structured interviews were conducted to learn about perceptions of and experiences with the COVID-19 pandemic, including reactions to public health guidelines.</p> <p>Participants who were willing to be vaccinated described vaccination as a pivotal adaptation to return to normal and to sustain Native culture and values. A major driver to get vaccinated was concern for Elders, family, and other community members.</p> <p>Reasons for vaccine hesitancy included:</p> <ul style="list-style-type: none"> • Conspiracy theories • Fear stemming from unknowns • Not wanting to be the first to get the vaccine • Distrust of the government given historical discrimination and marginalization of Alaska Native communities. 	<p>Moderate</p>
<p>Graham, S., Blaxland, M., Bolt, R., Beadman, M., Gardner, K., Martin, K., ... Bryant, J. (2022). Aboriginal peoples' perspectives about COVID-19 vaccines and motivations to seek vaccination: a qualitative study. <i>BMJ global health</i>, 7(7), e008815.</p>	<p>Jul 20, 2022</p>	<p>Qualitative</p>	<p>n=35 Aboriginal and Torres Strait Islander people (aged 15-80)</p> <p>Western Sydney, Australia</p>	<p>Peer interviews were conducted to examine views about and motivation to get COVID-19 vaccines.</p> <p>Participants expressed vaccine safety concerns related to how quickly vaccines had been developed, the 'newness' of the vaccines, and reports of serious side effects. Participants expressed a lack of trust in governments and health institutions, instead placing high levels of trust in Aboriginal Health Services or Aboriginal workers in other health settings. Trusted providers offer appropriate health services that address the needs of their communities.</p>	<p>High</p>
<p>Ignacio, M., Oesterle, S., Mercado, M., Carver, A., Lopez, G., Wolfensteig, W., ... Doubeni, C. (2023).</p>	<p>Mar 24, 2022</p>	<p>Qualitative</p>	<p>n=32 American Indian/Alaska Native</p> <p>Arizona, United States</p>	<p>Focus groups were conducted to understand factors associated with COVID-19 vaccine hesitancy and confidence.</p>	<p>Moderate</p>

<p>Narratives from African American/Black American Indian/Alaska Native, and Hispanic/Latinx community members in Arizona to enhance COVID-19 vaccine and vaccination uptake. <i>Journal of Behavioral Medicine</i>, 46(1-2), 140–152.</p>				<p>In American Indian/Alaska Native focus groups, vaccine hesitancy and mistrust were tied to historical and contemporary traumas. Some participants also wanted to trust Western medicine to fulfill cultural responsibilities and protect family members. Vaccine hesitancy was described as a tension between these views.</p> <p>Strategies to increase vaccine confidence in all groups included: using testimonials from trusted community members such as local leaders, religious leaders, and those who have received the COVID-19 vaccine.</p>	
Influenza Vaccines (n=2)					
New evidence reported on February 14, 2024					
<p>Gauld, N., Martin, S.N. P., Sinclair, O.T.R., Dumble, F., Petousis-Harris, H., & Grant, C.C. (2022). Mapping the maternal vaccination journey and influencing factors for Māori women in Aotearoa New Zealand: A qualitative study. <i>Journal of Primary Health Care</i>, 14(4), 352–362.</p>	<p>Sep 30, 2022</p>	<p>Qualitative</p>	<p>n=9 Maori women (aged 18-31) who were pregnant or had a young infant</p> <p>Aotearoa New Zealand</p>	<p>Semi-structured interviews were conducted to understand enablers and barriers to maternal vaccination uptake.</p> <p>Enablers included wanting to protect the baby, being pro-vaccination, trust in the health care provider offering the vaccine and vaccine information, health care providers raising awareness and providing reminders to receive the vaccine, and a feeling of proactivity in asking questions and receiving information from healthcare providers.</p> <p>Barriers included a lack of emphasis on vaccination by health care providers, lack of awareness and knowledge (i.e., benefits, risks, infections that vaccinations prevent), incorrect safety knowledge and safety concerns, no vaccinations in previous pregnancy, late presentation to midwife, accessibility (i.e., lack of transportation, difficulty making appointments), and inconvenience (i.e., not a priority compared to work and raising other children).</p>	<p>High</p>
Previously reported evidence					
<p>O'Grady, K.-A.F., Dunbar, M., Medlin, L. G., Hall, K.K., Toombs, M., Meiklejohn, J., ...</p>	<p>Apr 29, 2015</p>	<p>Mixed methods</p>	<p>n=53 Aboriginal and Torres Strait Islander women from 28 weeks gestation to 16 weeks post-birth, attending two</p>	<p>Qualitative data suggests that perceived benefits to themselves and infants were important in the decision to be vaccinated. Questions about vaccine safety, particularly for the fetus, were raised. The need to take a prescription to a pharmacy, collect the vaccine, and return</p>	<p>High</p>

<p>Andrews, R.M. (2015). Uptake of influenza vaccination in pregnancy amongst Australian Aboriginal and Torres Strait Islander women: A mixed-methods pilot study. <i>BMC Research Notes</i>, 8, 169.</p>			<p>primary healthcare services</p> <p>Caboolture and Toowoomba, Queensland, Australia</p>	<p>to a clinic for a second time to be vaccinated was a stated deterrent. Most participants were not aware that influenza vaccination was recommended and available free for pregnant women, and noted discussions were not had with their healthcare provider.</p>	
<p>H1N1 Vaccines (n=2)</p>					
<p>Previously reported evidence</p>					
<p>Driedger, S. M., Maier, R., Furgal, C., & Jardine, C. (2015). Factors influencing H1N1 vaccine behavior among Manitoba Métis in Canada: A qualitative study. <i>BMC Public Health</i>, 15, 128.</p>	<p>Feb 12, 2015</p>	<p>Qualitative</p>	<p>n=128, Métis from urban, rural, and remote locations</p> <p>Manitoba, Canada</p>	<p>From 2010-2013, participants from 17 focus groups in 4 communities were asked about their decision-making related to the H1N1 vaccine.</p> <p>Concerns about vaccine safety and lack of knowledge about the vaccine and the pandemic, in general, had the most negative influences on decision making.</p> <p>Perceived risk of contracting H1N1 positively influenced uptake, overriding concerns in many cases.</p> <p>Media reporting, the influence of peer groups, and government prioritization of Métis to receive the vaccine had dual influences (i.e., positively and negatively influenced different people).</p>	<p>Moderate</p>
<p>Driedger, S. M., Cooper, E., Jardine, C., Furgal, C., & Bartlett, J. (2013). Communicating risk to Aboriginal peoples: First Nations and Métis responses to H1N1 risk messages. <i>PLoS One</i>, 8(8), e71106.</p>	<p>Aug 7, 2013</p>	<p>Qualitative</p>	<p>n=193, First Nations, Métis</p> <p>n=23 key informant interviews (health decision makers)</p> <p>Manitoba, Canada</p>	<p>From 2009-2010, participants from 23 focus groups were asked how they reacted to messaging about the H1N1 vaccine and the identification and establishment of First Nations and Métis people as high-risk priority groups.</p> <p>Participants reported a feeling of general stigmatization, discrimination, and vulnerability (resulting from government action, public health messaging), specifically around perceptions that: First Nations and Métis lives are less valued; being First Nations or Métis, in itself, is a risk factor; and a generalized First Nations and Métis identity perpetuates a racialized “other”.</p>	<p>High</p>

Childhood Vaccinations (n=2)					
Previously reported evidence					
<p>Burghouts, J., Del Nogal, B., Uriepero, A., Hermans, P. W., de Waard, J. H., & Verhagen, L. M. (2017). Childhood vaccine acceptance and refusal among Warao Amerindian caregivers in Venezuela: A qualitative approach. <i>PLoS One</i>, 12(1), e0170227.</p>	Jan 20, 2017	Qualitative	n=31 Warao Amerindians Orinoco Delta, Northeastern Venezuela	<p>Parents' attitudes were explored through in-depth interviews with 20 vaccine-accepting and 11 vaccine-declining caregivers.</p> <p>Although Warao caregivers were generally in favor of vaccination, fear of side effects and the idea that young and sick children are too vulnerable to be vaccinated negatively affected vaccine acceptance.</p> <p>The importance assigned to side effects was related to the perception that these resembled symptoms/diseases of illness and could harm the child. Religious beliefs or traditional healers did not influence the decision-making process.</p>	High
<p>Tarrant, M., & Gregory, D. (2003). Exploring childhood immunization uptake with First Nations mothers in north-western Ontario, Canada. <i>Journal of Advanced Nursing</i>, 41(1), 63-72.</p> <p>Tarrant, M., & Gregory, D. (2001). Mothers' perceptions of childhood immunizations in First Nations communities of the Sioux lookout zone. <i>Canadian Journal of Public Health</i>, 92(1), 42-45.</p>	Jan 2003	Qualitative	n=28 mothers, 2 First Nations communities Sioux Lookout Zone, north-western Ontario, Canada	<p>Qualitative interviews were conducted with mothers to explore beliefs and perceptions of childhood immunizations and vaccine-preventable diseases.</p> <p>Participants were motivated to seek immunizations for their children by a fear of vaccine preventable diseases.</p> <p>A small proportion of mothers questioned the effectiveness of vaccines in preventing disease. Traumatic immunization experiences, vaccine side-effects and sequelae, negative interactions with health professionals, knowledge gaps related to vaccine effectiveness, the influence of others who are against vaccines, and barriers such as time constraints and not being able to vaccinate during a clinic visit when the child was ill all served as deterrents to immunization.</p>	High

General Vaccination (n = 1)					
Previously reported evidence					
Burnett, K., Sanders, C., Halperin, D., & Halperin, S. (2020). Indigenous Peoples, settler colonialism, and access to health care in rural and northern Ontario . <i>Health & Place</i> , 66, 102445.	Oct 5, 2020	Qualitative	n=72 Indigenous community members in 10 focus groups 2 Northern Ontario urban centers, 4 road-access and 5 fly-in First Nation communities, Canada	10 focus groups were conducted with Indigenous community members using a two-eyed seeing approach. Factors that informed vaccine decisions were rural space/location, access to healthcare, and relationships with healthcare providers and the state more generally (contemporary and historical). Suspicion and distrust of the state and, by extension, healthcare providers, a lack of choice in healthcare, and negative relationships with providers had bearing on vaccine confidence. The authors conclude that trust and rapport are vital considerations when developing vaccination policy, especially given Indigenous people's experiences with racism and colonialism.	High

Table 2: Black, African, Caribbean communities in North America: Single studies

Reference	Date Released	Study Design	Population, Setting	Summary of findings	Quality Rating:
COVID-19 Vaccine (n=23)					
New evidence reported on February 14, 2024					
Nascimento, L.G., Dubé, È., Burns, K.E., Brown, P., Calnan, M., Ward, P.R., ... Meyer, S.B. (2023). Informing efforts beyond tailored promotional campaigns by understanding contextual factors shaping vaccine hesitancy among equity-deserving populations in Canada: An exploratory qualitative study. <i>International Journal for Equity in Health</i> , 22(1), 209.	Oct 7, 2023	Qualitative	n=7 Black Canadians Ontario, Alberta, British Columbia, Saskatchewan, Manitoba, Quebec, Prince Edward Island, and New Brunswick, Canada	Semi-structured interviews were conducted to understand factors shaping vaccine hesitancy. Factors contributing to vaccine hesitancy included: <ul style="list-style-type: none"> • Perceived lack of autonomy • Distrust of the government and opposition to vaccine mandates • Fear associated with lack of testing and speed of vaccines' production • History of oppression and discrimination • Distrust of the healthcare system. 	Moderate
Vázquez, E., Juturu, P., Burroughs, M., McMullin, J., & Cheney, A.M. (2023). Continuum of trauma: Fear and mistrust of institutions in communities of color during the COVID-19 pandemic. <i>Culture, Medicine and Psychiatry</i> , Advance online publication.	Sep 30, 2023	Qualitative	n=89 Black/African American, Latinx/Indigenous Latin American, Native American/Indigenous, Inland Southern California, United States	11 focus groups were conducted to understand socio-cultural and structural factors influencing vaccination. Fear and mistrust in institutions (e.g., government, public health) was a major theme across groups, stemming from different types of trauma: historical (rooted in colonialism, classism, and structural racism), cultural (loss of land, community leaders, and collective identity), and social (racial- and income-based inequities, law enforcement, and mistreatment in healthcare system).	Moderate

<p>De Genna, N.M., Hossain, F., Dwarakanath, M., Balascio, P.M., Moore, M.M., & Hill, A.V. (2023). Pandemic stressors and vaccine hesitancy among young, pregnant Black people: A qualitative study of health disparities during a global pandemic. <i>Birth Defects Research, 115</i>(20), 1912–1922.</p>	<p>Dec 1, 2023</p>	<p>Qualitative</p>	<p>n=25 Black and biracial pregnant and birth participants (aged 16-23)</p> <p>Pittsburgh, Pennsylvania, United States</p>	<p>Semi-structured interviews were conducted to investigate factors influencing COVID-19 vaccine decision-making.</p> <p>Participants felt pressured by their health care provider to get the vaccine and felt that they played upon fears of harming baby or other family members. Vaccine hesitancy was related to mistrust in healthcare providers and government organizations, a legacy of racism in medicine and research, concerns that the vaccine hadn't been tested sufficiently in pregnant people, and possible side effects of the vaccine, including infection and pregnancy loss.</p>	<p>High</p>
<p>Bowen, C.D., Summersill, A.R., Google, A.N., Aadnes, M.G., & Barnes, M.E. (2023). Exploring Black undergraduate students' communication and biology education experiences about COVID-19 and COVID-19 vaccines during the pandemic. <i>CBE Life Sciences Education, 22</i>(4), ar42.</p>	<p>Sep 26, 2023</p>	<p>Qualitative</p>	<p>n=23 Black undergraduate science students</p> <p>Arizona, Tennessee, Texas, North Carolina, Florida, Michigan, New York, California, and Alabama, United States</p>	<p>Interviews were conducted to understand students' experiences communicating about vaccines with others in their communities.</p> <p>Factors influencing vaccine hesitancy included: misinformation, concerns about the speed of vaccine development, lack of data, and distrust of the government and/or science stemming from historical discrimination towards Black communities.</p>	<p>High</p>

<p>Cross, F.L., Wileden, L., Buyuktur, A.G., Platt, J., Morenoff, J.D., Aramburu, J., ... Woolford, S. J. (2023). MICEAL Black and Latinx perspectives on COVID-19 vaccination: A mixed-methods examination. <i>Journal of Racial and Ethnic Health Disparities</i>, Advance online publication.</p>	<p>Sep 19, 2023</p>	<p>Mixed methods</p>	<p>n=24 Black/African-Americans Michigan, United States</p>	<p>Semi-structured interviews exploring participants' attitudes and intentions regarding the COVID-19 vaccine.</p> <p>Factors influencing vaccine hesitancy included: historical mistreatment of Black communities by medical professionals, fear of side effects, and uncertainty of the efficacy of the vaccine.</p> <p>Factors influencing vaccine uptake included protection for self, family, and community.</p>	<p>High</p>
<p>Ignacio, M., Oesterle, S., Mercado, M., Carver, A., Lopez, G., Wolfersteig, W., ... Doubeni, C. (2023). Narratives from African American/Black, American Indian/Alaska Native, and Hispanic/Latinx community members in Arizona to enhance COVID-19 vaccine and vaccination uptake. <i>Journal of Behavioral Medicine</i>, 46(1-2), 140–152.</p>	<p>Mar 24, 2022</p>	<p>Qualitative</p>	<p>n=42 African American/Black Arizona, United States</p>	<p>Focus groups were conducted to understand factors associated with COVID-19 vaccine hesitancy and confidence.</p> <p>In African American/Black focus groups, vaccine hesitancy was tied to historical and contemporary experiences with racism. This includes research abuses like the Tuskegee syphilis study and health disparities experienced by community members. Participants had a “wait and see” attitude due to uncertainty created by disinformation, the speed of vaccine development, and concerns about potential side effects of the vaccine.</p> <p>Strategies to increase vaccine confidence in all groups included: using testimonials from trusted community members such as local leaders, religious leaders, and those who have received the COVID-19 vaccine.</p>	<p>Moderate</p>

<p>Mohammed, I.S., Widome, R., & Searle, K.M. (2023). COVID-19 vaccine decision-making among Black women: A qualitative study. <i>Vaccine</i>, 41(40), 5813–5819.</p>	<p>Aug 25, 2023</p>	<p>Qualitative</p>	<p>n=60 Black women Minneapolis/St. Paul Metropolitan Area, Minnesota, United States</p>	<p>Semi-structured interviews were conducted to understand factors that influence the decision to get the COVID-19 vaccine.</p> <p>Participants who were highly motivated to get the vaccine mentioned trust in science and wanting to protect themselves and others around them.</p> <p>Participants who delayed vaccination mentioned safety concerns, but often eventually got vaccinated due to mandates. Participants were overall more hesitant about boosters as they felt they had already done their part by getting vaccinated and felt uncomfortable having to get an unknown number of additional vaccines. Many participants had encountered misinformation surrounding the side effects of vaccines, particularly related to reproductive health. Sources of misinformation were often specific to a given Black community (i.e., participants of Caribbean heritage experienced different sources of misinformation than participants with connections in other areas, such as countries in Africa). Concerns were raised regarding historical trauma, structural racism, and mistrust in healthcare, public health, and the government.</p> <p>To improve vaccine confidence, participants recommended clear (i.e., explanation of the vaccine development process), culturally competent (i.e., correct translations, delivered by a trusted community member) communication.</p>	<p>Moderate</p>
---	---------------------	--------------------	--	--	-----------------

<p>Harris, M., Sherrod, D., Walsh, J.L., Hunt, B.R., Jacobs, J., Valencia, J., ... Quinn, K.G. (2023). The influence of racism in healthcare: COVID-19 vaccine hesitancy among Black mothers in Chicago. <i>Journal of Racial and Ethnic Health Disparities</i>. Advance online publication.</p>	<p>Aug 2, 2023</p>	<p>Qualitative</p>	<p>n=10 Black mothers (aged 27-65) Chicago, Illinois, United States</p>	<p>Semi-structured interviews were conducted to explore how healthcare discrimination and mistreatment influenced COVID-19 vaccine decision making.</p> <p>Microaggressions and discrimination from healthcare providers were perceived to be rooted in racist stereotypes and contributed to hesitancy in seeking future healthcare, including vaccines. Fears of experimentation and distrust in the government and pharmaceutical industry were expressed. Safety concerns regarding the speed of vaccine development and potential adverse affects, especially in relation to child health, were expressed.</p> <p>Vaccinated participants mentioned family protection and concern about the high risk of getting COVID-19 as motivators to get vaccinated.</p>	<p>Moderate</p>
<p>Dell'Imperio, S.G., Aboul-Hassan, D., Batchelor, R., Chambers-Peeple, K., Clauw, D.J., DeJonckheere, M., & Bergmans, R.S. (2023). Vaccine perceptions among Black adults with long COVID. <i>Ethnicity & Health, 28</i>(6), 853–873.</p>	<p>Aug, 2023</p>	<p>Qualitative</p>	<p>n=15 Black adults with long COVID Michigan, Illinois, South Carolina, and Georgia, United States</p>	<p>Semi-structured interviews were conducted to explore factors influencing perceptions of COVID-19 vaccines.</p> <p>Five themes that influence vaccine perceptions were identified:</p> <ol style="list-style-type: none"> 1. Vaccine safety and efficacy (i.e., concerns about development speed, viewing the vaccine as a novel treatment) 2. Social factors (i.e., concerns about social implications of being unvaccinated, importance of attitudes (positive or negative) of influential community members toward vaccination), 3. Interpreting vaccine information (i.e., dealing with inconsistent information from health authorities, fear of complications from the vaccine) 4. Mistrust in the government and scientific community due to historical injustices and abuse 5. Long COVID status and prior COVID infection (i.e., some participants were motivated to get vaccinated to avoid another COVID infection, while others were concerned about getting infected from the vaccine and worried it would worsen their long COVID symptoms) 	<p>High</p>

<p>Scales, D., Gorman, S., Windham, S., Sandy, W., Gregorian, N., Hurth, L., ... Gorman, J.M. (2023). 'They've all endorsed it...but I'm just not there:' A qualitative exploration of COVID-19 vaccine hesitancy reported by Black and Latinx individuals. <i>BMJ Open</i>, 13(7), e072619.</p>	<p>Jul 20, 2023</p>	<p>Qualitative</p>	<p>n=30 vaccine-hesitant Black individuals</p> <p>United States</p>	<p>A bulletin board discussion (online, asynchronous) was conducted to examine reasons for vaccine hesitancy.</p> <p>Reasons for hesitancy included:</p> <ul style="list-style-type: none"> • Safety concerns • Skepticism about vaccine efficacy • Risk/benefit calculations not perceived to favour vaccines (e.g., vaccines are riskier than the virus) • Limited trust in institutions (e.g., physicians, government, and public health authorities) 	<p>High</p>
<p>Whang, C., Lynch, K.A., Huang, T., & Tsui, E.K. (2023). Critical dynamics in Black and Latino parents' perceptions of childhood COVID-19 vaccination: How the "middle" moves. <i>Journal of Health Communication</i>, 28(s up1), 86–96.</p>	<p>Jun 30, 2023</p>	<p>Qualitative</p>	<p>n=24 Black and Latino parents of children aged 5-11</p> <p>United States</p>	<p>This study used interviews to understand parental vaccine hesitancy.</p> <p>Factors contributing to vaccine hesitancy included:</p> <ul style="list-style-type: none"> • Mistrust in the healthcare system • Fear of deportation among undocumented migrants (worried that visiting vaccination sites could disclose their migration status and possibly result in legal action) • Previous negative healthcare experiences <p>Parents mainly relied on the social norms and decisions of other parents to aid their decision-making. They recommended transparent and supportive conversations, and further suggested the potential benefit of community ambassador models of vaccination promotion (i.e., leveraging lay community members and their local social ties and networks) to promote vaccine education and build trust.</p>	<p>Moderate</p>

<p>Avorgbedor, F., Gondwe, K.W., Aljarrah, A., & Bankole, A.O. (2023). COVID-19 vaccine decision-making among Black pregnant and postpartum women. <i>Journal of Racial and Ethnic Health Disparities</i>, Advance online publication.</p>	<p>Jun 19, 2023</p>	<p>Qualitative</p>	<p>n=23 pregnant and postpartum Black women North Carolina, United States</p>	<p>Semi-structured, one-on-one interviews were conducted to understand factors influencing vaccine decision-making.</p> <p>Reasons to receive the vaccine included wanting to protect family and pressure from family and friends.</p> <p>Reasons not to receive the vaccine included personal beliefs, practices of using herbal and natural remedies, and the vaccine not fitting religious and cultural values. There was also mistrust in the vaccine stemming from its rapid development and lack of long-term information.</p> <p>Participants' exposure to other people's experiences with COVID-19 infection and the vaccine encouraged some and deterred others from getting the vaccine. Perceptions about the vaccine and pregnancy were also mixed. Some believed that pregnant women should not receive the vaccine and preferred to wait until after they gave birth. Others felt that being Black and pregnant made them more susceptible to COVID-19, so the vaccine would protect them and their unborn children.</p>	<p>High</p>
--	---------------------	--------------------	--	--	-------------

<p>Ameen, K., St Jean, D.T., & Woko, C. (2023). "They don't really consider us essential, but we are": A qualitative investigation of vaccine acceptance and perceived workplace safety among Black transit workers during the COVID-19 pandemic. <i>Journal of Racial and Ethnic Health Disparities</i>, 1–11. Advance online publication.</p>	<p>May 23, 2023</p>	<p>Qualitative</p>	<p>n=10 Black public transit workers</p> <p>Atlanta, Georgia, United States and New York, New York, United States</p>	<p>Semi-structured focus groups were conducted to explore intentions regarding COVID-19 vaccine uptake.</p> <p>Participants were skeptical about the vaccine information they received and were concerned about rushed development, serious side effects from the vaccine, and succumbing to breakthrough infections even when vaccinated. Participants found information sources conflicting and had difficulty deciphering facts from mis/disinformation. Participants felt that vaccine communications were being pushed on them and emphasized the importance of personal choice.</p> <p>Perceived advantages of getting vaccinated included:</p> <ul style="list-style-type: none"> • Decreasing illness severity • Increasing protection with high exposure transit work • Social benefits (i.e., protecting others, returning to social activities, relieving social pressure to get vaccinated) • Achieving herd immunity <p>Perceived disadvantages of getting vaccinated included:</p> <ul style="list-style-type: none"> • Side effects from the vaccine • Feeling that it was too early to know the long-term effects of the vaccine • Being skeptical about boosters. <p>Getting vaccinated at work and accessible community vaccination (i.e., simple booking, walk-in opportunities, flexible hours) were enablers to vaccination. Participants said that an employer vaccine mandate would encourage vaccination.</p>	<p>High</p>
---	---------------------	--------------------	---	--	-------------

<p>Soboti, J.M. (2023). “If you are going to step on this campus, you have to get vaccinated”: A qualitative understanding of COVID-19 vaccine hesitancy among Black emerging adults returning to college campuses. <i>Emerging Adulthood</i>, 11(3), 735-747.</p>	<p>Mar 7, 2023</p>	<p>Qualitative</p>	<p>n=14 vaccine hesitant Black college students East Coast, United States</p>	<p>Semi-structured interviews were conducted to understand factors that shaped perceptions and decisions about the vaccine.</p> <p>Personal reasons for vaccine hesitancy included:</p> <ul style="list-style-type: none"> • Body autonomy • Fear of side effects and impacts on reproductive health and preexisting health issues • Anxiety about vaccinating • Confusion from conflicting information about the vaccine • Lack of safety • Feeling forced • Feeling like a “lab rat” <p>External reasons for vaccine hesitancy included:</p> <ul style="list-style-type: none"> • College mandates made them feel suspicious and limited ability to choose • Limited access to information about the vaccine • Speed of vaccine development • Lack of trust in government and the medical field due to historical racism and medical mistreatment of Black Americans <p>Reasons for vaccination included their family’s wellbeing and a desire for life to ‘get back to normal’ and return to school.</p>	<p>High</p>
--	--------------------	--------------------	--	--	-------------

<p>Cunningham-Erves, J., George, W., Stewart, E.C., Footman, A., Davis, J., Sanderson, M., ... Brandt, H.M. (2023). COVID-19 vaccination: Comparison of attitudes, decision-making processes, and communication among vaccinated and unvaccinated Black Americans. <i>International Journal of Environmental Research and Public Health</i>, 20(4), 3481.</p>	<p>Feb 16, 2023</p>	<p>Mixed methods</p>	<p>n=30 Black Americans Nashville/Davidson County, Tennessee, United States</p>	<p>Open-ended interviews were conducted to understand attitudes, facilitators, and barriers to vaccination, as well as preferred information and communication channels.</p> <p>Among vaccinated individuals, reasons for vaccination included:</p> <ul style="list-style-type: none"> • Health benefits • Trust in the research • Trust built through long-term relationships with healthcare providers • Wanting to protect family members and their community • The need to create a sense of normalcy in life <p>Among unvaccinated individuals, reasons for vaccine hesitancy included:</p> <ul style="list-style-type: none"> • Concerns about the vaccine’s newness, safety, and speed of development (this was amplified when making the decision for their children) • Perceived ineffectiveness of the vaccine • Lack of information and misinformation about the vaccine • Lack of trust in the healthcare system, researchers, government, and pharmaceutical companies • Belief that the vaccine is not necessary • Concern for potential short- and long-term side effects • Inconvenient locations and times for vaccination sites 	<p>Moderate</p>
---	---------------------	----------------------	--	---	-----------------

<p>Mansfield, L.N., Carson, S.L., Castellon-Lopez, Y., Casillas, A., Morris, D., Ntekume, E., ... Brown, A.F. (2022). Exploring perspectives on establishing COVID-19 vaccine confidence in Black communities. <i>Ethnicity & Disease</i>, 32(4), 341–350.</p>	<p>Oct 20, 2022</p>	<p>Qualitative</p>	<p>n=17 Black participants at high risk for COVID-19 infection</p> <p>Los Angeles County, California, United States</p>	<p>Semi-structured focus groups were conducted to explore factors influencing COVID-19 vaccine confidence and access.</p> <p>Historical government inaction and racism and historical unethical research practices involving the Black community decreased vaccine confidence. An overemphasis on Black vaccine hesitancy compared to other hesitant groups created concerns of stigmatization (i.e., concerns that people will view the Black community more negatively than other communities that express vaccine hesitancy because of the overemphasis on Black vaccine hesitancy in the media). Participants felt that there was an ignorance to the root cause of hesitancy (i.e., historical and current events causing distrust) among leaders and policy makers.</p> <p>The need for community-led efforts (i.e., information availability, transport to appointments, appointment registration) and tailored public health strategies were identified as factors needed to address vaccine inequities and hesitancy.</p>	<p>High</p>
--	---------------------	--------------------	---	--	-------------

<p>Butler, J.Z., Carson, M., Rios-Fetchko, F., Vargas, R., Cabrera, A., Gallegos-Castillo, A., ... Grumbach, K. (2022). COVID-19 vaccination readiness among multiple racial and ethnic groups in the San Francisco Bay Area: A qualitative analysis. <i>PloS One</i>, 17(5), e0266397.</p>	<p>May 12, 2022</p>	<p>Qualitative</p>	<p>n=35 Black/African American residents</p> <p>San Francisco Bay Area, United States</p>	<p>Focus groups and interviews were conducted to explore knowledge and beliefs about vaccination and assess views on vaccination outreach and delivery strategies.</p> <p>Participants were concerned about the vaccine’s protection against variants, long-term effects, and speed of production and safety testing. They experienced information overload and received misinformation from social media, news outlets, friends, and family members. Due to these information challenges, they adopted a “wait and see” approach to vaccination. Participants also mentioned mistrust of governmental, medical, and other institutions due to historical racial injustices and negative personal experiences with the health care system.</p> <p>The greatest motivators for getting vaccinated were economic (e.g., returning to work), social (e.g., return to social normalcy), and health benefits. Community-based organizations were trusted messengers about the vaccine.</p> <p>Barriers to vaccine access included transportation, limited locations, and limited availability. To facilitate vaccine access, participants wanted more community-run vaccination locations and more outreach services to help schedule appointments and provide information.</p>	<p>High</p>
---	---------------------	--------------------	---	--	-------------

<p>Dong, L., Bogart, L.M., Gandhi, P., Aboagye, J.B., Ryan, S., Serwanga, R., & Ojikutu, B.O. (2022). A qualitative study of COVID-19 vaccine intentions and mistrust in Black Americans: Recommendations for vaccine dissemination and uptake. <i>PloS One</i>, 17(5), e0268020.</p>	<p>May 3, 2022</p>	<p>Qualitative</p>	<p>n=24 Black/African Americans United States</p>	<p>Semi-structured interviews examining reasons for low vaccination intentions and preferred strategies to promote COVID-19 vaccination.</p> <p>Barriers to vaccination included:</p> <ul style="list-style-type: none"> • Access to vaccination, health insurance, technology to sign-up to receive the vaccine, and information • Mistrust in the healthcare system, government and the pharmaceutical industry • Mistrust in the vaccine and its safety/efficacy • Misinformation about the vaccine <p>Participant-identified strategies to improve vaccine uptake included:</p> <ul style="list-style-type: none"> • Acknowledging systemic racism • Improving trust • Tailoring strategies to promote vaccine uptake to the community • Engagement between healthcare providers, social services and communities • Messaging that is transparent, in accessible language, and includes research findings • Information shared by trusted sources (Black or other trusted researchers, celebrities, local leaders) online, in-person or on news media outlets • Having a variety of convenient locations to receive the vaccine to cater to individual comfort levels (some participants preferred hospitals, others preferred non-medical facilities). • Describe vaccination as a choice and as empowerment 	<p>Moderate</p>
---	--------------------	--------------------	--	---	-----------------

<p>Sekimitsu, S., Simon, J., Lindsley, M.M., Jones, M., Jalloh, U., Mabogunje, T., ... Altman, W. (2022). Exploring COVID-19 vaccine hesitancy amongst Black Americans: Contributing factors and motivators. <i>American Journal of Health Promotion</i>, 36(8), 1304–1315.</p>	<p>May 3, 2022</p>	<p>Mixed methods</p>	<p>n=18 Black Americans Boston, Massachusetts, United States</p>	<p>Semi-structured in-depth interviews to explore vaccine hesitancy amongst Black Americans.</p> <p>Factors impacting vaccine hesitancy include:</p> <ul style="list-style-type: none"> • Fear of needles • Fear of side effects • Lack of trust in the government, healthcare system and pharmaceutical companies • Personal experience of past medical mistreatment • Past experience with a vaccination or medical condition making the participant vary of vaccination • General vaccine hesitancy • Fear of being treated like a 'guinea pig' • Feel at low risk for COVID-19 • Lack of accessible information • Lack of people of colour involved in vaccine production and testing • Concerns related to the rapid vaccine development • Unsettled feeling regarding the vaccine. <p>Factors impacting vaccine uptake include:</p> <ul style="list-style-type: none"> • Access to information • Participants doing their own research and seeing friends and family get vaccinated • Advice to get vaccinated from their physician • Vaccine requirements for opportunities such as travel and employment • Protecting friends, family, and community • More time and data related to the vaccine. 	<p>Low</p>
---	--------------------	----------------------	---	---	------------

<p>Kerrigan, D., Mantsios, A., Karver, T.S., Davis, W., Taggart, T., Calabrese, S.K., ... Harris, K.M. (2023). Context and considerations for the development of community-informed health communication messaging to support equitable uptake of COVID-19 vaccines among communities of color in Washington, DC. <i>Journal of Racial and Ethnic Health Disparities</i>, 10(1), 395–409.</p>	<p>Feb 3, 2022</p>	<p>Qualitative</p>	<p>n=35 African Americans Washington, DC, United States</p>	<p>Semi-structured interviews and focus groups were conducted to explore barriers and facilitators to vaccine uptake.</p> <p>Participants expressed distrust in government and the medical establishment because of historical mistreatment of Black communities. Participants were skeptical of vaccine safety and the speed of development, noting fears of unknown side effects. They wanted more detailed information about the vaccines.</p> <p>When asked about ways to improve vaccine uptake, they suggested leveraging trusted channels (e.g., grassroots mobilizing) and trusted messengers (e.g., community leaders). They also proposed messaging that would encourage uptake within their communities. Participants resonated with messaging about science and getting to the other side of the pandemic. Awareness of Black scientists' involvement in vaccine development could improve trust.</p>	<p>Moderate</p>
<p>Budhwani, H., Maycock, T., Murrell, W., & Simpson, T. (2021). COVID-19 vaccine sentiments among African American or Black adolescents in rural Alabama. <i>Journal of Adolescent Health</i>, 69(6), 1041–1043.</p>	<p>Dec, 2021</p>	<p>Qualitative</p>	<p>n=28 African American or Black adolescents (aged 15-17) Selma, Alabama, United States</p>	<p>In-depth interviews were conducted to explore sentiments toward COVID-19 vaccination.</p> <p>Three themes emerged as influencing vaccine decisions:</p> <ol style="list-style-type: none"> 1. Vaccine-related behaviours and sentiments of community members and older family members (i.e., the opinions of these individuals could convince the participants to get, or not to get, vaccinated). 2. Misinformation, particularly focused on vaccine side effects 3. Distrust in government and healthcare 	<p>Moderate</p>

<p>Balasuriya, L., Santilli, A., Morone, J., Ainooson, J., Roy, B., Njoku, A., ... Venkatesh, A. (2021). COVID-19 vaccine acceptance and access among Black and Latinx communities. <i>JAMA Network Open</i>, 4(10), e2128575.</p>	<p>Oct 13, 2021</p>	<p>Qualitative</p>	<p>n=36 Black, n=8 Black and Latinx residents</p> <p>New Haven, Connecticut, United States</p>	<p>Focus groups were conducted to understand barriers and facilitators of vaccine access and acceptance.</p> <p>Factors that negatively impacted vaccine access and acceptance included:</p> <ul style="list-style-type: none"> • Distrust due to historical and ongoing mistreatment of Black communities • Disparate death rates from COVID-19 infection • Experiences of being ignored by the health care system • Limited vaccine availability in Black communities • Complicated sign-up processes • Not knowing that insurance was not required for vaccinations <p>Facilitators of vaccine access and acceptance were:</p> <ul style="list-style-type: none"> • Sharing consistent, fact-based, and transparent information through trusted messengers • Personal choice, social support, and seeing diversity at the vaccination site • Offering vaccines through schools, workplaces, and community partnerships 	<p>Moderate</p>
--	---------------------	--------------------	--	--	-----------------

<p>Christian, S.N., Casas, A.D., Geffel, K.M., Gary-Webb, T.L., Hardy, H.E., Harris, R., & Mendez, D.D. (2022). Impact of COVID-19 on a community health coalition and its residents in Allegheny County, Pennsylvania: Insights into adaptation from focus groups and evaluation reports. <i>Health Promotion Practice, 23</i>(1_suppl), 174S–184S.</p>	<p>Nov 14, 2022</p>	<p>Qualitative</p>	<p>n=30 residents of majority Black neighbourhoods</p> <p>Allegheny County, Pennsylvania, United States</p>	<p>Four focus groups were conducted to discuss the impact of COVID-19 and views about vaccines.</p> <p>Beliefs contributing to vaccine hesitancy included:</p> <ul style="list-style-type: none"> • Possibility of being injected with the coronavirus • Vaccine is unnecessary • Vaccine would not help • Confusion about how the vaccine works and its safety (i.e., changing information is confusing) • Insincere motives behind monetary incentives (i.e., belief that the primary motivation to vaccinate communities of colour was that their susceptibility to the virus puts the rest of the population at risk). <p>Participants preferred receiving vaccine information from trusted messengers (e.g., people in the Black community, doctors of the same ethnicity, pastors).</p>	<p>High</p>
--	---------------------	--------------------	---	--	-------------

Influenza Vaccine (n=8)					
New evidence reported on February 14, 2024					
<p>Mantina, N.M., Ngaybe, M.B., Johnson, K., Velickovic, S., Magrath, P., Gerald, L.B., ... Madhivanan, P. (2022). Racial/ethnic disparities in influenza risk perception and vaccination intention among Pima County residents in Arizona. <i>Human Vaccines & Immunotherapeutics</i>, 18(7), 2154506.</p>	Dec 30, 2022	Qualitative	n=5 African American Pima County, Arizona, United States	<p>Focus groups were conducted to understand factors that influence influenza vaccine decision-making during the COVID-19 pandemic.</p> <p>Motivators to get vaccinated included:</p> <ul style="list-style-type: none"> • Being concerned about getting influenza from socializing • Wanting to protect community members, • Vaccination as a routine practice in the participant's life • Physician recommendation • Required vaccination for employment/education • Convenient vaccination options (i.e., local pharmacy, employer). <p>Participants also discussed the importance of their vaccination decision being in agreement with their family's vaccination decision.</p>	High
Previously reported evidence					
<p>Henderson, V., Madrigal, J.M., & Handler, A. (2020). A mixed methods study: Midlife African American women's knowledge, beliefs, and barriers to well-woman visit, flu vaccine, and mammogram use. <i>Journal of Women & Aging</i>, 32(3), 292-313.</p>	May 1, 2020	Mixed methods	<p>African American women aged 40-64 years, n=124 online survey and n=19 in-depth interviews</p> <p>Chicago, Illinois, United States</p>	<p>This study examined relationships between knowledge of, beliefs about, and barriers to well-woman visits, flu vaccines, and mammograms.</p> <p>Beliefs or misperceptions about influenza vaccination (e.g., skeptical or distrustful of them, feelings that their immune systems were strong enough to fight off potential infections, beliefs that the flu shot caused illness rather than prevented it, or feelings they were not at high risk for illness) led to decisions not to be vaccinated.</p> <p>Women who did obtain annual flu shots did so to protect themselves from illness due to the nature of their work or because of current chronic medical conditions (e.g., asthma).</p> <p>Providers may be able to provide information and address incongruent beliefs through patient interaction.</p>	High

Jamison, A.M., Quinn, S.C., & Freimuth, V.S. (2019). "You don't trust a government vaccine": Narratives of institutional trust and influenza vaccination among African American and white adults . <i>Social Science & Medicine</i> , 221, 87-94.	Jan 1, 2020	Mixed methods	n=119 White and African American adults; semi-structured interviews (n=12), 9 focus groups (n = 91), in-depth interviews (n=16) Maryland and Washington, DC, United States	This mixed-methods investigation of racial disparities in influenza vaccination was guided by grounded theory. Most participants distrusted government and pharmaceutical companies, which were viewed to be motivated by profit. Regardless of background knowledge, concerns about vaccines were related to trust in the sources of information and the healthcare system.	Moderate
Marsh, H.A., Malik, F., Shapiro, E., Omer, S.B., & Frew, P.M. (2014). Message framing strategies to increase influenza immunization uptake among pregnant African American women . <i>Maternal and Child Health Journal</i> , 18(7), 1639-1647.	Dec 12, 2013	Qualitative	n=21 pregnant African American women at urban OB/GYN clinics who had not received an influenza vaccine Atlanta, Georgia, United States	Semi-structured interviews were conducted to explore attitudes, opinions, and concerns of African American women regarding influenza vaccination during pregnancy. Most women indicated that positively framed messages focusing on infant's health, such as protection against preterm birth and low birth weight outcomes, would encourage them to receive an influenza vaccine. Messages via interpersonal networks and social media strongly influenced motivation to vaccinate.	Low
Cameron, K.A., Rintamaki, L. S., Kamanda-Kosseh, M., Noskin, G.A., Baker, D.W., & Makoul, G. (2009). Using theoretical constructs to identify key issues for targeted message design: African American seniors' perceptions about influenza and influenza vaccination . <i>Health Communication</i> , 24(4), 316-326.	Jun 3, 2009	Qualitative	n=48 African American seniors aged 65 and older Large urban Midwestern city, United States	Six focus groups were conducted to identify perceptions about influenza and influenza vaccination. The extended parallel process model, which suggests that effective messaging needs to include elements of both threat (susceptibility and severity) and efficacy (self-efficacy and response efficacy), was used. Perceived susceptibility varied based on perceptions of individual health status, background knowledge, and age-related risk. Some saw influenza as a minor nuisance; others viewed it as threatening and potentially deadly. Self-efficacy was related to vaccine accessibility and affordability. Some participants had confidence in the vaccine, some questioned its preventive ability or believed that the vaccine caused influenza, and others noted expected side effects.	Moderate

				Given the correct and incorrect beliefs held by participants, effective messages to promote vaccination must provide sufficient information to induce both high levels of threat and belief in efficacy.	
Wray, R.J., Jupka, K., Ross, W., Dotson, D., Whitworth, A.R., & Jacobsen, H. (2007). How can you improve vaccination rates among older African Americans? <i>The Journal of Family Practice</i> , 56(11), 925-929.	Nov 2007	Qualitative	Four focus groups (n=35) and 8 in-depth interviews with African Americans 50 years of age and older Midwestern city, United States	Focus groups and interviews were used to explore older African Americans' concerns about the flu vaccine. Fear of getting the flu from vaccination was widespread, as were concerns about interactions with medications and allergic reactions. Participants doubted vaccine effectiveness and distrusted both the vaccine and the healthcare system. The authors recommend that healthcare providers address vaccine efficacy, safety, side effects, and drug interactions.	Low
Harris, L.M., Chin, N.P., Fiscella, K., & Humiston, S. (2006). Barrier to pneumococcal and influenza vaccinations in Black elderly communities: Mistrust. <i>Journal of the National Medical Association</i> , 98(10), 1678-1684.	Oct 2006	Qualitative	n=20 African Americans aged 65 years and older Rochester, New York, United States	Semi-structured interviews were conducted to explore perspectives on influenza vaccination among vaccinated and unvaccinated individuals. Most vaccinated participants viewed vaccines as a preventive measure, while the unvaccinated group viewed vaccines as irrelevant to their health and believed vaccines caused illness. Willingness to be vaccinated was largely influenced by prior positive or negative experiences with healthcare systems.	Moderate
Sengupta, S., Corbie-Smith, G., Thrasher, A., & Strauss, R.P. (2004). African American elders' perceptions of the influenza vaccine in Durham, North Carolina. <i>North Carolina Medical Journal</i> , 65(4), 194-199.	Jul 2004	Qualitative	n=28 African Americans aged 65 years or older Durham County, North Carolina, United States	In-person interviews were used to explore community vaccination perceptions amongst older African Americans. Physician reminders increased vaccine uptake, as did positive beliefs that the vaccine prevents influenza. Community influences to not get vaccinated and fear of getting the flu from the vaccination decreased confidence. Primary care settings are important, as they are the most likely settings for influenza vaccinations.	Moderate

Pneumococcal Vaccine (n=1)					
Previously reported evidence					
Brown, T., Goldman, S.N., Acosta, F., Garrett, A.M., Lee, J.Y., Persell, S. D., & Cameron, K. A. (2017). Understanding Black patients' refusal of pneumococcal vaccination. <i>Journal of Racial and Ethnic Health Disparities</i> , 4(1), 1-8.	Dec 22, 2015	Mixed methods	n=40 African American primary care aged 65 years or over; 95 % female. Chicago, Illinois, United States	<p>In this mixed-method study, older adults surveyed reported that while most participants recognized pneumonia could be deadly, they also reported low perception of personal susceptibility. Participants perceived childhood vaccines to be safer than adult vaccines.</p> <p>In follow-up qualitative interviews, reasons for not accepting vaccination included low perceptions of personal susceptibility, fear of side effects, and mistrust.</p> <p>Strategies to increase vaccination uptake may need to emphasize individual susceptibility. Further, given the discrepancies in perceptions toward childhood versus adult vaccinations, focusing on vaccination across the lifespan may be a promising vaccine promotion strategy.</p>	High
Childhood Vaccines (n=1)					
Previously reported evidence					
Shui, I., Kennedy, A., Wooten, K., Schwartz, B., & Gust, D. (2005). Factors influencing African-American mothers' concerns about immunization safety: A summary of focus group findings. <i>Journal of the National Medical Association</i> , 97(5), 657-666.	May 2005	Qualitative	n=53 African American mothers in 6 focus groups in Atlanta, Georgia, United States	<p>Focus groups were conducted to examine vaccine safety concerns of African American mothers who, despite concerns, have had their children vaccinated.</p> <p>Lack of information and mistrust of the medical community and government were reasons for low vaccine confidence.</p> <p>Reasons for vaccine uptake, despite low confidence, included social norms and/or laws requiring vaccination and fear of consequences of not vaccinating.</p> <p>Suggestions given to improve vaccine confidence included improved provider communication and additional tailored information about the necessity and safety of vaccines.</p>	Moderate

Monkeypox (n=1)					
New evidence reported on February 14, 2024					
<p>Turpin, R.E., Mandell, C.J., Camp, A.D., Davidson Mhonde, R.R., Dyer, T.V., Mayer, K.H., ... Boekeloo, B.O. (2023). Monkeypox-related stigma and vaccine challenges as a barrier to HIV pre-exposure prophylaxis among Black sexual minority men. <i>International Journal of Environmental Research and Public Health</i>, 20(14), 6324.</p>	<p>Jul 8, 2023</p>	<p>Qualitative</p>	<p>n=24 Black Sexual Minority Men (BSMM)</p> <p>District of Columbia, Maryland and Virginia, United States</p>	<p>Semi-structured interviews exploring the experiences and perceptions of BSMM related to Monkeypox (mpox).</p> <p>Barriers to vaccine uptake included:</p> <ul style="list-style-type: none"> • Vaccine availability • Rationing of vaccines (i.e., participants questioned changing dosing guidelines and the impact on the effectiveness of the vaccine) • Vaccine resistance (participants were uncertain of biomedical prevention broadly related to past medical abuses in Black communities) • Stigma around receiving the vaccine and engaging in sexually risky behaviors 	<p>High</p>

Table 3: Individuals experiencing homelessness or who are precariously housed: Syntheses

Reference	Date Released	Description of Included Studies	Summary of findings	Quality Rating: Synthesis	Quality Rating: Included Studies
General Vaccination (n=1)					
Previously reported evidence					
Babando, J., Quesnel, D.A., Woodmass, K., Lomness, A., & Graham, J.R. (2022). Responding to pandemics and other disease outbreaks in homeless populations: A review of the literature and content analysis . <i>Health & Social Care in the Community</i> , 30, 11-26.	Apr 6, 2021	This review included 223 studies of individuals experiencing homelessness; 11 studies were specific to vaccination strategies.	<p>Content analysis was conducted on studies examining vaccination strategies during pandemic or outbreak response and planning for rapid-spread illnesses with contact spread in homeless populations.</p> <p>The authors highlight the unique challenges for planning, implementing, and communicating pandemic-associated public health measures.</p> <p>The authors conclude that vaccines should be free; cost is one of the biggest barriers to uptake and may be facilitated by improved access to care, drop-in clinics in shelters, and good case management.</p> <p>Establishing incentives and education programs for service providers and recipients, strategies such as “blitzing” (e.g., offering influenza vaccines to a large cohort), and partnerships to administer vaccines (e.g., with faith-based organizations, local government, academic institutions) have also been shown to be successful.</p>	Moderate	Not done

Table 4: Individuals experiencing homelessness or who are precariously housed: Single studies

Reference	Date Released	Study Design	Participants, Setting	Summary of findings	Quality Rating:
COVID-19 Vaccination (n=4)					
New evidence reported on February 14, 2024					
Balma, B., Vasilakos, L., Osman, I., Elgonda, A., & Gerwitz O'Brien J.R. (2023). COVID-19 vaccine attitudes among youth experiencing homelessness: a qualitative analysis with opportunities for action . <i>BMC Public Health</i> , 23, 1672.	Aug 31, 2023	Qualitative	n=20 youth (aged 12-24) experiencing homelessness Hennepin County, Minnesota, United States	<p>Focus groups were conducted to describe youth perspectives on factors that influence (and strategies to improve) vaccine confidence and access.</p> <p>Factors included:</p> <ul style="list-style-type: none"> • Historical harms and mistrust of systems • Misinformation and a lack of reliable information sources • Prioritizing basic needs over vaccination • Pre-existing health conditions • Barriers to healthcare (i.e., lack of insurance, identification) • Fear and uncertainty of the vaccines • Sense of body autonomy (i.e., wanting personal choice over what is done to one's body, concerns about being forced to vaccinate) • Community influence (i.e., community attitudes toward the vaccine influence decision making, youth may want to get vaccinated to protect community). <p>Youth-driven strategies to improve included:</p> <ul style="list-style-type: none"> • Promoting autonomy and agency (i.e., encouraging ability of youth to choose if/when/where/which vaccine to receive). • Utilizing trusting sources of information (i.e., displaying information in trusted spaces, including youth in messaging development) • Improving vaccine accessibility (i.e., improving transit access and free/non-insurance-based vaccine sites) 	Moderate

<p>Grune, J., Savelsberg, D., Kobus, M., Lindner, A.K., Herrmann, W.J., & Schuster, A. (2023). Determinants of COVID-19 vaccine acceptance and access among people experiencing homelessness in Germany: A qualitative interview study. <i>Frontiers in Public Health</i>, 11, 1148029.</p>	<p>Mar 24, 2023</p>	<p>Qualitative</p>	<p>n=20 adults experiencing homelessness Berlin, Germany</p>	<p>Semi-structured interviews were conducted to understand factors determining acceptance and access to the COVID-19 vaccine.</p> <p>Factors influencing acceptance include:</p> <ul style="list-style-type: none"> • Confidence in safety and efficacy of the vaccine • Confidence in the political and healthcare systems • Perceived risk of COVID-19 • Collective responsibility and protection • Individual benefit-risk weighing (i.e., wanting to return to daily life activities, reduce testing) <p>Factors influencing access included:</p> <ul style="list-style-type: none"> • Availability and awareness of needs (i.e., information from facilities for people experiencing homelessness, addressing language barriers) • Accessibility and affordability (e.g., transportation access to public vaccination centres, vaccinations at facilities for people experiencing homelessness was preferred) • Acceptability and adequacy of service (i.e., long wait times, need for identification documents) 	<p>Moderate</p>
<p>Gin, J.L., Balut, M.D., & Dobalian, A. (2022). COVID-19 vaccine hesitancy among U.S. veterans experiencing homelessness in transitional housing. <i>International Journal of Environmental Research and Public Health</i>, 19(23), 15863.</p>	<p>Nov 29, 2022</p>	<p>Qualitative</p>	<p>n= 20 male Veterans (aged 29-65) experiencing homelessness enrolled in transitional housing programs California, Florida, Iowa, Kentucky, and Massachusetts, United States</p>	<p>Semi-structured interviews were conducted to examine COVID-19 vaccination attitudes and uptake.</p> <p>Veterans who were willing to get the vaccine wanted to prevent illness, death, and transmission to loved ones and community.</p> <p>Hesitant veterans expressed concerns about vaccine safety (i.e., speed of vaccine development, long term side effects) and mistrust in the government and vaccine manufacturers. Vaccination was also listed as a low priority compared to competing interests such as finding housing.</p> <p>Beliefs about other vaccines (i.e., influenza) and sources of information (i.e., news, internet, medical professionals) influenced beliefs about COVID-19 vaccination.</p>	<p>Moderate</p>

<p>Abramovich, A., Pang, N., Kunasekaran, S., Moss, A., Kiran, T., & Pinto, A.D. (2022). Examining COVID-19 vaccine uptake and attitudes among 2SLGBTQ+ youth experiencing homelessness. <i>BMC Public Health</i>, 22(1), 122.</p>	<p>Jan 18, 2022</p>	<p>Mixed methods</p>	<p>n=32 2SLGBTQ+ youth (aged 14-29) at risk of, or experiencing, homelessness</p> <p>Toronto, Durham, Peel, York Region, Hamilton, Barrie, Guelph, and Waterloo, Ontario, Canada</p>	<p>In-depth, semi-structured, one-on-one interviews were conducted to explore factors impacting vaccine uptake.</p> <p>Participants that were confident in the vaccine believed that it could curb the spread of virus and provide protection against infection, and they viewed vaccine information as reliable and trustworthy.</p> <p>Those who were not vaccinated mentioned the following factors that impacted their uptake: vaccine safety and side effect concerns; trauma and ongoing mental health issues that impacted perception of COVID and interest in vaccination (i.e., risk of infection seemed manageable compared to other lived experiences); not trusting vaccine related information and feeling that it was ineffective for their demographic (i.e., messaging to "stay at home" does not resonate); and accessibility issues (i.e., lack of transport, language and culture barriers to vaccine information).</p> <p>Participant-provided solutions to increase vaccine uptake included fostering trust, targeting public health messaging to the demographic, and addressing accessibility needs.</p>	<p>High</p>
<p>General Vaccinations (n=1)</p>					
<p>Previously reported evidence</p>					
<p>Doroshenko, A., Hatchette, J., Halperin, S.A., MacDonald, N.E., & Graham, J.E. (2012). Challenges to immunization: The experiences of homeless youth. <i>BMC Public Health</i>, 12, 338.</p>	<p>May 8, 2012</p>	<p>Qualitative</p>	<p>n=29 youth experiencing homelessness</p> <p>Halifax, Nova Scotia, Canada</p>	<p>This study explored knowledge, attitudes, beliefs, and experiences related to vaccination among youth experiencing homelessness.</p> <p>Youth acknowledged the protective mechanisms of vaccines. Most reported getting vaccinations despite being unsure as to their effectiveness. They often complied with health professional advice to be vaccinated.</p> <p>Immunizations are not a priority for youth because other personal challenges take precedence (e.g., food, finding a place to sleep).</p> <p>Barriers to vaccination uptake:</p>	<p>Moderate</p>

				<ul style="list-style-type: none"> • Lack of information from healthcare providers • Uncertainty among providers about youth qualifying for free vaccines • Cost • Lack of access to immunization services <p>Strategies to improve immunization:</p> <ul style="list-style-type: none"> • Outreach via media: better advertisement of time and location of free clinics via public/commercial locations (e.g., buses, grocery store pamphlets); ensure messaging is framed positively • Youth friendly healthcare systems: thinking outside the box to accommodate their unique needs • Improved access: using shelters as access point for vaccinations 	
--	--	--	--	--	--

References

- Abramovich, A., Pang, N., Kunasekaran, S., Moss, A., Kiran, T., & Pinto, A.D. (2022). [Examining COVID-19 vaccine uptake and attitudes among 2SLGBTQ+ youth experiencing homelessness](#). *BMC Public Health*, 22(1), 122.
- Ameen, K., St Jean, D.T., & Woko, C. (2023). ["They don't really consider us essential, but we are": A qualitative investigation of vaccine acceptance and perceived workplace safety among Black transit workers during the COVID-19 pandemic](#). *Journal of Racial and Ethnic Health Disparities*, 1–11. Advance online publication.
- Avorgbedor, F., Gondwe, K.W., Aljarrah, A., & Bankole, A.O. (2023). [COVID-19 vaccine decision-making among Black pregnant and postpartum women](#). *Journal of Racial and Ethnic Health Disparities*, Advance online publication.
- Babando, J., Quesnel, D. A., Woodmass, K., Lomness, A., & Graham, J. R. (2021). [Responding to pandemics and other disease outbreaks in homeless populations: A review of the literature and content analysis](#). *Health & Social Care in the Community*, Epub ahead of print.
- Balasuriya, L., Santilli, A., Morone, J., Ainooson, J., Roy, B., Njoku, A., ... Venkatesh, A. (2021). [COVID-19 vaccine acceptance and access among Black and Latinx communities](#). *JAMA Network Open*, 4(10), e2128575.
- Balma, B., Vasilakos, L., Osman, I., Elgonda, A., & Gerwitz O'Brien J.R. (2023). [COVID-19 vaccine attitudes among youth experiencing homelessness: a qualitative analysis with opportunities for action](#). *BMC Public Health*, 23, 1672.
- Bowen, C.D., Summersill, A.R., Google, A.N., Aadnes, M.G., & Barnes, M.E. (2023). [Exploring Black undergraduate students' communication and biology education experiences about COVID-19 and COVID-19 vaccines during the pandemic](#). *CBE Life Sciences Education*, 22(4), ar42.
- Brown, T., Goldman, S. N., Acosta, F., Garrett, A. M., Lee, J. Y., Persell, S. D., & Cameron, K. A. (2017). [Understanding Black patients' refusal of pneumococcal vaccination](#). *Journal of Racial and Ethnic Health Disparities*, 4(1), 1-8.
- Budhwani, H., Maycock, T., Murrell, W., & Simpson, T. (2021). [COVID-19 vaccine sentiments among African American or Black adolescents in rural Alabama](#). *Journal of Adolescent Health*, 69(6), 1041–1043.
- Burghouts, J., Del Noyal, B., Uriepero, A., Hermans, P. W., de Waard, J. H., & Verhagen, L. M. (2017). [Childhood vaccine acceptance and refusal among Warao Amerindian caregivers in Venezuela: a qualitative approach](#). *PLoS One*, 12(1), e0170227.
- Burnett, K., Sanders, C., Halperin, D., & Halperin, S. (2020). [Indigenous Peoples, settler colonialism, and access to health care in rural and northern Ontario](#). *Health & Place*, 66, 102445.
- Butler, J.Z., Carson, M., Rios-Fetchko, F., Vargas, R., Cabrera, A., Gallegos-Castillo, A., ... Grumbach, K. (2022). [COVID-19 vaccination readiness among multiple racial and ethnic groups in the San Francisco Bay Area: A qualitative analysis](#). *PLoS One*, 17(5), e0266397.

- Cameron, K. A., Rintamaki, L. S., Kamanda-Kosseh, M., Noskin, G. A., Baker, D. W., & Makoul, G. (2009). [Using theoretical constructs to identify key issues for targeted message design: African American seniors' perceptions about influenza and influenza vaccination.](#) *Health Communication, 24*(4), 316-326.
- Christian, S.N., Casas, A.D., Geffel, K.M., Gary-Webb, T.L., Hardy, H.E., Harris, R., & Mendez, D.D. (2022). [Impact of COVID-19 on a community health coalition and its residents in Allegheny County, Pennsylvania: Insights into adaptation from focus groups and evaluation reports.](#) *Health Promotion Practice, 23*(1_suppl), 174S–184S.
- Cross, F.L., Wileden, L., Buyuktur, A.G., Platt, J., Morenoff, J.D., Aramburu, J., ... Woolford, S. J. (2023). [MICEAL Black and Latinx perspectives on COVID-19 vaccination: A mixed-methods examination.](#) *Journal of Racial and Ethnic Health Disparities*, Advance online publication.
- Cunningham-Erves, J., George, W., Stewart, E.C., Footman, A., Davis, J., Sanderson, M., ... Brandt, H.M. (2023). [COVID-19 vaccination: Comparison of attitudes, decision-making processes, and communication among vaccinated and unvaccinated Black Americans.](#) *International Journal of Environmental Research and Public Health, 20*(4), 3481.
- De Genna, N.M., Hossain, F., Dwarakanath, M., Balascio, P.M., Moore, M.M., & Hill, A.V. (2023). [Pandemic stressors and vaccine hesitancy among young, pregnant Black people: A qualitative study of health disparities during a global pandemic.](#) *Birth Defects Research, 115*(20), 1912–1922.
- Dell'Imperio, S.G., Aboul-Hassan, D., Batchelor, R., Chambers-Peeple, K., Clauw, D.J., DeJonckheere, M., & Bergmans, R.S. (2023). [Vaccine perceptions among Black adults with long COVID.](#) *Ethnicity & Health, 28*(6), 853–873.
- Dong, L., Bogart, L.M., Gandhi, P., Aboagye, J.B., Ryan, S., Serwanga, R., & Ojikutu, B.O. (2022). [A qualitative study of COVID-19 vaccine intentions and mistrust in Black Americans: Recommendations for vaccine dissemination and uptake.](#) *PloS One, 17*(5), e0268020.
- Doroshenko, A., Hatchette, J., Halperin, S. A., MacDonald, N. E., & Graham, J. E. (2012). [Challenges to immunization: The experiences of homeless youth.](#) *BMC Public Health, 12*, 338.
- Driedger, S. M., Cooper, E., Jardine, C., Furgal, C., & Bartlett, J. (2013). [Communicating risk to Aboriginal peoples: First nations and Métis responses to H1N1 risk messages.](#) *PLoS One, 8*(8), e71106.
- Driedger, S. M., Maier, R., Furgal, C., & Jardine, C. (2015). [Factors influencing H1N1 vaccine behavior among Manitoba Métis in Canada: A qualitative study.](#) *BMC Public Health, 15*, 128.
- Fazel, S., Geddes, J. R., & Kushel, M. (2014). [The health of homeless people in high-income countries: descriptive epidemiology, health consequences, and clinical and policy recommendations.](#) *Lancet (London, England), 384*(9953), 1529–1540.
- Gauld, N., Martin, S.N. P., Sinclair, O.T.R., Dumble, F., Petousis-Harris, H., & Grant, C.C. (2022). [Mapping the maternal vaccination journey and influencing factors for Māori women in Aotearoa New Zealand: A qualitative study.](#) *Journal of Primary Health Care, 14*(4), 352–362.

- Gin, J.L., Balut, M.D., & Dobalian, A. (2022). [COVID-19 vaccine hesitancy among U.S. veterans experiencing homelessness in transitional housing](#). *International Journal of Environmental Research and Public Health*, 19(23), 15863.
- Graham, S., Blaxland, M., Bolt, R., Beadman, M., Gardner, K., Martin, K., ... Bryant, J. (2022). [Aboriginal peoples' perspectives about COVID-19 vaccines and motivations to seek vaccination: a qualitative study](#). *BMJ global health*, 7(7), e008815.
- Grune, J., Savelsberg, D., Kobus, M., Lindner, A.K., Herrmann, W.J., & Schuster, A. (2023). [Determinants of COVID-19 vaccine acceptance and access among people experiencing homelessness in Germany: A qualitative interview study](#). *Frontiers in Public Health*, 11, 1148029.
- Harris, L. M., Chin, N. P., Fiscella, K., & Humiston, S. (2006). [Barrier to pneumococcal and influenza vaccinations in Black elderly communities: Mistrust](#). *Journal of the National Medical Association*, 98(10), 1678-1684.
- Harris, M., Sherrod, D., Walsh, J.L., Hunt, B.R., Jacobs, J., Valencia, J., ... Quinn, K.G. (2023). [The influence of racism in healthcare: COVID-19 vaccine hesitancy among Black mothers in Chicago](#). *Journal of Racial and Ethnic Health Disparities*. Advance online publication.
- Henderson, V., Madrigal, J. M., & Handler, A. (2020). [A mixed methods study: Midlife African American women's knowledge, beliefs, and barriers to well-woman visit, flu vaccine, and mammogram use](#). *Journal of Women & Aging*, 32(3), 292-313.
- Ignacio, M., Oesterle, S., Mercado, M., Carver, A., Lopez, G., Wolfersteig, W., ... Doubeni, C. (2023). [Narratives from African American/Black, American Indian/Alaska Native, and Hispanic/Latinx community members in Arizona to enhance COVID-19 vaccine and vaccination uptake](#). *Journal of Behavioral Medicine*, 46(1-2), 140–152.
- Jamison, A. M., Quinn, S. C., & Freimuth, V. S. (2019). ["You don't trust a government vaccine": Narratives of institutional trust and influenza vaccination among African American and white adults](#). *Social Science & Medicine*, 221, 87-94.
- Kerrigan, D., Mantsios, A., Karver, T.S., Davis, W., Taggart, T., Calabrese, S.K., ... Harris, K.M. (2023). [Context and considerations for the development of community-informed health communication messaging to support equitable uptake of COVID-19 vaccines among communities of color in Washington, DC](#). *Journal of Racial and Ethnic Health Disparities*, 10(1), 395–409.
- Lewin, S., Booth, A., Glenton, C., Munthe-Kaas, H., Rashidian, A., Wainwright, M., ... Noyes, J. (2018). [Applying GRADE-CERQual to qualitative evidence synthesis findings: introduction to the series](#). *Implementation Science*, 13(2).
- Liu, C. Y., Chai, S. J., & Watt, J. P. (2020). [Communicable disease among people experiencing homelessness in California](#). *Epidemiology and Infection*, 148, e85.
- Mansfield, L.N., Carson, S.L., Castellon-Lopez, Y., Casillas, A., Morris, D., Ntekume, E., ... Brown, A.F. (2022). [Exploring perspectives on establishing COVID-19 vaccine confidence in Black communities](#). *Ethnicity & Disease*, 32(4), 341–350.

- Mantina, N.M., Ngaybe, M.B., Johnson, K., Velickovic, S., Magrath, P., Gerald, L.B., ... Madhivanan, P. (2022). [Racial/ethnic disparities in influenza risk perception and vaccination intention among Pima County residents in Arizona](#). *Human Vaccines & Immunotherapeutics*, 18(7), 2154506.
- Marsh, H. A., Malik, F., Shapiro, E., Omer, S. B., & Frew, P. M. (2014). [Message framing strategies to increase influenza immunization uptake among pregnant African American women](#). *Maternal and Child Health Journal*, 18(7), 1639-1647.
- Mohammed, I.S., Widome, R., & Searle, K.M. (2023). [COVID-19 vaccine decision-making among Black women: A qualitative study](#). *Vaccine*, 41(40), 5813–5819.
- Nascimento, L.G., Dubé, È., Burns, K.E., Brown, P., Calnan, M., Ward, P.R., ... Meyer, S.B. (2023). [Informing efforts beyond tailored promotional campaigns by understanding contextual factors shaping vaccine hesitancy among equity-deserving populations in Canada: An exploratory qualitative study](#). *International Journal for Equity in Health*, 22(1), 209.
- Neil-Sztramko, S.E., Belita, E., Traynor, R.L., Clark, E., Hagerman, L., & Dobbins, M. (2021). [Methods to support evidence-informed decision-making in the midst of COVID-19: creation and evolution of a rapid review service from the National Collaborating Centre for Methods and Tools](#). *BMC Medical Research Methodology*, 21(231).
- O'Grady, K.-A. F., Dunbar, M., Medlin, L. G., Hall, K. K., Toombs, M., Meiklejohn, J., . . . Andrews, R. M. (2015). [Uptake of influenza vaccination in pregnancy amongst Australian Aboriginal and Torres Strait Islander women: A mixed-methods pilot study](#). *BMC Research Notes*, 8, 169.
- Scales, D., Gorman, S., Windham, S., Sandy, W., Gregorian, N., Hurth, L., ... Gorman, J.M. (2023). ['They've all endorsed it...but I'm just not there:' A qualitative exploration of COVID-19 vaccine hesitancy reported by Black and Latinx individuals](#). *BMJ Open*, 13(7), e072619.
- Schanzer, B., Dominguez, B., Shrout, P. E., & Caton, C. L. (2007). [Homelessness, health status, and health care use](#). *American Journal of Public Health*, 97(3), 464–469.
- Sekimitsu, S., Simon, J., Lindsley, M.M., Jones, M., Jalloh, U., Mabogunje, T., ... Altman, W. (2022). [Exploring COVID-19 vaccine hesitancy amongst Black Americans: Contributing factors and motivators](#). *American Journal of Health Promotion*, 36(8), 1304–1315.
- Sengupta, S., Corbie-Smith, G., Thrasher, A., & Strauss, R. P. (2004). [African American elders' perceptions of the influenza vaccine in Durham, North Carolina](#). *North Carolina Medical Journal*, 65(4), 194-199.
- Shui, I., Kennedy, A., Wooten, K., Schwartz, B., & Gust, D. (2005). [Factors influencing African-American mothers' concerns about immunization safety: A summary of focus group findings](#). *Journal of the National Medical Association*, 97(5), 657-666.
- Simms, A.J., King, K.D., Tsui, N., Edwards, S.A., Mecredy, G., & Métis Nation of Ontario (2023). [COVID-19 vaccine behaviour among citizens of the Métis Nation of Ontario: A qualitative study](#). *Vaccine*, 41(38), 5640–5647.

- Soboti, J.M. (2023). [“If you are going to step on this campus, you have to get vaccinated”: A qualitative understanding of COVID-19 vaccine hesitancy among Black emerging adults returning to college campuses.](#) *Emerging Adulthood*, 11(3), 735-747.
- Storer, D., Lafferty, L., Graham, S., Murphy, D., Rance, J., Brener, L., ... Bryant, J. (2023). [Perceptions of COVID-19 vaccines: Lessons from selected populations who experience discrimination in the Australian healthcare system.](#) *Health & Social Care in the Community*, 2023.
- Sullivan, P., Starr, V., Dubois, E., Starr, A., Acharibasam, J. B., & McIllduff, C. (2023). [Where past meets present: Indigenous vaccine hesitancy in Saskatchewan.](#) *Medical humanities*, 49(2), 321–331.
- Tarrant, M., & Gregory, D. (2001). [Mothers' perceptions of childhood immunizations in First Nations communities of the Sioux lookout zone.](#) *Canadian Journal of Public Health*, 92(1), 42-45.
- Tarrant, M., & Gregory, D. (2003). [Exploring childhood immunization uptake with First Nations mothers in north-western Ontario, Canada.](#) *Journal of Advanced Nursing*, 41(1), 63-72.
- Turpin, R.E., Mandell, C.J., Camp, A.D., Davidson Mhonde, R.R., Dyer, T.V., Mayer, K.H., ... Boekeloo, B.O. (2023). [Monkeypox-related stigma and vaccine challenges as a barrier to HIV pre-exposure prophylaxis among Black sexual minority men.](#) *International Journal of Environmental Research and Public Health*, 20(14), 6324.
- van Doren, T.P., Zajdman, D., Brown, R.A., Gandhi, P., Heintz, R., Busch, L., ... Paddock, R. (2023). [Risk perception, adaptation, and resilience during the COVID-19 pandemic in Southeast Alaska Natives.](#) *Social Science & Medicine*, 317, 115609.
- Vázquez, E., Juturu, P., Burroughs, M., McMullin, J., & Cheney, A.M. (2023). [Continuum of trauma: Fear and mistrust of institutions in communities of color during the COVID-19 pandemic.](#) *Culture, Medicine and Psychiatry*, Advance online publication.
- Willis, D. E., Montgomery, B. E. E., Selig, J. P., Andersen, J. A., Shah, S. K., Li, J., Reece, S., Alik, D., & McElfish, P. A. (2022). [COVID-19 vaccine hesitancy and racial discrimination among US adults.](#) *Preventive Medicine Reports*, 31, 102074.
- Wilson, R. F., Kota, K. K., Sheats, K. J., Luna-Pinto, C., Owens, C., Harrison, D. D., & Razi, S. (2023). [Call out racism and inequity in reports on vaccine intentions.](#) *Nature Human Behaviour*, 7(3), 300–302.
- Whang, C., Lynch, K.A., Huang, T., & Tsui, E.K. (2023). [Critical dynamics in Black and Latino parents' perceptions of childhood COVID-19 vaccination: How the "middle" moves.](#) *Journal of Health Communication*, 28(sup1), 86–96.
- Wray, R. J., Jupka, K., Ross, W., Dotson, D., Whitworth, A. R., & Jacobsen, H. (2007). [How can you improve vaccination rates among older African Americans?](#) *The Journal of Family Practice*, 56(11), 925-929.