

# The use of motivational interviewing to overcome COVID-19 vaccine hesitancy in primary care settings

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## Abstract

Vaccine hesitancy is not a new phenomenon. However, the COVID-19 pandemic has highlighted the impact of political, racial, and health disparities on vaccine hesitancy at a global level. With the creation of the COVID-19 vaccine, a resurgence of vaccine hesitancy has emerged and many are reluctant to receive the vaccination. The reluctance varies from concerns about government interference in vaccine development, to the speed of vaccine development, to long-term health outcomes and potential side effects. Health care professionals need to consider evidence-based approaches that are effective in assisting patients with health care decision-making regarding vaccine uptake. Motivational Interviewing (MI) is an effective technique to positively impact behavior change. Definitions and examples of MI techniques are provided to illustrate how MI can be used to support patient autonomy and provide a safe and trusting environment, with the goal of increasing COVID-19 vaccination uptake.

## KEYWORDS

COVID-19, motivational interviewing, vaccination hesitancy, vaccine acceptance

## 1 | INTRODUCTION

The introduction of the COVID-19 vaccine was a global achievement that highlighted the strength of modern science, medicine, and pharmacology. However, while the development of the vaccine showed the world the power of scientific and medical collaboration, its rollout illustrated the power of faulty narratives and disproven or misrepresented data. Vaccines, especially the COVID-19 vaccine, became the epicenter of the newest culture war and the regrettable struggle between science and misinformation. COVID-19 has exposed long-standing political divisions, racial inequities, science skepticism, and the role of personal freedom in decision-making. These personal and political values have impacted the choices that individuals have made regarding the need for and the safety of the COVID-19 vaccine (AHC MEDIA, 2021; Funk et al., 2020; Salmon et al., 2021). Even with the rollout of the new vaccines, concerns remain high as new variants that are more contagious emerge.

Data suggests that minority and low socio-economic status (SES) groups are disproportionately affected by COVID-19 (Boserup, 2020;

Evans, 2020). However, minority and low SES groups are also identified as having the highest rates of COVID-19 vaccine hesitancy (Moplaisir et al., 2021). Finding techniques to support increasing vaccine uptake in all populations is a key focus of public health professionals (Dzau et al., 2021; Gomez et al., 2021). This article will provide an overview of vaccine hesitancy and discuss the use of motivational interviewing (MI) as a technique to support patient-centered decision-making. Practical tips for applying MI techniques are provided to assist public health nurses frame discussions with patients regarding vaccine hesitancy.

## 2 | VACCINE HESITANCY

Vaccine hesitancy is defined by the SAGE Working Group on Vaccine Hesitancy as the "... delay in acceptance or refusal of vaccination despite availability of vaccination services. Vaccine hesitancy is complex and context specific, varying across time, place and vaccines. It is influenced by factors such as complacency, convenience and confidence" (McDonald, 2015, p. 4163). Vaccine hesitancy is not a new



concept. It has been a worldwide public health issue for many generations (McDonald et al., 2018; Wagner et al., 2020). Vaccine hesitancy has been documented as early as the introduction of the smallpox vaccine in 1902 (Callender, 2016). While vaccines save millions of lives each year; millions of lives are lost due to vaccine refusal (World Health Organization, 2021). Vaccine hesitancy can include all vaccines or just one particular vaccine (McIntosh et al., 2016).

Vaccine hesitancy carries a significant social cost because vaccine refusal allows viruses to infiltrate an otherwise potentially protected community. One well-known strategy is to vaccinate a large enough percentage of a population to reach herd immunity. It is estimated that herd immunity can be reached with 50%–90% of individuals vaccinated, depending on the contagiousness of the disease (Souza & Dowdy, 2021). It is estimated that 63%–76% of the population will need to be vaccinated to achieve herd immunity for the COVID-19 virus (Kadkhoda, 2021).

McIntosh et al. (2016) suggests that vaccine hesitancy is a multifaceted issue consisting of many domains including social, religious, cultural, political and personal factors. Reasons for vaccine hesitancy include but are not limited to lack of trust in pharmaceutical companies, safety concerns, misunderstood perception of impact of illness vs vaccine, and ease of access for receiving vaccines (Salomon et al., 2015). De Figueiredo et al. (2020) reported on global trends of individuals' confidence in the importance, safety and effectiveness of vaccines. Decreased vaccine confidence was consistently found in young males or in individuals with fewer years of education. The study also reported on the ramifications of political turmoil and misinformation on vaccine confidence. Increased vaccine confidence was found in those who had positive information-seeking behaviors and those who trusted their healthcare workers (de Figueiredo, 2020).

Vaccine hesitancy is seen each year with the influenza vaccine. In the United States, the influenza vaccine is an FDA approved vaccine that is updated annually to combat the most anticipated variants of the influenza virus. The CDC has monitored the vaccination rates for the influenza vaccine for decades. The 2019–2020 flu vaccine report shows that the age group with the highest influenza vaccination rates was those over 65-years old (69.8%), and the lowest vaccination rate was seen in those between 18 and 49-year-old (38.4%). Vaccination uptake differed by race with Non-Hispanic Whites having the highest flu vaccination rates (54.8%). Blacks and Hispanic had the lowest (45.7%). Even with a safe and effective vaccine, uptake rates remain low (CDC, 2020).

## 2.1 | Covid-19 vaccine hesitancy

The emergence of the global COVID-19 pandemic into an existing environment of vaccine hesitancy has highlighted a critical existing issue. COVID-19 has had a devastating impact on individuals, healthcare systems and global economies. Therefore, nations infused massive fiscal and government support to develop a safe and effective vaccine. While coronavirus and potential vaccines for coronavirus have been widely studied for years, many viewed COVID-19 as an unprecedented virus.

In addition, the high investment and expedient approach in vaccine development led to a wide range of concerns throughout the population, including concern about political interference, concerns about safety due to the rapid development and testing, and the potential for adverse side effects (Lin et al., 2021). Many individuals expressed a desire to wait until others had been vaccinated before they would consent to be vaccinated (Lin et al., 2021).

COVID-19 vaccination rates in the United States are increasing. In June, 2021 only 42% of adults in the US had been fully vaccinated (Mathieu et al., 2021). As of October 2021, 56.8% of eligible individuals have been fully vaccinated in the United States. Some states continue to lag far behind the national average with vaccination rates at 40% (US Coronavirus Vaccine Tracker, 2021). Funk and Tyson (2020) reported public confidence in COVID-19 vaccine is improving and estimated that overall, 60% of Americans will get the COVID-19 vaccine. However, there are racial variations in vaccination rates. Frequently listed reasons for vaccine hesitancy in minority populations include a general mistrust of the medical system, concern about the long-term safety of the vaccination, and concern regarding adverse reactions (Nguyen, 2021). In the United States, vaccine hesitancy was higher in Blacks and Hispanics than Whites (Nguyen et al., 2021). In a June 2021 report by the Kaiser Family Foundation, rates of vaccination in Whites (45%) was 1.4 times higher than Blacks (32%), and 1.2 times higher than Hispanics (36%). The highest vaccination rates in the US was found in Asian Americans (59%) (Hamel et al., 2021).

COVID-19 vaccine hesitancy in health care workers (HCWs) is another significant concern. Recent research has shown that health care professionals share similar COVID-19 vaccine hesitancy rates as the general population. In surveys of healthcare professionals, approximately 45% were willing to be vaccinated, and of those willing to be vaccinated, 70% still reported concerns about side effects and 12% reported religious-related concerns (Unroe et al., 2021). Vaccine effectiveness and safety outcomes were identified as the key reasons for vaccine hesitancy among HCWs (Roy et al., 2020). Other concerns included vaccine side effects, negative effects on pregnancy/breastfeeding, religious convictions and the use of mRNA technology in vaccine preparation (Roy et al., 2020). The effect of health care professional hesitancy on patient vaccination rates has not been studied, but it can be inferred that health care professional concerns regarding the vaccine may influence a patient's desire to be vaccinated. Low vaccination rates will delay or dismantle the hoped-for achievement of herd immunity in many communities (Chou & Budenz, 2020). It appears then, that while reasons for vaccine hesitancy vary from individuals and across communities, it can be found in most every demographic of United States culture.

## 3 | MOTIVATIONAL INTERVIEWING

MI is an evidenced-based technique established by Miller and Rollnick (2013). MI was originally created to assist with tobacco and drug addiction, it has been successfully applied to changing dietary habits, alcohol consumption, harmful sexual practices and weight reduction (Lundahl



et al., 2010). In a systematic review, Frost et al. (2018) revealed MI was proven effective in empowering patients to evoke positive change with unhealthy behaviors specifically problematic drinking, tobacco use and substance abuse. MI has been used in a variety of settings with vulnerable populations. MI interventions have been shown to be effective with disadvantaged and minority populations in regards to positive health decision-making and medication adherence (Bahafzallah et al., 2020; Clair et al., 2013; Hardcastle et al., 2012; Sampson et al., 2013).

MI is a patient-centered approach that can assist patients in making health care and behavioral changes. Taking a patient centered approach by acknowledging the impact of cultural and ethnic characteristics on the dynamics of health decision making has been linked to successful behavioral change. Dart (2011) states, "Motivational interviewing is a form of communication that allows patient involvement, respect for each patient as an individual with his or her own agenda and acceptance of the patient's choices" (p.13). MI consistently taps into each unique individual's self-efficacy and decision-making autonomy.

The cornerstone of MI is patient empowerment, where the patient is in control of their healthcare decisions. Health care professionals work in partnership with the patient to guide the patient's understanding of a disease and its treatments. The goal is to support rather than to persuade. When using MI, healthcare professionals assess a patient's internal motivation for change, identify ambivalence, and co-create a new plan of action. The health care professional enters into a relationship utilizing active listening skills, embodying attitudes of acceptance and offering compassion to create a safe space for cultivating trust (Watson, 2008). Incorporated into the philosophy of acceptance is a respect for the absolute worth and autonomy of the patient. By interacting in a non-judgmental manner, the professional's attitude of compassion supports an environment where the patient feels safe to communicate thoughts and emotions. It is a collaborative, non-confrontational approach to change. The healthcare professional works to help evoke change in the patient, all within the patient's values and goals. If suggestions to make a behavior change feels coercive to the patient, the patient will often become defensive and resistant to the change (Gabarda & Buttersworth, 2021).

MI includes four core communication skills, known as OARS. The OARS acronym stands for open-ended questions, affirmations, reflections and summary (Miller & Rollnick, 2013). These four communication skills are crucial in creating a psychologically safe environment for the patient to explore their perception of readiness for and potential barriers to change. Supportive interactions related to information exchange and trust-building between the healthcare professional and patient can positively impact a patient's confidence in making a behavioral change.

## 4 | MOTIVATIONAL INTERVIEWING AND VACCINE HESITANCY

MI offers health care professionals a non-judgmental and compassionate alternative when provoking change related to vaccine hesitancy (Gagneur et al., 2017; Garbada & Buttersworth, 2021; Reno et al.,

2018). In a randomized controlled study of more than 3300 families, Gagneur et al. (2017) used a brief MI based program to discuss childhood vaccinations with mothers in a postpartum unit. The MI technique resulted in an increased intent to vaccinate and an increased achievement of full vaccination rates at two years post-intervention. MI has also been used to improve vaccination rates for the Human Papillomavirus vaccine (Reno et al., 2018). Utilization of MI for vaccine reluctant patients may provide a patient-centered means to discuss issues and concerns regarding vaccinations (Razai et al., 2021).

### 4.1 | Using MI with COVID-19 hesitant patients

Using MI to frame vaccination conversations may assist with increased vaccine uptake. Patients come into appointments with a HCW with existing knowledge, values, and belief systems. MI allows the HCW to come to the vaccine hesitant patient with a curious, non-judgmental, and supportive demeanor. The goal of the interaction is to better understand the patient's knowledge and belief system regarding the vaccine. The four MI communication skills (open-ended questions, affirmations, reflection, and summary) work together to create this safe and trusting environment. Boness et al. (2021) suggest HCWs evoke information by asking the following open-ended questions: "What makes you hesitant about taking the vaccine?," "What reasons do you see for taking the vaccine?," "How important is it for you to get the vaccine?," "How do you see the COVID-19 vaccination benefiting your community?," and "What do you know about the safety of the vaccine?" By listening to the patient's point of view and affirming their trepidation with a comment such as "I can see why that may concern you," the HCW is communicating that they have heard and acknowledged that patient's belief, whether it is correct or not. A HCW can reflect back to the patient by saying "It sounds like you are concerned about the side effects of the vaccine." At the end of the discussion, the HCW can use reflective language "We've talked a lot about the vaccine. Let me make sure I have this right. Your understanding about the vaccine is that it was produced too quickly, and you are concerned about the side effects." Table 1 presents the definitions of the OARS communication skills, and provides additional examples of the use of these skills when discussing COVID vaccine hesitancy.

Built into MI is an acceptance that change is difficult and that change is more successful when collaborating with the patient. The MI philosophy recognizes that devaluing a patient's belief system is ineffective and often results in resistance to change. It is key for the HCW to communicate in a conversational, not confrontational, tone with the patient. Once the patient feels that their thoughts or opinions have been heard, they may be more open to considering information about the vaccine. It is important to ask the patient for permission to present information about the vaccine. This is an example of rolling with a patient's resistance. "Is it OK if I share some information about the COVID vaccine with you?" The step allows the patient to be in control of the information flow and helps them maintain their sense of agency in regards to their health care decision. A key MI technique is recognizing a discrepancy in the patient's logic. An example of this might be

**TABLE 1** Motivational interviewing (MI) core skills (OARS)

Core skill	Purpose	Example
Open-ended questions	Let the patient discuss their story and fears related to the Covid-19 vaccine. The patient should be doing most of the talking.	Begin the conversation with "Tell me what you know about the COVID vaccine..."
Affirmations	Affirming is acknowledging the patient's concerns or limitations.	"I can see that this really concerns you." "I can hear your ambivalence about taking the vaccine."
Reflection	Reflective listening includes empathy and sensitivity about what feelings are being verbalized.	"You are feeling unsure about getting the vaccine."
Summary	Summarize the conversation using three to four sentences. Summarizing allows clarification of misinformation	"It sounds like you are concerned about the side effects of the vaccine, and the possibility that the vaccine was rushed through FDA approval. Did I miss anything?"

**TABLE 2** Motivational interviewing (MI) principles with patient examples

Principle	Explanation	Example
Express empathy	Individual's feelings should be recognized. Normalize concerns of reluctance.	"Sue, I understand the conflict you are having about the Covid-19 vaccine is concerning to you."
Roll with resistance	Reflect with the individual when feeling resistance in the conversation. Ask permission to clarify information. Do not argue or push ideas if the individual is not ready.	"Sue, I hear you saying you are concerned about the Covid-19 vaccine because of the speed of which it was developed." "Would it be okay if I shared some information with you regarding the development of the vaccine?"
Develop discrepancy	Note discrepancy in the conversation with the individual. Listen for change talk.	"Sue, I heard you say you really want to get the vaccine but you are just not sure about the side effects."
Support self-efficacy	Discuss previous situations in which the individual was successful. Small goals could be beneficial.	"Sue, I heard you say you receive the influenza vaccine every year. What goal might you set for our next visit when we discuss the Covid-19 vaccine?"

Miller and Rollnick  
(2013)

in the case of a pregnant woman who expresses concern regarding the safety of the vaccine on her developing fetus. Nevertheless, at the same time, she provides consent to receive the Tdap. "Can you tell me a little bit more about your willingness to take the Tdap vaccine versus taking the COVID vaccine?" An example of change talk that you may hear is "I have to care for my sister's kids this week, so maybe next week we can talk about it again." Table 2 provides examples of using MI to discuss vaccine hesitancy within the framing principles of expressing empathy, rolling with resistance, developing a discrepancy, and listening for change talk.

## 5 | IMPLICATIONS FOR NURSING

MI has been established as an evidence-based tool used to assist individuals overcome hesitancy in making difficult health care decisions. Because MI has been proven effective, more research studies utilizing this tool with vaccine resistance would be beneficial. In implementing a research project, specific vaccine resistance topics could be identified. Gaugneur et al. (2018) suggests understanding the "root cause" of vac-

cine hesitancy is key in overcoming resistance. Using MI to understand these "root causes" more in depth would be beneficial.

As public health nurses are on the "front lines" of the vaccination effort, they would benefit greatly from becoming familiar with MI. Such a positive paradigm shift would enable nurses to take a healthy promoting stance to combat vaccine hesitancy. Empowering nurses to utilize core nursing skills of connecting with the patient, evoking trust and empathic listening are key to MI. These skills can assist in moving away from the patient "blame game" and prove beneficial in promoting positive health focused behavior change.

## 6 | CONCLUSION

Vaccine hesitancy is a common concern, and the COVID-19 vaccination is no exception. Health care professionals must become familiar with tools to provoke positive change with a resistant patient. Forcing individuals to take a vaccination when they are hesitant can result in frustration and mistrust. MI is an evidence-based, patient-centered model that can evoke individual self-efficacy that can bridge the gap for those who are reluctant to receive the vaccine. Active listening,

acceptance and compassion are key elements of MI. The goal is to build and create a trusting partnership among health care professionals and patients. Acceptance and compassion allow the client to develop trust with those providing care. Open-ended questions, affirmations, reflections and summary can assist health care professionals in guiding individuals to change their perceptions and behavior to increase COVID-19 vaccine acceptance and achieve herd immunity.

## DATA AVAILABILITY STATEMENT

The authors declare that the data supporting the findings of this study are available within the article and listed on the reference page.

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