

# Cultural Information and Misinformation Regarding Vaccines

CME NEWSLETTER FROM THE



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## Learning Objectives:

Understand the framework of healthcare and how culture can affect vaccine uptake.

Define the reasons for lower vaccination rates amongst various cultures.

Facilitate how healthcare providers can reduce misinformation and disinformation and increase vaccination rates by tailoring discussions on vaccines based on each patient's cultural background.

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## Speaker & Faculty Disclosures

Anne Schneider, DO, disclosed that she has an AAFP Vaccine Science fellowship. The AAFP Vaccine Science Fellowship is supported by an unrestricted grant from Merck Sharp & Dohme Corp. Sharon Smaga, MD, (Reviewer) & IAFP staff members Kate Valentine and Sara Ortega disclosed no relevant financial relationship or interest with a proprietary entity producing, marketing, reselling, or distributing health care goods or services.

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The ongoing COVID-19 pandemic has shown a spotlight on the public's views and beliefs regarding vaccines. Our patients are utilizing more sources than ever before to gain knowledge and form opinions on vaccines. From the media, social media, friends, and political parties, patients are hearing information and misinformation about not only the COVID-19 vaccines, but also vaccines in general. It is important to note that the way patients assimilate this knowledge is based not only the source but also their cultural background. As healthcare providers we must continue to work towards increasing vaccine confidence and acceptance to increase vaccination rates. To this end, it is critical that our approach to reaching this goal with each patient be individualized to their unique customs, beliefs, and racial and ethnic backgrounds.

This article will discuss culture in the context of healthcare and how culture can affect vaccine uptake. It will touch on reasons for lower vaccination rates amongst various cultures. This article will also lay out ways healthcare providers can combat misinformation and disinformation and increase vaccination rates by tailoring discussions on vaccines based on each patient's cultural background.

The Centers for Disease Control and Prevention (CDC) states, "culture can be defined by group membership, such as racial, ethnic, linguistic or geographical groups, or as a collection of beliefs values, customs, ways of thinking, communicating, and behaving in specific groups".<sup>1</sup> Factors that influence culture include: gender, race, ethnicity, gender identity, sexual orientation, geographic region, socio-economic status, religious, and political beliefs. Studies have showed that a person's cultural background not only affects how they perceive healthcare but also

their healthcare outcomes. Despite increasing awareness of the need for cultural competence in healthcare, healthcare disparities persist and negatively affect vaccination rates.<sup>2,3</sup> A study published in the Journal of General Internal Medicine found that only 42% of Black American adults were recommended by their healthcare provider to receive an influenza vaccine over more than one visit during influenza season vs 56.5% of non-Black American adults.<sup>4</sup> While this study demonstrated the need for improvement in routine offering of influenza vaccine at office visits, it also highlighted a disparity in who healthcare providers recommend receive an influenza vaccine. While challenging and uncomfortable, we are doing a disservice to our patients if we do not acknowledge our own biases in our approach to patients whose cultural background may be different than our own.

Historically, minority communities have had lower vaccination rates for a multitude of reasons. Firsthand experiences and the history of segregation, discrimination, and mistreatment have resulted in higher levels of mistrust in the medical community among minority groups. The Tuskegee experiment, in which approximately 400 African-American men with syphilis were followed and left untreated from 1932-1972, is often cited as a cause for higher rates of medical mistrust among African-American men.<sup>5</sup> A recent study involving Latinx families in Oregon found that 45% surveyed expressed hesitancy in receiving a COVID-19 vaccine due to mistrust.<sup>6</sup> Lack of access to care is a barrier experienced more often by minority communities that results in lower vaccination rates as well. Lack of health insurance is a factor in lower adult vaccination rates,<sup>7</sup> and, vaccine coverage data continues to demonstrate lower rates in children and adolescents living in more rural areas.<sup>8,9</sup> Various conservative religious groups have historically had lower vaccination rates, and more than half of US states allow for vaccine exemptions for religious reasons.<sup>10</sup>

Misinformation is inaccurate information shared unintentionally. Intentionally shared false information is termed disinformation. Both have a history in contributing to negatively affecting vaccination rates in the US. From a lack of understanding of how vaccines work causing misinformation surrounding the smallpox vaccine to fuel hesitancy, to disinformation published suggesting the measles, mumps, rubella vaccine increases a child's risk for autism, there are many instances where inaccurate information has decreased vaccine acceptance.

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Medically disenfranchised cultural groups have statistically higher rates of vaccine-preventable disease.<sup>11,12</sup> Severity of illness is also worse in minority groups. The CDC reports on influenza disparities among racial and ethnic minority groups and noted higher rates of hospitalization and ICU admission in these groups during influenza seasons over a 10-year period.<sup>13</sup> And yet, studies have shown that vaccine misinformation and disinformation disproportionately target minority communities. Sources of misinformation and disinformation include rumors, the media, politicians and community leaders, and social media. Human culture depends on people passing on information. In the past, this was accomplished on a societal level, through newspapers, radio, and television. Nowadays, it is also easy for an individual to pass on information on a large scale via the internet and social media.

Even prior to the COVID-19 pandemic, anti-vaccine leaders targeted minority groups. These leaders attempt to capitalize on the historical skepticism of the medical establishment by these groups. Anti-vaccine proponents' disinformation disseminated to Somali community members in Minnesota and Orthodox Jewish community members in New York contributed to measles outbreaks in the late 2010s in these communities. In 2020, Robert F. Kennedy Jr., founder of The Children's Health Defense, and prominent anti-vaccine leader, released a free online film that targeted Black Americans by preying on their experience of medical racism to attempt to create fear and suspicion of vaccines.



Scientific models have demonstrated that as the amount of information people review on social media increases, the quality or accuracy of the information shared goes down.<sup>14</sup>

Social media and the internet have created a space where misinformation and disinformation regarding vaccines and peoples' cognitive biases collide. An overabundance of information via the internet and social media contributes to the problem. Scientific models have demonstrated that as the amount of information people review on social media increases, the quality or accuracy of the information shared goes down.<sup>14</sup> In a study demonstrating confirmation bias, in 1932,

the psychologist Frederic Bartlett told volunteers a Native American legend. Over a period of years, Bartlett asked the volunteers, all of which were not Native American, to retell the legend. As time went on, the volunteers tended to distort the culturally unfamiliar components of the legend and shaped it into a more familiar tale.<sup>15</sup> This confirmation bias, as defined by Filippo Menczer and Thomas Hills, authors of, "Information Overload Helps Fake News Spread, and Social Media Knows It" as the seeking out, recalling, and understanding information that best confirms what an individual already believes", occurs daily via the internet and social media.

As healthcare providers, we must work towards dispelling myths and misinformation regarding vaccines in order to increase vaccination rates. By learning and understanding how a patient's cultural background participates in shaping their views and beliefs on vaccines, we can better address hesitations patients may have regarding vaccines and combat disinformation they receive. It is also important to be aware of barriers not only to access to care but also access to reliable and trustworthy information.



Healthcare providers can work towards empowering patients to understand how to decipher good information from bad. And, to reach a larger number of people, healthcare providers can partner with religious and cultural leaders that are trusted voices in their communities to assist in disseminating accurate information regarding vaccines. Just as anti-vaccine proponents have taken advantage of the ease at which misinformation and disinformation spreads through the internet and social media, so too can healthcare providers utilize these platforms to promote positive and accurate information on vaccines.



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