



## In My Opinion

## Coronavirus Vaccination Hesitancy: Early Education to Counter Vaccine Hesitancy/Refusal

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## A B S T R A C T

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The coronavirus infection has resulted in more than 1 million deaths in the United States. The momentary enthusiasm that came with introducing the coronavirus disease (COVID) vaccine soon faded away due to the public's hesitant reaction toward the coronavirus vaccine. COVID vaccine hesitancy creates an enormous problem in the fight to eradicate the coronavirus infection. This hesitancy highlights gaps in knowledge between public health organizations, educational institutions, and public perception of COVID vaccines. Therefore, these stakeholders should consider a collaborative action to introduce vaccine education in grade school. Such a curriculum could facilitate a better understanding of how vaccines prevent infectious diseases.

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During my daily clinical practice, I meet patients who decide against getting the coronavirus disease (COVID) vaccine despite being presented with the facts on vaccination. I encourage patients to discuss their fears and reservations about vaccine hesitancy. Regardless of the misrepresented COVID information online, on social media, and in some news outlets, many patients still believe the online information, whereas others express insusceptibility to the illness. These personal beliefs are resistant to change and often develop over a lifetime.

Although the COVID infection rate has been declining, the disease remains a public health threat, with a death toll of more than 1 million in the United States (US) as of August 2022.<sup>1</sup> However, the sigh of relief observed with the introduction of the COVID vaccine was short-lived due to vaccine hesitancy. Vaccines have nearly eliminated certain diseases, including smallpox, pertussis, polio, measles, rubella, diphtheria, and mumps.<sup>2</sup> However, some of these diseases are gradually reemerging due to the rejection of vaccination.<sup>3</sup> The rate of antivaccine sentiment has been slowly rising in the US,<sup>4</sup> and the COVID-19 pandemic seems to have driven antivaccine views to a new peak.

Individuals may minimize the adverse health outcomes related to some of these diseases because they may not have experienced the devastating nature of the illness. This consideration could lead to decreased interest in vaccination while increasing the burden of such conditions in the community. The ultimate concern is how health care organizations, public health systems, and educational institutions can promote public engagement and vaccine acceptance.

Therefore, stakeholders such as nursing schools, public school educators, and public health organizations must direct significant efforts toward tackling the development of harmful beliefs about vaccines beginning in elementary school. Such actions are necessary to prevent any future pandemic, potential loss of human lives,

and subsequent economic breakdown. The introduction of vaccine education should begin in grade school and should be a stepwise process. This process may include age-appropriate teaching, such as pictorial presentations for kindergarteners to a more content-based curriculum for 12th graders.

Early vaccine education could facilitate a better understanding of how vaccines prevent certain diseases and emphasize the relationship between immunization, the immune system, and disease prevention. Vaccine misconceptions should be explored and exposed. An improved understanding of the need for vaccination will lead to well-informed decisions and possibly increase the vaccination rate.<sup>5</sup>

Eventually, students will grow up to be adults and parents, and engaging them as children early could produce well-informed individuals across sex, ethnicity, and socioeconomic backgrounds. Appropriate vaccination knowledge could significantly encourage individuals to refute online antivaccine information. The above-stated proposal could increase the vaccination acceptance rate and foster self-responsibility and obligation toward vaccination.

It is worth mentioning that the National Science Teaching Association has educational resources and articles on how to introduce vaccine education in the classrooms.<sup>5</sup> In the same article, some teachers explained how they engaged students in discussions about the COVID vaccine and body systems using graphic materials to analyze immunity, correlation, and disease causation. The article contends that such activities help the students to differentiate facts from misrepresented information. The students become well informed with accurate knowledge of vaccine facts, which they share with their family members.

In conclusion, coronavirus vaccine hesitancy highlights gaps in knowledge between public health organizations, educational institutions, and public perception of COVID vaccines. Vaccine education in schools and continued public education will raise vaccine

awareness, reduce vaccine hesitancy, and boost vaccine acceptance. Being well informed about the importance of immunization early in grade school could lessen vaccination bias, promote vaccine knowledge, increase the vaccination rate, and prevent future disease outbreaks. The proposed immunology/vaccine curriculum aim is to improve health equities and patient outcomes in vaccine-preventable diseases. I suggest that involved stakeholders coordinate with nurse practitioners to formulate vaccine curricula and create vaccine education lesson plans. The above proposal can bridge the knowledge gap and decrease vaccine hesitancy.

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