

## Addressing COVID-19 Vaccine Hesitancy in Patients with IBD

Dania Hudhud, MD,\* Freddy Caldera, DO, MS,<sup>†,©</sup> and Raymond K. Cross, MD, MS\*<sup>©</sup>

From the \*University of Maryland School of Medicine, Department of Medicine, Division of Gastroenterology and Hepatology, Baltimore, MD, USA

<sup>†</sup>Department of Medicine, Division of Gastroenterology and Hepatology, University of Wisconsin School of Medicine and Public Health, Madison, WI, USA

Address correspondence to: Raymond K. Cross, MD, MS, 685 W. Baltimore St., Suite 8-00, Baltimore, MD, 21201, USA (rcross@som.umaryland.edu).

On March 11, 2020, Coronavirus disease 2019 (COVID-19) was recognized as a global pandemic. COVID-19 is a highly contagious and fatal respiratory illness caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). By the end of 2020, several vaccines were developed to prevent SARS-CoV-2 infection and are now considered the most effective approach for putting an end to the pandemic. To date, there are 3 different vaccines against COVID-19 that have received emergency use authorization (EUA) by the FDA in the United States.

While navigating this global public health emergency, there are substantial considerations raised in patients with inflammatory bowel disease (IBD) due to their chronic inflammatory state and use of immunosuppressive medications. Overall, patients with IBD do not appear to be at a higher risk for infection with SARS-CoV-2 or for the development of severe disease. However, subsets of patients with IBD with preexisting comorbidities including diabetes, obesity, use of corticosteroid medications, socioeconomic deprivation, and being from a Black or other minority ethnic group are at increased risk of severe COVID-19 disease.1 It is recommended that all patients with IBD, including those on immunosuppressants, undergo vaccination, as studies have shown no increased risk of flares after immunization.2 Since the development of the vaccines, there were concerns that patients with IBD on certain immunosuppressive agents such as antitumor necrosis factor (TNF) may have a diminished protective response to the COVID-19 vaccines.<sup>3</sup> Preliminary results from studies suggest that the vast majority of patients with IBD are able to mount an antibody response postimmunization.<sup>4</sup> Therefore, the benefits of immunization outweigh the possibility of suboptimal response, and vaccination is strongly recommended for all patients with IBD.

Survey studies showed that most patients with IBD would be willing to receive a COVID-19 vaccine.<sup>5-7</sup> However, a recent study still suggested that IBD patients are more hesitant to get vaccinated in comparison with the general population.<sup>8</sup> This hesitancy mainly stems from fears regarding vaccine safety, efficacy, and government distrust.<sup>9</sup> These barriers to vaccination are amplified by a wide range of misinformation

and misconceptions circulating on social media. It is crucial to identify social and systemic immunization barriers, in addition to properly educating patients on vaccine safety to improve the vaccination rate among the IBD population.

Inflammatory bowel disease providers may not be able to overcome all barriers to vaccination but should adopt an active role in battling misinformation, dismissing myths, addressing hesitancies, and understanding the reason for the reluctance to receive vaccination among their patients. Provider communication and continuous reinforcement should be incorporated in routine clinic visits and tailored to patient's needs and concerns. Using available resources including pharmacists, nursing staff, and electronic messaging systems may further assist in identifying concerns and lead to a more productive conversation. Therefore, strategies for effective vaccine counseling include acknowledging concerns, discussing the benefits of immunization and risks of infection, and providing a strong recommendations to receive a COVID-19 vaccine to all patients with IBD.<sup>10</sup>

Disparities in health and health care remain a major challenge in the care of minority populations and are associated with worse clinical outcomes. In patients with IBD, racial disparities already exist in many aspects of their care. Non-White patients are at a higher risk for care fragmentation which results in higher health care costs following an IBD hospitalization.<sup>11</sup> Additionally, Black patients receive a disproportionate amount of hospital-based care compared with ambulatory care, resulting in missed opportunities for preventive health care interventions. 12,13 The emergence of the COVID-19 pandemic has further shed light on those health care disparities, with a lag of vaccination interest in minority patients. Since the EUA for the COVID-19 vaccines, significant gaps in vaccine uptake have been seen in ethnic minorities. 14,15 A recent CDC survey showed that vaccination nonintent is highest amongst minority populations including younger adults, Black persons, adults with lower education and lower income, and those without insurance. 16 This highlights the importance of targeting the minority population, displaying cultural sensitivity, and taking extra measures to ensure equity in vaccine uptake and distribution ultimately preventing the spread of COVID-19.10

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To educate our patients with IBD and identify their concerns about vaccinations, we developed an educational COVID-19 vaccine video. Our goal was to determine if providing an educational intervention would result in increased willingness to receive a COVID-19 vaccine. The video was performed by a gastroenterologist who discussed the rationale for COVID-19 vaccines, as well as the efficacy and the safety of the vaccine specifically in relation to patients with IBD. The video was followed by a survey that contained demographic questions, vaccination intent, and concerns about vaccination. This was sent in the form of an electronic health portal message. The message was sent to unvaccinated patients in our practice after the vaccine was widely available to all adults in the state. A total of 45 patients responded. After watching the video, 43 of the 45 respondents answered "absolutely certain" or "very likely" to receive the COVID-19 vaccine. Additionally, 35 of the 45 patients responded that the video information was "very helpful" or "somewhat helpful" in making an informed decision regarding COVID-19 vaccination. Based on our results, we suggest that providing tailored education content in the form of a video may be a valuable tool in decreasing vaccine hesitancy in patients with IBD and potentially in those with other chronic conditions. In addition to increasing vaccination knowledge and awareness, other proposed methods include improving convenience and access to vaccination, targeting specific populations, and engaging influential persons to promote vaccination.<sup>17</sup>

We strongly recommend that IBD providers assume the role of COVID-19 vaccine advocates to patients, provide appropriate counseling, and utilize available resources to ensure equitable vaccine distribution amongst their patients. Additionally, the implementation of dedicated services may improve adherence to vaccination programs for patients with IBD and help protect them from a vaccine-preventable disease. Careful attention needs to be paid to vaccination nonintent in minority populations to decrease health and health care disparities within the community. Further studies are needed to identify hesitancy towards vaccination and its effect in the IBD population and search for predictive markers for vaccination success.

## **Conflicts of Interest**

Dr. Cross has participated in advisory boards for Janssen and Pfizer. Dr. Caldera has received research support from Takeda Pharmaceuticals and Sanofi; he has been a consultant for Takeda, Arena Pharmaceuticals, GSK, and Celgene.

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