




Patients' Acceptance of COVID-19 Vaccine: Implications for Patients with Chronic Disease in Low-Resource Settings

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Abstract: Coronavirus disease 2019 (COVID-19) has become a major global health challenge, with high morbidity and mortality. Despite different vaccines being produced around the globe, the spread of the virus is still uncontrolled. In particular, the shortage of vaccines in low-income countries is one of the key factors hindering efforts to reduce the spread of the virus. Even though evidence has been provided by different responsible bodies, there are still multiple beliefs and misconceptions about COVID-19 vaccination that have not yet been addressed. Nowadays, vaccine hesitancy is one of the top ten threats to global health, arising from the unwillingness of chronic patients to receive the vaccine. Chronic disease patients in low-resource settings are fearful of taking the vaccine because of a shortage of information about the COVID-19 vaccine. Therefore, the acceptance of the COVID-19 vaccine among chronic disease patients should be studied more widely in low-resource settings.

Keywords: COVID-19, acceptance, chronic care patients

Commentary

Coronavirus disease 2019 (COVID-19) has become a major global health challenge, with high levels of morbidity and mortality.^{1–3} Recently, different brands of vaccine against the causative agent, severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2), have been produced and distributed to patients and the general population to decrease the burden of COVID-19.^{4,5}

The vaccines have the capacity to reduce the transmission of the virus from an infected person to others. It was believed and has been declared that vaccination against COVID-19 is one mechanism to control the spread of this pandemic.^{5–8}

In spite of different vaccines being produced around the globe, the spread of the virus is still uncontrolled. In particular, there is a shortage of vaccine in low-income countries, which is a key factor hindering efforts to reduce the spread of the virus.¹ Therefore, people who have a greater risk of exposure to the disease, including frontline health workers and patients with chronic disease, have been given first priority to receive the vaccine.^{4,5}

Acceptance of the COVID-19 vaccine can be affected by multiple beliefs and misconceptions among different population classes.¹ The unwillingness to take this vaccine is more pronounced in low-resource settings.⁴ It has been estimated that the pooled prevalence of acceptance rates toward the COVID-19 vaccine among

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patients in Africa is very low.⁹ Women were found to be less willing to accept the vaccine than men, while people under the age of 25 years and less well-educated respondents were marginally more willing to take the vaccine than their respective comparator groups.^{10,11}

Besides vaccine efficacy and safety, vaccine acceptance among the general population plays a paramount role in the successful eradication of the virus.⁷ Despite this, chronic disease patients may be hesitant and reluctant to receive the vaccine because of the fear of unexpected adverse effects.^{5,12,13} Similarly, in developing countries such as Ethiopia, concern over vaccine safety was the topmost reason among those unwilling to receive the vaccine.¹⁴ Therefore, it has been highly recommended that different stakeholders, including policymakers, community leaders, and governments, work effectively to increase the acceptance of the vaccine.^{3,6,12,15}

The healthcare system is the most trustworthy source to help patients to decide whether to take the COVID-19 vaccine. However, in sub-Saharan African countries, the fragmented healthcare system is the main reason hindering the acceptance of the COVID-19 vaccine among chronic disease patients.¹⁰

There is a scarcity of findings on the acceptance of the vaccine in low-income countries where large-scale vaccination has yet to begin. Therefore, research into patients' understanding and acceptance of the COVID-19 vaccine is important to create awareness. A lag in vaccination in any country may be expected to result in the emergence and spread of new variants that are difficult to treat.

Apart from inadequate distribution of the vaccine, the vaccine hesitancy of patients in low-resource countries needs to be studied. Future researchers should aim to identify the possible gaps and factors affecting the acceptance of the COVID-19 vaccine.¹⁶

Globally, there is inadequate information among chronic disease patients on receiving the vaccine.⁴ Vaccine hesitancy is often due to false information released on different social media, such as Facebook, Twitter, and YouTube.¹⁷ In low-resource countries, chronic disease patients do not receive enough information about the COVID-19 vaccine. As a result, they may be fearful of taking the vaccine.

Chronic patients who were more likely to be affected by this virus and carry a high clinical burden from COVID-19 were given first priority for vaccination.⁴ During the surge of the pandemic, the care and frequency of follow-up of patients with chronic diseases have been reduced or interrupted. This can be related to the fear of physicians in treating COVID-19 patients, low levels of protective equipment, increased

number of COVID-19 cases, and the declaration of a state of emergency that resulted in the lockdown of different health services. Therefore, the acceptance of the COVID-19 vaccine by patients with chronic disease should be studied more widely in low-resource settings.

Overall, chronically ill patients have a high hesitancy about receiving the vaccine in lower-income countries owing to false information and poor communication.¹¹ Therefore, special attention should be paid to patients with chronic disease to increase vaccine acceptance, and a vaccine campaign could be introduced to increase awareness about COVID-19 vaccination.

Conclusion

The hesitancy regarding the COVID-19 vaccine is more pronounced in low-resource settings. In low-resource countries, patients with chronic disease do not receive enough information about the COVID-19 vaccine. As a result, these patients were fearful of taking the vaccine. Therefore, future researchers should focus on the optimal ways to communicate with and counter misinformation in patients with chronic diseases. In addition, vaccine campaigns should be strengthened to disseminate the correct information and increase the awareness of chronic patients and their acceptance of the vaccine.

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Author Contributions

All authors made substantial contributions to conception and design, acquisition of data, or analysis and interpretation of data; took part in drafting the article or revising it critically for important intellectual content; agreed to submit to the current journal; gave final approval of the version to be published; and agree to be accountable for all aspects of the work.

Disclosure

The authors report no conflicts of interest in this work.

References

1. Berihun G, Walle Z, Berhanu L, Teshome D. Acceptance of COVID-19 vaccine and determinant factors among patients with chronic disease visiting Dessie Comprehensive Specialized Hospital, Northeastern Ethiopia. *Patient Prefer Adherence*. 2021;15:1795. doi:10.2147/PPA.S324564

2. Kanyike AM, Olum R, Kajjimu J, et al. Acceptance of the coronavirus disease-2019 vaccine among medical students in Uganda. *Trop Med Health.* 2021;49(1):1–11. doi:10.1186/s41182-021-00331-1
3. Abedin M, Islam MA, Rahman FN, et al. Willingness to vaccinate against COVID-19 among Bangladeshi adults: understanding the strategies to optimize vaccination coverage. *PLoS One.* 2021;16(4):e0250495. doi:10.1371/journal.pone.0250495
4. Abebe H, Shitu S, Mose A. Understanding of COVID-19 vaccine knowledge, attitude, acceptance, and determinates of COVID-19 vaccine acceptance among adult population in Ethiopia. *Infect Drug Resist.* 2021;14:2015. doi:10.2147/IDR.S312116
5. Guangul BA, Georgescu G, Osman M, et al. Healthcare workers attitude towards SARS-COVID-2 vaccine, Ethiopia. *Glob J Infect Dis Clin Res.* 2021;7(1):043–048.
6. El-Elimat T, AbuAlSamen MM, Almomani BA, Al-Sawalha NA, Alali FQ. Acceptance and attitudes toward COVID-19 vaccines: a cross-sectional study from Jordan. *PLoS One.* 2021;16(4):e0250555. doi:10.1371/journal.pone.0250555
7. Alle YF, Oumer KE. Attitude and associated factors of COVID-19 vaccine acceptance among health professionals in Debre Tabor Comprehensive Specialized Hospital, North Central Ethiopia; 2021: cross-sectional study. *Virus Dis.* 2021;32(2):272–278. doi:10.1007/s13337-021-00708-0
8. Freeman D, Loe BS, Chadwick A, et al. COVID-19 vaccine hesitancy in the UK: the Oxford coronavirus explanations, attitudes, and narratives survey (Oceans) II. *Psychol Med.* 2020:1–15. doi:10.1017/S0033291720005188.
9. Wake AD. The acceptance rate toward COVID-19 vaccine in Africa: a systematic review and meta-analysis. *Glob Pediatr Health.* 2021;8:2333794X211048738. doi:10.1177/2333794X211048738
10. Solis Arce JS, Warren SS, Meriggi NF, et al. COVID-19 vaccine acceptance and hesitancy in low- and middle-income countries. *Nat Med.* 2021;27(8):1385–1394. doi:10.1038/s41591-021-01454-y
11. Angelo AT, Alemayehu DS, Dachew AM. Health care workers intention to accept COVID-19 vaccine and associated factors in south-western Ethiopia, 2021. *PLoS One.* 2021;16(9):e0257109. doi:10.1371/journal.pone.0257109
12. Garcia P, Montez-Rath ME, Moore H, et al. SARS-CoV-2 vaccine acceptability in patients on hemodialysis: a nationwide survey. *J Am Soc Nephrol.* 2021;32(7):1575–1581. doi:10.1681/ASN.2021010104
13. Joshi A, Kaur M, Kaur R, Grover A, Nash D, El-Mohandes A. Predictors of COVID-19 vaccine acceptance, intention, and hesitancy: a scoping review. *Front Public Health.* 2021;9. doi:10.3389/fpubh.2021.698111
14. Oyekale AS. Willingness to take COVID-19 vaccines in Ethiopia: an instrumental variable probit approach. *Int J Environ Res Public Health.* 2021;18(17):8892. doi:10.3390/ijerph18178892
15. Hajure M, Tariku M, Bekele F, et al. Attitude towards COVID-19 vaccination among healthcare workers: a systematic review. *Infect Drug Resist.* 2021;14:3883. doi:10.2147/IDR.S332792
16. Shitu K, Wolde M, Handebo S, Kassie A. Acceptance and willingness to pay for COVID-19 vaccine among school teachers in Gondar City, Northwest Ethiopia. *Trop Med Health.* 2021;49(1):1–12.
17. Belsti Y, Gela YY, Akalu Y, et al. Willingness of Ethiopian population to receive COVID-19 vaccine. *J Multidiscip Healthc.* 2021;14:1233. doi:10.2147/JMDH.S312637

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