

# Hesitancy of receiving COVID-19 vaccine among people living with HIV

Mohammad Saeed Jadgal<sup>1,2</sup>, Moradali Zareipour<sup>3</sup>

<sup>1</sup>Tropical and Communicable Diseases Research Center, Iranshahr University of Medical Sciences, Iranshahr, Iran

<sup>2</sup>Department of Public Health, School of Nursing, Iranshahr University of Medical Sciences, Chabahar, Iran

<sup>3</sup>Department of Public Health, School of Health, Khoy University of Medical Sciences, Khoy, Iran

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Dear Editor,

There is currently no definitive antiviral drug to treat COVID-19, so finding a vaccine, along with following health protocols, is important to counteract the further spread of this pandemic [1]. To prevent COVID-19 as an emerging disease of the century and the most difficult health challenge, discovering an effective vaccine is essential. Vaccination has begun in high-risk groups and people with underlying disease and continues, although vaccination does not definitively prevent COVID-19. However, it prevents severe infection as well as death from COVID-19 [2].

HIV patients are those who are at high-risk of COVID-19. Studies show that HIV infection is not itself susceptible to COVID-19, but social inequalities associated with HIV and co-morbidities may increase the risk of infection and severity of COVID-19 consequences of [3]. Diseases, such as high blood pressure, obesity, and cardiovascular diseases increase the risk of complications of COVID-19 in this group. It may also be associated with barriers to care, such as stigma, discrimination, and isolation, which can disrupt treatment and lead to health inequalities in healthcare delivery [4]. Compared to the general population, the risk of death or hospitalization in intensive care unit is higher in HIV-infected patients than in the same age group of people without HIV [5]. Therefore, acceptance and skepticism of the COVID-19 vaccine is very important in HIV-infected patients. Understanding the main determinants influencing preferences and desires of the community can help develop strategies to improve vaccination program. Previous experiences in the world and in the country confirm that the high level of acceptance and coverage are important key elements in the success of immunization programs. However, based

on the evidence, there seem to be concerns and doubts about vaccination among people in different countries [6]. Suspicion of vaccination has been defined by the World Health Organization as 'delay in accepting or refusing vaccination despite the availability of an effective and safe vaccine' [7]. In the current context, doubts about the acceptance of the COVID-19 vaccine could seriously affect global efforts to control the current pandemic, and impose more human and economic burdens on human societies, which will increase problems in countries with limited resources. According to the available estimates to achieve group safety with vaccination and assuming that 100% of vaccines are effective, between 60 and 70% of the population should be COVID-19-resistant [8]. Due to lower level of effectiveness of vaccines in the world, a higher percentage of the population needs to be immune. Concerns about vaccination for COVID-19 should also be consider serious, given the World Health Organization's warning about the existence of 'infodemics' surrounding the existing pandemic [9]. In this case, it is necessary for health policy makers and managers in the country to start the necessary measures for the management of published information, and planning for effective messages and policies in this field, especially in the field of programs related to COVID-19 vaccines and vaccinations. [10]. In this regard, to achieve these important elements and to plan for effective messaging and policies, it is crucial to know the level of acceptance of HIV patients about the willingness to receive COVID-19 vaccine and the factors associated with it. In the meantime, the Ministry of Health should provide accurate information about vaccines to reduce potential inconsistencies and mistrust of vaccine efficacy and safety information [10]. Rumors and superstitions

**Address for correspondence:** Moradali Zareipour,  
Department of Public Health, School of Health,  
Khoy University of Medical Sciences, Khoy, Iran,  
e-mail: z.morad@yahoo.com

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have been identified as the cause of skepticism. Individuals may not be vaccinated because of false claims that the vaccine contains infertility and microchips, or that they can cause infectious diseases, such as human immunodeficiency virus (HIV) [11]. Negative claims about the effectiveness of the vaccine have cast doubt on the vaccine. Rumors often challenge health policies and interventions by government and non-government officials and international health agencies, such as the World Health Organization (WHO) [12]. Whether or not a person believes, false information depends on the person's level of awareness and understanding of their danger. And given that most HIV patients are low literacy, it is necessary to consider targeted policies and vaccination campaigns for HIV-infected patients to receive COVID-19 vaccines. On the other hand, HIV is one of the biggest public health problems, especially in low-income countries; therefore, it is expected that by increasing the awareness of people living with HIV in the field of COVID-19 vaccination, the possibility of a long and healthy life will be provided for this group. Finally, to reduce doubts about receiving the vaccine in this group, increase to access to vaccination services for people living with HIV are necessary.

To prevent hesitation in receiving COVID-19 vaccine in HIV patients, the following is recommended:

1. Educate and inform the group about the benefits of receiving COVID-19 vaccine.
2. Implement motivational methods that can increase the motivation to receive the vaccine in HIV patients.
3. Allocate special vaccination centers to expedite the provision of services to this group.
4. Provide vaccination instructions in a simple, fluent way and in native language.
5. Creating financial incentives for HIV-infected individuals to receive the vaccine.

## Conflict of interest

The authors declare no conflict of interest.

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