



COVID-19 Vaccination Coverage in Low-Income Areas: Outcomes, Barriers, and Facilitators

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Dear Editor,

Since March 11, 2020, the Coronavirus (COVID-19) has been declared a global pandemic, and the World Health Organization (WHO) has declared it a public health emergency, countries have borne the brunt of the outbreak and attention has been focused on preventing the disease (1, 2). One of the most effective ways to prevent COVID-19 and control the epidemic is general vaccination, which was introduced as a key intervention against this disease (3, 4). A year after the start of the COVID-19 epidemic, a number of companies have developed a safe vaccine against COVID-19, but the lack of production of these vaccines has created problems for various countries (5).

In Iran, national vaccination began on February 9, 2021, with the priority of healthcare personnel, and gradually expanded with the priority of different vaccination groups. However, the success of vaccination depends on the general acceptance of the vaccine (5, 6). Various studies have shown that vaccination is not popular in low- and middle-income countries (4, 7-9).

With the outbreak of the delta type, it should be noted that its infectivity is more than twice that of the original strain, and the morbidity and mortality have increased. In this regard, regional and local healthcare systems have taken new steps (3). One of the cities in Iran that was affected by the COVID-19 delta virus type was Mashhad, which is located 900 km from the capital, the city has a large margin and a population of about 1,200,000 economically disadvantaged people. The mortality rate in these areas is higher than that in other areas of the city, and they are reluctant to be vaccinated.

In order to increase vaccination coverage in these low-income areas of the city, a coalition was formed between the Basij Organization and the University of

Medical Sciences. By conducting need assessments, identifying existing barriers, and using facilitators, this coalition was able to create mobile vaccination bases in mosques in low-income areas to increase the vaccination coverage in such areas of Mashhad. From 14 August 2021, when the project started, to 14 September 2021, the total number of injections was 146,186, which shows a 70% increase, compared to the same period last month, when the number of injections was 86,315.

Barriers to vaccination in these areas were: 1) people's fear of vaccine side effects, 2) people's fear that the vaccine would not work, 3) extensive activity of social networks in creating reluctance in people to get vaccinated, 4) linking the corona pandemic in public opinion to divine destiny and consequently the lack of need for vaccination, 5) low level of health literacy in these areas, and 6) difficult access to fixed corona vaccination centers due to working hours of employed people.

In order to eliminate these obstacles, facilitators were used. These facilitators were 1) inter-sectoral activities: an agreement has been reached between Mashhad Medical University and the Basij Organization. The Basij Organization in Iran is a popular and widespread organization that members of the community trust and the involvement of this organization in vaccination increases people's trust; 2) appropriate technology: use of senior students and graduates of the University of Medical Sciences who have passed the specialized course of vaccination as an hourly contract, use of refrigerated cars to deliver vaccines to the injection site while maintaining and controlling the cold chain, the presence of a general practitioner at the vaccine injection site with resuscitation bags and required medications; 3) people's participation: using popular volunteer groups to carry out service activities, propaganda, inviting people and organizing; 4) easy access:

vaccination close to where people live from 8 am to 6 pm even on holidays; 5) gaining people's trust: using religious places, such as mosques as a place for vaccination and specialized mobilization forces in carrying out vaccinations; 6) provision of transparent information for the people: through telephone and WhatsApp systems, using a voice machine in the area, house-to-house invitation of people to get vaccinated and encouraging them to get vaccinated; 7) usage of opinion leaders: identify opinion leaders in the region and justify these leaders to receive the vaccine, showing the vaccination of leaders on TV and social channels and their invitation to be vaccinated, asking religious speakers to encourage people to get vaccinated, the presence of experts and vaccinators in the Friday prayers of Shiites and Sunnis and the use of the tribune of these ceremonies to encourage people to get vaccinated; 8) usage of billboards and banners in suburban squares to encourage vaccinations; 9) usage of communication channels: broadcasting documentaries of activities carried out on the outskirts of Mashhad on television, informing through provincial news, forming channels on social media to answer doubts about vaccination, setting up a telephone system and using faculty and expert members of the University to respond online to vaccine suspicions, and face-to-face contact with people about vaccines; 10) usage of health literacy strategies, such as using a simple and understandable language when educating people, rather than using professional jargon; 11) diversification of vaccines and use of vaccines available in the country; 12) creation of an Android application for electronic health records for the online registration of vaccinations; and 13) vaccination of non-Iranian citizens living on low-income areas of the city.

Conclusion

Vaccination is the most effective way to control the COVID-19 epidemic. In order to increase the coverage of COVID-19 vaccination in low-income areas of Mashhad, a coalition was formed between the Basij Organization and the University of Medical Sciences. Barriers to vaccination were people's fear of the side effects of the vaccine, the ineffectiveness of the vaccine, the widespread activity of social networks in creating reluctance to get vaccinated, and people's misconceptions. Facilitators were used to overcome these barriers, which are: inter-sectoral

activities, usage of appropriate technology, easy access, provision of transparent information and gaining people's trust, support of religious leaders, effective use of communication channels, use of health literacy strategies and diversity. Finally, by taking these measures, the number of vaccinations in low-income areas of Mashhad will increase by 70% in 1 month, which can be considered as a model for similar areas.

Footnotes

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