

## Tackling COVID-19 Vaccine Misinformation: A Challenge Greater than the Pandemic

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The pandemic of coronavirus disease (COVID-19), caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) emerged as a public health emergency worldwide. The outbreak has not just overwhelmed the healthcare system by a rising number of cases and fatalities but also affected social patterns, economic systems, and policies alike. The pandemic has reached Pakistan by February 2020 and so far over 944,065 confirmed cases with 882,332 recoveries and over 21,828 deaths have been reported.<sup>1</sup>

Despite the alarming trends in the rising number of cases, the overall global response to this catastrophe has been successful. Strategies were formulated and strictly implemented across the globe. The scientific community has shown an unprecedented and rapid response with a massive publication output.<sup>2,3</sup> A major milestone in efforts against this pandemic was the early and successful development of different vaccines against COVID-19 using different approaches encompassing traditional live attenuated and inactivated vaccines, and modern solutions employing viral vectors, mRNA, DNA, single proteins, and virus-like particles as carriers.<sup>4</sup> Vaccination is one of the most cost-effective ways of avoiding disease. High rates of successful vaccinations will not only help us to overcome this global health crisis but will help us to return a pre-COVID state without a restriction in performing daily activities. However, this is risked by co-evolving “Infodemic” and “Misinformation”, a feature unique to the COVID-19 pandemic.<sup>5</sup>

The global vaccination campaign against COVID-19 is an unmatched operation that is also met with a loud response from anti-vaccine communities currently using all available resources to manipulate public opinion.<sup>6</sup> The resistance against vaccination drive is not a new experience. Historically, organized anti-vaccination trends were seen against smallpox vaccination in the UK as early as the 19<sup>th</sup> century.<sup>7</sup> A boycott/refusal of the polio vaccination, specifically in the rural areas due to rumours that the vaccine caused infertility led to increased polio cases in Pakistan.<sup>8</sup> World Health Organization (WHO) defines vaccine hesitancy as “the reluctance or refusal to vaccinate despite the availability of vaccines”.<sup>9</sup> Vaccine hesitancy threatens to reverse progress made in tackling vaccine-preventable diseases. WHO has declared vaccine hesitancy as one of the top ten threats to global health in spreading communicable diseases and around the world.<sup>9</sup> People may decline immunizations due to false claims by anti-vaxxers that vaccines contain infertility agents or can spread an infectious pathogen such as human immunodeficiency virus (HIV). Moreover, conspiracy theories, promoting fake experts, disseminating false logic, promoting unrealistic expectations and misrepresentation of facts and the use of social 'bots' are all deceptive strategies being used against COVID-19 vaccination.<sup>10</sup>

Therefore, it becomes crucial that all stakeholders involved in the COVID-19 vaccination program realize the negative effect of infodemic and misinformation/disinformation on these efforts and actively take steps to counter them. Few of the recommendations in tackling this threat are to (a) actively engage with the community and public to increase awareness regarding the vaccination program, (b) employ a multi-prong strategy which must include appropriate use of social media, (c) moderation of social bots with the help of skilled professionals to filter out misinformation, (d) advertise the content in national and regional languages to reach out to the maximum number of people in all parts of the

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country and (e) involve medical/dental students and residents in these awareness campaigns and countering infodemic and misinformation since they are more IT touched in this digital pandemic.

#### DISCLAIMER

None.

#### CONFLICT OF INTEREST

None to declare.

#### ETHICAL STATEMENT

Not applicable.

#### FUNDING DISCLOSURE

The author received no financial support for the research, authorship, and/or publication of this article.

#### AUTHORS' CONTRIBUTION

Conception and design, drafting and critical review of the manuscript: N. Um Min Allah, Approval of the final version of the manuscript to be published: R. Nazir, N. Um Min Allah

#### REFERENCES

1. COVID-19 Health Advisory Platform by Ministry of National Health Services Regulations and Coordination [Internet]. Islamabad: Government of Pakistan. [cited 2021 Jun 16]. Available from: <https://covid.gov.pk/>
2. Nowakowska J, Sobocińska J, Lewicki M, Lemańska Ż, Rzymiski P. When science goes viral: The research response during three months of the COVID-19 outbreak. *Biomed Pharmacother.* 2020;129:110451.
3. Gianola S, Jesus TS, Barger S, Castellini G. Characteristics of academic publications, preprints, and registered clinical trials on the COVID-19 pandemic. *PLoS One.* 2020;15(10):e0240123.
4. Rawat K, Kumari P, Saha L. COVID-19 vaccine: A recent update in pipeline vaccines, their design and development strategies. *Eur J Pharmacol.* 2021;892:173751.
5. World Health Organization. Immunizing the public against misinformation [Internet]. [updated 2020 Aug 25; cited 2021 Jun 16]. Available from: [https://www.who.int/news-room/feature-](https://www.who.int/news-room/feature-stories/detail/immunizing-the-public-against-misinformation)

[stories/detail/immunizing-the-public-against-misinformation](https://www.who.int/news-room/feature-stories/detail/immunizing-the-public-against-misinformation)

6. Rzymiski P, Borkowski L, drąg M, Flisiak R, Jemielity J, Krajewski J, et al. The Strategies to Support the COVID-19 Vaccination with Evidence-Based Communication and Tackling Misinformation. *Vaccines.* 2021;9(2):109.
7. Williamson S. Anti-vaccination leagues. *Arch Dis Child.* 1984;59(12):1195–6.
8. Khan SA, Ashfaq M, Ayub A, Jamil A, Badshah J, Ullah I, et al. Developing a three-dimensional narrative to counter polio vaccine refusal in Charsadda. *J Glob Health.* 2020;10(2):21301.
9. World Health Organization. Ten threats to global health in 2019 [Internet]. [cited 2021 Jun 16]. Available from: <https://www.who.int/news-room/spotlight/ten-threats-to-global-health-in-2019>
10. MacDonald NE. Fake news and science denier attacks on vaccines. What can you do? *Can Commun Dis Rep.* 2020;46(1112):432-435.

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#### How to cite this Article:

Nazir R, Um Min Allah N. Editorial: Tackling COVID-19 Vaccine Misinformation: A Challenge Greater than the Pandemic. *Found Univ J Dent.* 2021;1(1):1-2.