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Opinion

Vaccine Hesitancy Threatens Important Gains in the War against COVID-19

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Since its discovery in Wuhan China in November 2019, COVID-19 has emerged as arguably the worst pandemic in the 21st century. This disease is caused by a virus named by World Health Organization (WHO) as Sars-COV-2 virus, which as of today (5th April 2021) has affected over 131 million worldwide with over 2.8 million deaths and more than over 22 million active cases currently [1]. As of today, Africa has over 4 million confirmed cases of COVID-19 and more than 114,000 reported deaths [1]. There continue to be serious concerns regarding the emergence of different and new variants [B.1.1.7, B.1.351, P.1, B.1.427, and B.1.429 circulating variants] of concern from South Africa, Brazil, UK and USA [2]. These variants are thought to be much more infectious and virulent and have heightened fears for new surges in the disease worldwide [2]. There has been concerted efforts to ensure better and quicker testing, better treatment options for COVID-19 and production of effective vaccines against COVID-19 [3]. The widespread strict lockdowns worldwide due to COVID-19 had a very negative impact on routine childhood immunisation programs where over 53% (of 129) countries reported moderate or severe disruptions in programs, while some had complete disruption in 2020 [3]. These reports of disruptions have fueled concerns and worries about polio gains being reversed, reemergence of measles, and delays with roll out of new vaccines. The WHO as a result called on countries to double their effort for delivery of routine immunizations during COVID-19 pandemic, with clear strategies aimed at increasing acceptance and community demand for vaccination and immunization programs [3].

At the moment, about seven vaccines for COVID-19 have received approval for use - including one by Moderna; one produced by a collaboration between BioNTech and Pfizer; and a third vaccine produced by University of Oxford and AstraZeneca collaboration; two inactivated vaccines by Sinovac and Sinopharm, a vaccine produced by Jensen - a subsidiary of Johnson and Johnson and Covaxin – a vaccine made by Bharat Biotech of India from inactivated coronaviruses. [4]. Discovery of these vaccines generated enthusiasm and excitement, but the roll out and uptake is being hindered by concerns regarding vaccine hesitancy and the emergence of new virus strains. The WHO defines vaccine hesitancy as "a delay in the acceptance of or the refusal of vaccines by communities despite the availability of vaccination services" [5]. The WHO has a Strategic Advisory Group of Experts (SAGE) which in turn has a working group focused on vaccine hesitancy and identified 3 main factors that underly vaccine hesitancy described as 3C's model: "1. Convenience (deals with access to vaccines and access to vaccination services); 2. Confidence (where there is no trust in vaccines and healthcare providers of vaccines); and 3. Complacency (where target groups do not perceive the need for vaccination or they do not value vaccination)" [5]. Vaccine hesitancy may range from one delaying taking a vaccine to one completely refusing the vaccine, depending on one's context, and is influenced by space, time and could be expressed by anyone including religious leaders, or scientists or healthcare workers [6].

It is clear that the COVID-19 pandemic has fueled vaccine hesitancy since there has been rising presence of antivaxxer groups on social media, widespread misinformation on social media and similar platforms that end up raising mistrust, in- creasing complacency and lowering vaccine confidence [7,8]. The effort of some social media networks to block or remove and even ban misleading content or its promoters, a lot more needs to be done to overcome the problem of hesitancy. Opportunities arising out of COVID-19 pandemic include a chance for development and testing of innovative social mobilization and communication strategies dependent on different contexts and settings; some of which include better social mobilization, better messaging, focused outreach, robust programs for catch-up immunization and online social media content vigilance [9]. There is an urgent need to employ a wide range of players to combat vaccine hesitancy, from governments non- governmental organizations - which have capacity to reach many rural communities due to their existing wide networks and help build trust and demand for vaccines [9]. Additionally, the civil society including community-based organizations, cultural groups, religious groups and local community volunteers should help promote the uptake of new vaccines [9]. The WHO does recommend a pre-emptive and pro-vaccination strategy for dealing with vaccine hesitancy - a strategy that ' psychologically immunizes' the public and local communities against misinformation on vaccines through proactively reporting trusted vaccine information; while correcting any wrong information or correcting information rapidly in order to drown out any misinformation while at the same time desisting from sharing any fake news or unverified misinformation, more so on social media platforms [10].

There is need for concerted efforts to dispel current and future vaccine misinformation and myths as soon as they arise; to differentiate clearly between the under-vaccinated populations, the vaccine-hesitant groups and the anti-vaxxers. The vaccine-hesitant as earlier stated represent populations that are uncertain about getting the vaccines, but they remain open to vaccination if they are better informed and convinced that vaccines they question are safe, are effective, and are necessary for their health [6]. Even within the vaccine-hesitant groups, it is important to differentiate between those that experiencing vaccine-associated misinformation and the ones who just have mistrust. The question of whether ethnic minorities are more hesitant needs to be addressed, whether it is lack of trust in the vaccines or whether the problem arises from historical injustices and historical suspicions linked to vaccination as a tool for discrimination. These communities may not be ill-informed about their heightened risk of suffering severe COVID-19 illness and even death, yet may still experience significantly high levels of hesitancy [7]. The magnitude of the mistrust felt by these minority populations should not be downplayed, but it should be addressed. Efforts to engage these communities should focus on deliberate emancipation through increasing levels of knowledge, reducing any perceived risks, equal access, distribution and availability of vaccines to these communities as compared to other communities in the population, and enablement of opportunities for informed decision making [6,9]. One area of focus is improved approaches to education and social mobilization regarding mass vaccination campaigns especially when targeting these vaccine-hesitant groups; addressing culturally sensitive concerns; and ensuring tailored risk communication strategies and messaging, with the clear involvement of faith-based and influential cultural/community leaders in promoting buy-in to vaccination programs.

While there is no intention to make COVID-19 vaccines mandatory, promoting community confidence and improving current choice-offering strategies and incentives for vaccination is important [6-10]. Continuous listening and persuasion with timely response to community concerns on vaccine safety and efficacy and communication that current vaccine development has followed and adhered to the same legal requirements and scientific criteria for pharmaceutical safety, quality, and efficacy as other vaccines and medicines may improve voluntary cooperation. There has been increased online anti-vaccine messages and narratives that drives the current rise in vaccine hesitancy thus increasing the perception of harm/risk of vaccines while reducing the chances of accepting the vaccine. Deliberate accurate communication and counter-messaging should as well focus on emphasizing that while current "next generation" COVID vaccines have been based on sequence information, and not the traditional/classical virus-based or protein-based technology, these vaccines are actually built on many years of research and scientific developments in infrastructure, in improvement of knowledge and technical capacity of vaccine development process [6-10]. The current seeds of doubt are important, with provision of accurate information through use of carefully-designed consumer health surveys, observational qualitative research and survey of social media trending thoughts and concerns can help avoid misinformation by targeted posting of correct information. Science-based vaccine communication should be clear

and not ambiguous, to promote confidence in public health and ensure clear communication about the scientific basis and authenticity of vaccines and promoting the building of trust through community outreach and sanitization.

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