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LETTER TO EDITOR

Challenges in COVID-19 Vaccination – Need to Overcome

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Immunization is a protected and successful approach to forestall sickness and save lives – presently like never before. Today, there are immunizations accessible to ensure against at least 20 infections. Together, these immunizations defend the existence of up to 30 lakh individuals every year.[1]

When we get vaccinated, we are not merely securing ourselves yet also everyone around us. A few people, who are severely sick, are encouraged not to get certain vaccines – so they rely on most of us to get vaccinated and help diminish the spread of infection.[1] During the COVID-19 pandemic, vaccination keeps on being significant. The pandemic has caused a decrease in the number of children getting routine vaccines, which could cause an increment in sickness and death from preventable illnesses.[1]

It has been a challenge in developing the COVID-19 vaccine. Both animal and human trials need to show the safety, immunogenicity, and efficacy before the vaccine gets introduced for vast immunization.[1,2] India has introduced an immense COVID immunization drive utilizing two vaccines, Covishield and Covaxin.

The development of the COVID vaccine shed new hope into the world. However, for winning over the COVID pandemic, a successful immunization is another issue, for instance, preparing a detailed blueprint for storage, distribution, and administration.[2] Furthermore, to vaccinate a large population in India, large doses of vaccine are required. Despite having enormous cold chain capacities, India is likely to struggle with the storage and distribution of the COVID-19 vaccine. It is very well known that India runs the effective polio vaccination program successfully, where the temperatures ranging from 2 to 8°C are maintained, and COVID vaccine demands a dedicated cold chain. Interests in foundation and storage spaces, particularly ultracold freezing abilities, have not accumulated at a similar speed in which COVID-19 immunization advancement is occurring.[2] Several other components such as vials, gauze, alcohol swabs, syringes, and stoppers are also required in enormous quantities to vaccinate the large population.

COVID-19 vaccines have been introduced in India after clearance from regulatory bodies.

Before the vaccine is made available to the general public, health care and frontline workers are being vaccinated in the first phase of vaccination, which began on January 16. Since the beginning of the COVID vaccination program, various claims and misinformation concerning the vaccine have appeared on social media.[2,3] It is required to shed light on the myths and false claims associated with the vaccine to make the vaccination program effective.

First, people believe that COVID-19 is no more severe infection than flu.[2] Although both the illnesses spread through the respiratory route and have similar symptoms, COVID spreads rapidly and has a high case fatality rate.

Second, people doubt the rapid development of the vaccine jeopardizing safety. People perceive halt in vaccine trials as a problem with the participants.[2]

Third, people fail to understand that vaccines contain a small portion of the weakened or inactive pathogen, which stimulates the immune system to build antibodies against the pathogen, hence protecting the body when it encounters the actual pathogen, and that vaccines have no adverse impact on the immune system.[1-5]

Fourth, people fear catching COVID-19 infection from the COVID vaccine. They need to understand that body takes few

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weeks to build antibodies. Hence, before antibodies develop, one may acquire the disease, and safety measures, for instance, washing hands and wearing masks, offer protection.[1,2]

Fifth, people doubt the prerequisite of the COVID vaccine for the ones with the insusceptible immune system as they believe COVID affects only the individuals with a vulnerable immune system.

Sixth, patients recovered from COVID infection do not require the COVID vaccine. However, coronavirus strain undergoes mutation, so acquiring COVID infection does not guarantee immunity. Furthermore, there is a chance of the false-positive initial test with no actual viral infection.[2,3]

Seventh, people fear the impact of the COVID vaccine on DNA. Nevertheless, the COVID vaccine delivers mRNA, our cells respond to it by making pathogen protein, stimulate the immune system to construct antibodies, and protect the body. The mRNA never enters the cell nucleus, which contains DNA, and does not integrate with DNA.[2-4]

Eighth, people believe that the COVID vaccine contains a microchip or radiofrequency identification tags to keep track of their every move.[2] Nonetheless, our cell phones effectively complete that task.

Ninth, hesitancy is also reasonable by the false belief of the vaccine's impact on fertility.[2] However, to date, no evidence proves adverse effects on fertility.

Tenth, people also claim that the vaccines contain harmful toxins such as formaldehyde, mercury, and aluminum.[4,5] However, they are present in trace amounts as additives, make vaccines safer and sterile.

Eleventh, the vaccine protects against the COVID-19 disease, not against SARS-CoV-2 infection.[2,3] Therefore, people need to take adequate precautions even following vaccination. Taking necessary precautions does not abolish the need for immunization.

Twelfth, people fear that the COVID vaccine may harm older individuals with compromised immune systems or pre-existing conditions such as diabetes and heart disease, which is untrue.

It is difficult to accept that very little over a year ago, COVID-19 and SARS-CoV-2 were altogether obscure. At present, we have various suitable, safe, and effective vaccines. Following successful vaccine production, storage, and distribution, our next goal is to abrogate vaccine hesitancy. In this internet age, rumors develop and spread rapidly. These obstinate myths create fear and anxiety among people. To avoid this, people must pay attention to information from reliable sources.

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