



VACCINE HESITANCY FOR COVID 19 VIRUS

Dr. Samar Hossain^{*1}, Dr. Suneela Garg², Dr. Meera Dhuria³

¹Consultant Epidemiologist, National Center for Disease Control.

²Director Professor, Ex-Head(CM), National President Elect IAPSM, Maulana Azad Medical College.

³Deputy Director (PH), National Center for Disease Control.

***Corresponding Author: Dr. Samar Hossain**

Consultant Epidemiologist, National Center for Disease Control.

Article Received on 05/01/2021

Article Revised on 26/01/2021

Article Accepted on 16/02/2021

INTRODUCTION

The pandemic has created the ideal conditions for mistrust of a COVID-19 vaccine to thrive. Part of the problem is the complexity and variability of transmission and infection. After the whole world is taken off guard by an unseen virus striking with full force, there has been a lot of collateral damage in the battle we face against this deadly virus. The refusal of people to get the vaccine is no new, despite the fact that the health sector has put in a lot of effort to come up with several shield against the virus but there is this rising hesitancy on the side of the people to get the vaccine administered into their system, and this poses a greater threat to the society because vaccine hesitancy has implications for us all.

Covid 19 pandemic is now in high peaks and there is the immediate need for vaccine development. It starts as normal cold and flu and develops into covid when it gets accumulated in alveoli sacs of lungs. Unaware of the severity of the disease and the parts of the body getting affected, vaccination needs to be must and should to the population. Vaccines are the ones that induce immunity in the body against the foreign organisms when they attack. Knowledge of vaccines is limited in public as they think that it may cause side effects that are sometimes fatal. Keeping this point in mind and lacking basic scientific strategies in the vaccination procedures, people try to avoid or hesitate to take vaccine. Presently, due to the spread of corona virus all over the world, scientists have been struggling to bring vaccine and immunize people. In people, controversies are arising day by day due to misleading by few people about the efficacy of the vaccine.^[1]

A total of 13000 people all over the world were surveyed for their acceptance for the vaccine. Among them, 71 % are ready to accept the vaccine if proved 100% safe and working. 48 % were in the opinion of taking if their neighbour or friend recommends. There is difference in opinion noticed in people's response in different countries. Vaccine is not accepted globally. 80% of the acceptance is from the asian countries where people rely on the government decisions and trust them. Immunization programmes should consider public health, scientific awareness and literacy percentage in subpopulations, find a very reliable source (Larson et al., 2018) and should explain in detail about vaccines safety and effectiveness. The group of people working on vaccine production also sometimes hesitate to take

vaccine. The vaccination should not limit employees freedom, self interest. This can be mostly in adult people in the crew (Lugo,2007). Lessons we had learnt due to earlier pandemics such as infectious disease spread and recent ones of H1N1, MERS, HIV, Ebola and SARS made us realise the information from trusted resources and their guidance in disease control (Siegris & Zingg, 2014). However, addressing the issue of vaccine hesitancy among people requires trust as primary thing in them. Communication programmes by government organisations can build confidence in public of different cadres for vaccines.^[2]

MERS and SARS are also from the same family and all over researchers are trying to work out a good vaccine to control the disease spread. People in some areas are still in the false illusion that the disease is just like above influenza and ends with high fever and chills. The awareness of the disease should be spread by every citizen and the communication should be very clear to such people.

WHO says vaccine hesitancy as the nature of reluctance or rejecting vaccine in this pandemic in people. There is misinterpretation that the available vaccine threatens to reverse progress in the immune system when it is able to tackle vaccine-preventable diseases. In 2019, WHO said "vaccine hesitancy" as the top 10 threat to world health (WHO website).

Older adults having less resistance are more prone to the virus attack than the younger population. But age old patients and other elder people are not willing to take any vaccine (not specific to covid -19)saying they know very

well about these pandemics. This survey is matching with previous research on the generation of parents above 35 years old who are also hesitant towards vaccines and less compliant with the vaccination recommendation (Eve Dubé & Noni E MacDonald, 2020).^[3]

People who smoke and consume alcohol are more susceptible to the complications of the lung and also to the corona virus. They have to be educated about their sensitivity to disease and their immune response so that they can change their opinion towards prevention of immunization. Also cancer affected patients who have less immunity are having greater chances of getting COVID.^[3]

The gap between science and society should be filled with trust and cooperation as researchers through out the world are striving to find a vaccine that could slow down or completely bring to a halt the spreading of this virus (MacDonald, 2015). Misinterpretation about the vaccines and the companies that produce the vaccine are to be avoided by the media. The debates that news channels keep doing will effect the trust of people in vaccine.

Importance of Vaccine

The importance of vaccination and the negative effect of vaccine hesitancy were observed recently during a measles outbreak affecting more than 600 children in a Jewish orthodox community in New York City, the measles was taken under control in the society that allowed the vaccines to be administered to their system, but the others who refused suffers the outbreak. The two authorized vaccines, made by Moderna and Pfizer-BioNTech, are safe according to leading experts and clinical trials – for one thing they contain no live virus and so cannot give a person Covid – and with tens of thousands of patients, they have had about 95% efficacy. But across the country, health workers with the first access to the vaccine are turning it down. The rates of refusal is up to 40% of frontline workers in Los Angeles county, 60 % of care home workers in Ohio have prompted concern and in some cases, shaming. But the ultimate failure could be dismissing these numbers at a critical moment in the US vaccination campaign.

Dr Whitney Robinson, an epidemiologist at the University of North Carolina, told the Guardian if these early figures coming from healthcare workers are not tackled: “It could mean after all this work, after all this sacrifice; we could still be seeing outbreaks for years, not just 2021, maybe 2022, maybe 2023.”

Vaccine Hesitancy

Vaccine hesitancy is common, but having it participation to be wide on the side health worker is really discouraging. What do we say to that? People who are to assure us on the safety on the vaccine are the ones who are leading the coup against it.

Coined out from the statement of Dr. Allison Arwady, Chicago Department of Public Health commissioner, there are still more than 60,000 outpatient healthcare workers who need to be vaccinated. And there are still many other congregate settings that are being vaccinated.

The hesitancy is growing at a wide range. The refusal of the Health workers to get the vaccines administered to them is contributing to this problem. Covid 19 emerged as a great deal and even made the powerful countries now to its will. The fear it emerged with is a case study, despite the all effort to get it under control, it's just seems like it is unstoppable.

Even WHO (World health organization) warned against the herbal discovered by Madagascar, stating it clear that it had not been recommended as a cure to covid 19, there are a lot to see under the hesitancy.

A study of potential acceptance of a COVID-19 vaccine in 13,426 individuals across 19 countries were conducted. 71.5% had responded that they would like to take a vaccine if it were proven 100% safe and effective, and 48.1% had an opinion of getting vaccinated if their employer recommend it. There is high heterogeneity noticed in responses between countries. Universal willingness to accept a COVID-19 vaccine is a cause for concern. Countries where acceptance exceeded 80% tended to be Asian nations with strong trust in central governments (China, South Korea and Singapore). The vaccine immunization strategies have to consider the aspects of health, scientific and literacy in subpopulations, identify a trusted source of information (Larson et al., 2018) and should explain in detail about vaccines safety and effectiveness. It is easier to monitor compliance in adults in the working age group if employers of the vaccination group require it, but this could fail if it limits employees' freedom of choice or those manifesting employers' self-interest (Lugo,2007). Lessons from infectious disease outbreaks and public health emergencies such as HIV, H1N1, SARS, MERS and Ebola remind us about the trusted sources of information and guidance as fundamental factors to disease control (Siegris & Zingg, 2014). However, addressing vaccine hesitancy needs more than building trust. Clear and consistent communication by government officials is crucial to building public confidence in vaccine programmes.^[4]

CONCLUSION

The current levels of willingness to accept a COVID-19 vaccine are insufficient to meet the requirements for community immunity. To build increased trust among the general population, the elements that define and build trust must be understood and interventions crafted accordingly.

As the virus is also from the same genus of MERS and SARS, researchers have been trying to draw lessons from previous outbreaks to find a potential cure. Although

there were five Phase I human vaccine trials against SARS and MERS, the lack of data in humans provided us with limited benchmarks that could help us design a new vaccine for Coronavirus disease 2019 (COVID-19). Since the COVID-19 pandemic had first hit Wuhan, China, in December 2019, scientists have been trying to investigate and develop, test this advanced vaccines to protect against severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The speed of scientific discovery that is now related to COVID-19 is unprecedented. With several vaccine candidates who are already been tested in clinical trials, we have to pose a question: what will the vaccine hesitant do in the face of this pandemic?

REFERENCES

1. Evans M. The epidemiology of severe acute respiratory syndrome: a global perspective. *Imaging in SARS*. London: Greenwich Medical Media Ltd., 2004 Jun 24: 1-6.
2. Lugo-Lugo CR, Bloodsworth-Lugo MK, editors. *A New Kind of Containment: "the War on Terror," Race, and Sexuality*. Rodopi, 2009.
3. MacDonald NE, Dubé E. Antimicrobial Resistance in Canada: Promoting immunization resiliency in the digital information age. *Canada Communicable Disease Report*, 2020 Jan 2; 46(1): 20.
4. Lazarus JV, Ratzan SC, Palayew A, Gostin LO, Larson HJ, Rabin K, Kimball S, El-Mohandes A. A global survey of potential acceptance of a COVID-19 vaccine. *Nature medicine*, 2020 Oct 20: 1-4.