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Viewpoint

Avoiding the "Twindemic" in India – Importance of the flu vaccine this winter

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ABSTRACT

COVID-19 pandemic has had significant effect on almost everyone. Flu causes immense strain on the health service during winter. A combination of flu and COVID-19 can be disastrous. In this editorial, we discuss the importance of having flu vaccine to avoid the twindemic.

Keywords: Flu vaccine, Winter, Coronavirus disease

There is increased demand globally for the influenza vaccine currently, as people try to protect themselves amidst the worldwide SARS-CoV-2 (coronavirus) pandemic. Recent research has implied that people infected with SARS-CoV-2 between January and April 2020 were more at risk from severe illness and death.[1] In addition, the risk of death had doubled for people positive for both influenza virus-related flu and COVID-19, compared to those with COVID-19 alone.[1] The importance of the flu vaccine has also been highlighted by Fink *et al.*[2] In this study involving over 92,000 patients in Brazil, the odds of severe respiratory disease and death were reduced with confirmed COVID-19 patients who also received an inactivated flu vaccine. The study recommended widespread uptake of the flu vaccine, especially in high-risk groups.

India has seen a recent surge in the number of COVID-19 cases in the past few weeks, with September 2020 being the nation's worst month on record: On average, 1100 Indians died every day from the virus.[3] Some regions such as Maharashtra have persistently the highest case load and death toll in the country, with no signs of letting up. The consensus among the country's medical experts is that testing has not been ramped up significantly to act on new cases. There is currently no effective medication or vaccine available, with primary intervention including lockdowns and restrictions to minimize unnecessary contact such as mandatory face masks in indoor public spaces. Despite a relatively low current death rate in India compared to June, the number of cases is on the rise. To make matters worse, the upcoming months in India following monsoon season are unfortunately associated with severe acute respiratory distress syndrome due to seasonal Influenza. The number of influenza cases nationally is usually only around 2000 (compared to 10,000 in the UK), which this year is projected to be roughly 29,000 due to the global pandemic.[4] Indeed, the aforementioned research showed that adults at risk of COVID-19 are also at risk of flu-related illness and vice versa. Unfortunately, given the unknown historical health burden of influenza virus in India compared to other countries, the statistical data required to prioritize and formulate strategies for prevention are still not widely available.

Moreover, unlike the majority of Western nations where vaccination is heavily promoted and free such as the UK, the influenza vaccine is not popular in India. The country does have a national seasonal vaccination policy, but the public is expected to pay out of their own pockets. The quadrivalent vaccine (recommended against influenza virus strains A and B) costs around 1200–2000 Indian rupees.[5] The general public feel this is too high for a disease that the country as a whole has not traditionally succumbed to yearly.

The World Health Organization (WHO) recommends vaccination for pregnant women, children below the age of 5, the elderly (above 60), health care workers, and those

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with chronic condition.[6] Despite this, there is still vast misinformation among Indians about the flu vaccine. Reassuringly, research from the Cleveland Clinic, USA, has shown no link between receiving the influenza vaccine and a person contracting COVID-19.[7] Second, there are conflicting reports of when to get the vaccine. The optimal time is in mid-to-late October. This works on the notion that reasonable immunity would have built up by the end of October and last on average 6 months, all the way through to April corresponding to the tail end of flu season. There is a logical but flawed argument therefore that one should wait till the end of October to potentially remain immune longer during peak flu season. Despite SARS-CoV-2 and influenza being two separate viruses, they both show similar early symptoms, discriminating one from the other clinically is almost impossible. Therefore, getting vaccinated against the flu reduces the chances of contracting it, or at least having both flu and COVID-19-related illness. The latter is certainly possible given that several studies have already shown coinfection between SARS-CoV-2 and various other respiratory pathogens.[8] Another reason to get vaccinated earlier is the potential for "herd immunity," a term now made famous as one of the initial and controversial proposed strategies put forward by the UK government during the height of the pandemic. If enough of the population has been vaccinated before the spread of the flu virus, it could alter its ease of spread. This combined with current social distancing rules may greatly reduce the virulence of the influenza virus. This could also potentially induce bystander immunity, by augmenting immunity to other viral infections such as SARS-CoV-2.

There still remains great mystery around SARS-CoV-2, with speculation regarding silent reinfection, highly virulent strains, declining antibody levels, and vaccine trials showing promising but no immediate solutions.[9] To make matters worse, robust data concerning the disease patterns of influenza virus in India are not available and the country's health systems have not dealt well with previous outbreaks. India reported its first case of influenza A/H1N1 in May 2009, with the peak of the pandemic in September 2009. Despite the Indian government importing 1.5 million doses of flu vaccine, its acceptance and utilization were poor. Unfortunately by December 2010, the country recorded 38,730 cases and 2024 deaths.[10] Given the current SARS-CoV-2 pandemic, the numbers are feared to be much higher this year.

We suggest a few actions as a national priority. First, education programs should be developed targeting general public and all health care workers to raise awareness about influenza and dispel any misconceptions about the vaccine. Second, the seasonal vaccination should be made mandatory for health care workers, at a minimum to frontline workers taking care of infants, the elderly, patients with chronic conditions, and those who are immunocompromised as recommended by the WHO.

The number of COVID-19-related deaths in India has just passed the 100,000 mark, ranking the country third globally only behind USA and Brazil.[11] It is, therefore, imperative that the public are well informed about the potential risk of not opting to take the flu vaccine. The bottom line is that getting vaccinated will make a big impact on lessening the force of a "twindemic," this winter, that is, the second wave of SARS-CoV-2 coinciding with peak influenza season. As a template, we should perhaps look to Australia, a country that has its flu season from June to August. Due to their robust vaccination scheme and strict lockdown measures, the country's reported rate of flu cases dropped by 99% this year compared to 2019. As India enters into its own flu season, it is proof that flu vaccinations and social distancing measures will be crucial in avoiding a "twindemic." Given the proven safety record and beneficial effects of flu vaccine in adults, we recommend widespread vaccination on a national level, at least in part as an adjuvant to minimize the severity of COVID-19 disease. Unfortunately, conditions favoring influenza virus spread are more prevalent than ever in India: Cities are more interconnected, denser, with more people living in the same household. The possibility of the emergence of a reassortant flu virus remains high, and when combined with a coincidental second wave of SARS-CoV-2, vaccination seems crucial now more than ever in the country's history. One thing is certain, if left alone and not managed appropriately India will not be spared. However, how India perceives this threat and whether it will act with nationwide vaccination programs remains uncertain.

Declaration of patient consent

Patient's consent not required as there are no patients in this study.

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Conflicts of interest

The author Ashish Gulia is on the editorial board. He does not have any competing interests.

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