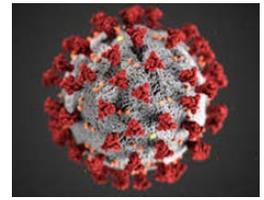




The Flu Vaccine and its Unknown Impact on the COVID Pandemic: The Precautionary Principle must be applied



As an article in the American Journal of Public Health states, “The precautionary principle asserts that the burden of proof for potentially harmful actions by industry or government rests on the assurance of safety and that when there are threats of serious damage, scientific uncertainty must be resolved in favor of prevention.” (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1446778/>).

Physicians, employers, schools, legislators and all others should follow the Precautionary Principle with respect to flu vaccination requirements this year and heed on the side of caution until there is scientific assurance that the flu vaccine will not put individuals and the community in a higher risk category for COVID-19 infection, symptoms and/or death.

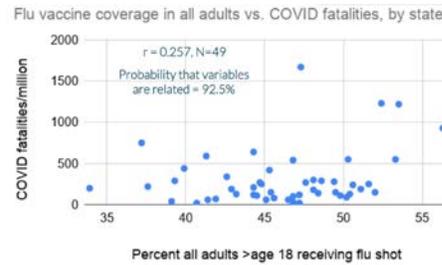
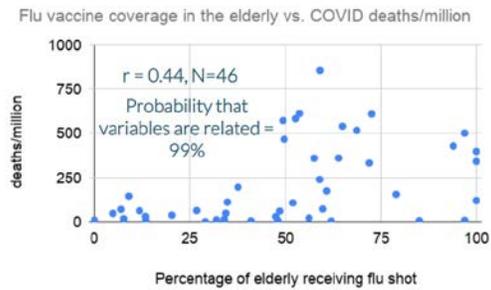
The CDC states “Getting a flu vaccine will not protect against COVID-19, however flu vaccination has many other important benefits. Flu vaccines have been shown to reduce the risk of flu illness, hospitalization and death. Getting a flu vaccine this fall will be more important than ever, not only to reduce your risk from flu but also to help conserve potentially scarce health care resources.” (<https://www.cdc.gov/flu/season/faq-flu-season-2020-2021.htm>)

However, there is no conclusive data showing that the flu vaccine would lessen the impact of COVID on an individual or on a community. In fact, there are a number research studies that have found the opposite – that flu vaccination increases COVID morbidity and increases the risk of coronaviruses and other non-flu viruses, as detailed below. Until the science is settled, a flu vaccine requirement should not be implemented.

Influenza vaccination and respiratory virus interference among Department of Defense personnel during the 2017–2018 influenza season (Wolff, 2020) <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7126676/>

This paper describes that the “Vaccine derived virus interference was significantly associated with coronavirus and human metapneumovirus; however, significant protection with vaccination was associated not only with most influenza viruses, but also parainfluenza, RSV, and non-influenza virus coinfections.” So while the influenza vaccine does give protection to influenza viruses, the risk of getting both coronavirus and human metapneumovirus in vaccinated individuals is significantly higher when compared to unvaccinated individuals, implying the influenza vaccination may increase the risk of COVID-19.

The key question with this paper is: Do the findings translate to all coronaviruses, including COVID-19. In a response to this paper, Cunningham (2020) published a list of flu shot coverage rates for the elderly vs. their COVID-19 fatality rates (<https://www.bmj.com/content/369/bmj.m1932/rr-15>). His data updated through August 2020 and supplemented with every other country for which there is influenza vaccine data is graphed below. Because COVID-19 testing and reporting may be inconsistent between countries, the graph provides the peak total excess death rate since January of 2020, in the form of a statistical Z score, for countries for which this was available.



This data on the left is among the elderly because the flu vaccine, in many countries is primarily given to the elderly. The data for adults by US state is available and shows a similar trend. (Full data: <https://storage.googleapis.com/wzukusers/user-34892194/documents/396b111f5a24632b25546c37c7a8232/expanded%20countries%20updated%20August%2014%2C%202020.xlsx>)

Two important takeaways from these graphs:

- 1) Countries with high flu vaccine coverage, as of August 2020, suffered up to at least 20 times more COVID-19 fatalities/million as countries with low coverage.
- 2) There appears to be a TIPPING POINT that occurs at 45% -50% flu vaccine coverage. The average fatality rate in countries or states with coverage over the tipping point is significantly higher. This indicates that reaching a certain density of individuals vaccinated with the flu vaccine made the community especially vulnerable to COVID (that is, the percolation threshold is reached) which suddenly creates sharply worse outcomes.

Increased Risk of Noninfluenza Respiratory Virus Infections Associated With Receipt of Inactivated Influenza Vaccine, (Cowling et al., 2012) <https://academic.oup.com/cid/article/54/12/1778/455098>

This paper describes that children given a “trivalent inactivated influenza vaccine (TIV) had an increased risk of virologically-confirmed non-influenza infections” over the subsequent 9 months. “Being protected against influenza, TIV recipients may lack temporary non-specific immunity that protected against other respiratory viruses.” In other words, children given a flu vaccine have a higher likelihood of getting other infections.

Epidemiology of respiratory viral infections in children enrolled in a study of influenza vaccine effectiveness (Dierig et al. 2014) <https://onlinelibrary.wiley.com/doi/pdf/10.1111/irv.12229>

This paper describes that influenza-like illness (Adeno- and rhinoviruses being the most common) was more common in “children vaccinated against influenza in this observational study, but prior health-seeking behaviour may have contributed to this difference.” Again, giving question to whether the flu vaccine increases the risk of other types of viral infections.

The number of people in a country who take the flu vaccine is highly correlated to the country's COVID-19 fatality rate, and research done before the epidemic clearly showed that taking the flu vaccine can increase an individual's susceptibility to viruses not contained in the shot. Additionally, the data is non-linear, suggesting that vaccinated individuals are super-spreaders of COVID-19, who become dangerous to the whole community.