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## Influenza Vaccination to Reduce Cardiovascular Risk in COVID-19 Patients



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According to a state-of-the-art review published in the Journal of the American College of Cardiology, seasonal influenza vaccine development and the findings of three international influenza cardiovascular outcomes trials that are currently underway could provide more information regarding the development and effectiveness of vaccine strategies for COVID-19. The review also evaluates whether existing flu trial networks could offer primary and secondary prevention strategies for COVID-19 patients with cardiovascular disease.

Influenza kills nearly 650,000 people every year globally, according to figures from the World Health Organization (WHO). Influenza is among the top 10 leading causes of death among people of all ages, in particular those who have comorbidities like cardiovascular disease. Seasonal influenza is also associated with increases in cardiovascular hospitalisation and mortality. That is why health authorities recommend that people receive their annual flu vaccination as it can reduce the risk of influenza-like illness. This is even more important for high-risk individuals (such as those suffering from cardiovascular disease).

COVID-19 patients who have cardiovascular disease or are high risk have demonstrated increased case fatality ratio, including 6% for hypertension, 7.3% for diabetes and 10.5% for cardiovascular disease. There is sufficient evidence to show that viral respiratory infections such as influenza or COVID-19 are risk factors for patients with cardiovascular disease. They are at a higher risk of complications following respiratory infections and are also at risk of increased morbidity, mortality and utilisation of healthcare resources.

Experts believe that influenza vaccination could serve as a preventive measure against adverse cardiovascular outcomes. However, despite recommendations and guidelines for routine influenza and pneumococcal vaccination for patients with cardiovascular disease, vaccination is often deprioritised and there is a lack of adherence to these guidelines.

"Although COVID-19 and other respiratory virus infections are associated with acute myocardial infarction and other cardiovascular events, influenza has the best evidence of a safe vaccine option for cardiovascular risk reduction to date," said Jacob A. Udell, MD, MPH, cardiologist at Women's College Hospital and Toronto General Hospital's Peter Munk Cardiac Centre, University of Toronto, and corresponding author of the paper.

Three international cardiovascular outcomes trials are currently underway. These include the Influenza Vaccine to Prevent Adverse Vascular Events trial, the Influenza Vaccination After Myocardial Infarction trial and the INfluenza Vaccine to Effectively Stop cardioThoracic Events and Decompensated heart failure trial. These trials will examine the cardioprotective effects of different influenza vaccine formulations.

"Three large ongoing influenza vaccine cardiovascular outcome trials have an opportunity to contribute further to our understanding of the underlying comorbidities in these patients that may be driving morbidity and mortality associated with COVID-19 infection," Udell said. "These cohorts may also be an opportunity to explore novel infection prevention therapies beyond influenza vaccination in patients that have already volunteered to participate in a respiratory virus vaccine cardiovascular outcome study. While developing new vaccines, we will also definitively learn soon whether influenza vaccination is an effective, low-cost, widely available therapy that reduces cardiovascular risk, which may further help prevent fatal and nonfatal cardiovascular complications of COVID-19."

Source: [American College of Cardiology](#)

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