Influenza Vaccines and CVD

Influenza disease is estimated to result in about 3 to 5 million cases of severe illness, and about 290,000 to 650,000 deaths.

People with chronic cardiac disease are at greater risk of severe disease or complications when infected.

Health care workers are often at high risk acquiring influenza virus infection due to increased exposure to the patients and risk further spread particularly to vulnerable individuals.

Complications such as heart attacks in cardiovascular patients may be reduced by up to 67% with influenza vaccination.

Healthcare workers’ vaccination against influenza reduces mortality and influenza cases in healthcare facilities.

Key facts
Influenza 

epidemiology

Seasonal influenza is an acute respiratory infection caused by influenza viruses which circulate in all parts of the world. Illnesses range from mild to severe and even death. Hospitalization and death occur mainly among high-risk groups. Worldwide, influenza annual epidemics are estimated to result in about 3 to 5 million cases of severe illness, and about 290,000 to 650,000 deaths. All age groups can be affected but there are groups that are at more risk than others:

- People at greater risk of severe disease or complications when infected are: pregnant women, children under 59 months, the elderly, individuals with chronic medical conditions (such as chronic cardiac, pulmonary, renal, metabolic, neurodevelopmental, liver or hematologic diseases) and individuals with immunosuppressive conditions (such as HIV/AIDS, receiving chemotherapy or steroids, or malignancy).
- Health care workers are often at high risk acquiring influenza virus infection due to increased exposure to the patients and risk further spread particularly to vulnerable individuals.

Influenza infection and cardiovascular disease

- In persons with cardiovascular disease, systemic respiratory infections - which are frequently caused by influenza viruses - increase the risk of stroke and heart attacks three- and five-fold respectively, in the three days following the onset of infection.
- The risk of dying from acute myocardial infarction and chronic ischaemic heart disease is 1.3 times greater during influenza epidemic weeks.
- A study showed that 50% of adults hospitalized during the 2014-2015 flu season in the USA had heart conditions.

What are the benefits of influenza vaccination for patients with CVD?

When the impact of vaccination on NCDs was measured in over 35,000 older adults, mortality from stroke, diabetes, COPD, and heart disease was lowered by 65%, 55%, 45% and 22% respectively. Complications, such as heart attacks in cardiovascular or COPD patients, may be reduced by up to 67% and the chance of stroke occurrence may be reduced by 24%. One study calculated the vaccine efficacy to be 29% in preventing acute myocardial infarction (AMI).

Should healthcare professionals also get influenza vaccination?

Healthcare workers constitute a special group at an elevated risk of both contracting and transmitting influenza to already vulnerable patients. Nosocomial infections can compromise quality of care and patient safety and result in prolonged hospital stays, microbial resistance, exacerbations of existing conditions and even deaths. Healthcare workers are another high-risk group in terms of both susceptibility and contagiousness: they are at a risk of exposure to influenza virus since healthcare facilities are a frequent site of nosocomial outbreaks. Healthcare workers can act as vectors as well, unknowingly infecting their patients particularly when the infection is asymptomatic.

The most recent evidence indicates that healthcare workers’ vaccination against influenza reduces mortality and influenza cases in healthcare facilities.

How healthcare professionals can help patients get their influenza shot

A recent study from Israel provided evidence that patients whose physicians got a flu shot were more likely to follow their lead than patients of the physicians who did not get the flu shot. Studies indicate that recommendations by physicians is the most effective strategy influencing patients’ behaviour, since the majority of people view their doctors as the most trusted source of health information.