

Vaccines against respiratory infections linked with less heart failure deaths

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Influenza and pneumonia vaccinations are associated with fewer hospital deaths in patients with heart failure. That's the result of a study in nearly 3 million Americans released today at ESC Congress 2020.

One out of five individuals will develop [heart](#) failure in their lifetime. An estimated 26 million people are affected worldwide. Heart failure is a serious condition in which the heart cannot pump blood around the body as well as it should. It leads to a build-up of fluid in the lungs, causing shortness of breath and coughing, and impacts people's quality of life, often requiring urgent hospitalisations.

Respiratory infections such as influenza and pneumonia make heart failure worse, and annual vaccinations are recommended.

"The COVID-19 pandemic has shone the spotlight on the importance of vaccination to prevent respiratory infections, particularly for people with diseases like heart failure," said study author Dr. Karthik Gonuguntla of the University of Connecticut.

While it is known that inoculations protect against respiratory infections, and that these infections exacerbate heart failure, few studies have compared outcomes of vaccinated versus unvaccinated patients. This study examined whether immunisations had any link with the risk of heart failure patients dying while in hospital.

The study included 2,912,137 patients with heart failure who had a hospital admission in 2010 to 2014. The average age was 70 years. Data were obtained from the National Inpatient Sample (NIS), which covers more than 95% of the US population.

Just 1.4% of patients in the study had the flu [vaccine](#) and 1.4% had the pneumonia vaccine. The researchers compared in-hospital death rates between heart failure patients who received flu and pneumonia vaccinations that year and those who did not.

Rates of in-hospital mortality were significantly lower in patients who received the flu vaccine (1.3%) compared to those who did not receive

the [flu vaccine](#) (3.6%). Similarly, rates of in-hospital mortality were significantly lower in patients inoculated against pneumonia (1.2%) compared to those who were not inoculated (3.6%).

Dr. Gonuguntla said: "Our study provides further impetus for annual immunisations in patients with heart failure. Despite advice to do so, uptake remains low. Although large administrative databases like the NIS are prone to containing some errors, the [data](#) indicate that there is some distance to go before reaching 100% coverage."

He noted that serious reactions to flu and [pneumonia](#) vaccinations are very rare, happen within a few hours, and can be effectively treated.

Dr. Gonuguntla said: "Pneumonia and flu vaccines are vital to preventing these respiratory infections and protecting patients with [heart failure](#). Although many people have rejected common and safe vaccines before COVID-19, I am optimistic that the pandemic has changed perceptions about the role of immunisations in safeguarding our health."

More information: Abstract title: Impact of influenza and pneumococcal vaccines upon in-hospital mortality in patients with heart failure: a retrospective cohort study in the United States.

Provided by European Society of Cardiology

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