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## VA researcher links flu to heart-failure hospitalizations

## Study offers strong evidence adults need annual immunization to avoid potential complications that lead to hospitalization

WASHINGTON — Influenza significantly increased the risk of hospitalization for heart failure, according to a study of more than 450,000 adults, which was published in the March 27 issue of Journal of the American Medical Association (JAMA)/Cardiology, and headed by a Minneapolis Department of Veterans Affairs (VA) researcher.

Senior author Dr. Orly Vardeny, a clinical pharmacist and researcher at the Minneapolis VA Medical Center's Center for Care Delivery and Outcomes Research and an associate professor of medicine at the University of Minnesota, said this is the largest study to confirm the long-held notion of a connection between influenza, also known as flu, and heart failure.

"The study's findings support VA's aggressive effort every year to provide Veterans with influenza vaccine," said VA Secretary Robert Wilkie. "Although the flu season is winding down, it's not too late for Veterans, and others, to get a vaccine."

Vardeny and colleagues reviewed hospitalization data of adults ages 35-84 between October 2010 and September 2014 in four geographically diverse U.S. communities. Researchers correlated this information with reports of influenza activity from the federal Centers for Disease Control Surveillance Network.

"We hypothesized that increased influenza activity would be associated with an increase in hospitalizations for heart failure and myocardial infarction among adults in a community cohort," Vardeny said.

Indeed, that was the case. Influenza activity was related to an increase in heart-failure hospitalizations across four influenza seasons in the four communities. Communities studied included Jackson, Mississippi; eight suburbs of Minneapolis, Minnesota; and two rural communities, Forsyth County, North Carolina; and Washington County, Maryland.

Researchers found a 5 percent monthly increase in influenza activity was associated with a 24 percent relative increase in heart failure hospitalization rates.

"Our study suggests that influenza may contribute to the risk of heart failure hospitalization in the general population," Vardeny said. "This is additional strong evidence that adults need to have an annual immunization against influenza to avoid potential complications that lead to hospitalization.'

Study co-authors were from Brigham and Women's Hospital in Boston, Toronto General Hospital, the University of North Carolina, the University of Wisconsin and the National Heart, Lung and Blood Institute.

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