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Publishing Title: **Role of Statins in Preventing Death among Patients Hospitalized with Lab-confirmed Influenza Infections**

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Abstract Body:

Background:
There is growing evidence that statins have anti-inflammatory and immunomodulatory effects that could reduce the risk of mortality from severe infections. We examined the role of statins in reducing mortality in adults hospitalized with lab-confirmed influenza.

Methods:
The Emerging Infections Program (EIP) conducts active surveillance for persons hospitalized with lab-confirmed influenza in 59 counties in 10 states. We analyzed data collected via chart review of patients ≥18 years for two influenza seasons to evaluate the association between receiving statins during hospitalization and death.

Results:
We identified 3,921 lab-confirmed influenza associated hospitalizations, of whom 1019 (26.0%) received statins. Patients who received statins were more likely to be older, male, White and Asian, to have underlying health conditions such as cardiovascular disease, and to have been vaccinated against influenza that season. In a multivariable logistic regression model, age (aOR=1.06, CI: 1.04-1.08 per year increase) and cardiovascular disease (aOR=2.91, CI: 1.52-5.56) were associated with increased odds of death, while administration of statins during hospitalization was significantly protective (aOR=0.34, CI: 0.16-0.70).

Conclusion:
Statin use may be associated with reduced mortality in patients hospitalized with influenza. Although vaccine was not found to be protective in our study, residual

confounding from factors not captured by chart review may account for this finding.

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