Abstract

Purpose: The 2024-2025 influenza season was classified as high severity and was associated with increased hospitalization rates and flu-related mortality compared to prior seasons. Viral pulmonary infections such as influenza can be complicated by secondary bacterial infections, resulting in clinical complications and adverse outcomes. Optimizing antibiotic prescribing and applying antimicrobial stewardship principles is essential to improve patient outcomes.

Methods: A single-center retrospective chart review was conducted on adult inpatients with laboratory-confirmed influenza admitted between January and February 2025. Data was collected on clinical characteristics, CURB-65 scores, and oseltamivir and antibiotic use. The primary outcome was frequency of antibiotic prescribing relative to symptom onset and disease severity; secondary outcomes included oseltamivir use based on date of symptom onset and percentage of patients treated with both oseltamivir and antibiotics.

Results: Of 131 patients, 76 received antibiotics. Patients treated with antibiotics were generally older, had higher CURB-65 scores, and required higher levels of care. Oseltamivir was initiated beyond 48 hours of symptom onset in 41% of cases. Of the 131 patients, 59 (45%) were prescribed both oseltamivir and antibiotics.

Conclusions: Overall, prescribing patterns observed in our study were consistent with appropriate clinical decision-making and antimicrobial stewardship principles. Variability in antiviral use and challenges applying IDSA criteria for antibiotic use in influenza patients highlight future research needs.

Keywords: influenza, secondary bacterial pneumonia, CURB-65 criteria, antimicrobial stewardship, IDSA, oseltamivir