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Title

Prospective validation of a 3 item COVID-19 hospitalization risk score for outpatients

Priority 1 (Research Category)

COVID-19

Presenters

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Abstract

Context: Triage of outpatients newly diagnosed with COVID-19 continues to be an important issue. We previously developed the Lehigh Outpatient COVID Hospitalization (LOCH) risk score to assist in these decisions.

Objective: To prospectively validate the LOCH risk score in outpatients during the Omicron wave of the pandemic, with stratification by vaccination status.

Study design and analysis: This was a retrospective cohort study to validate a previously develop risk score.

Population studied: The electronic health record in the Lehigh Valley Health System in Pennsylvania, USA was used to identify all patients diagnosed with COVID-19 who had an outpatient encounter in primary or urgent care from 11/21/2021 and 10/31/2022. Their encounter data were linked to data regarding vaccinations and comorbidities.

Outcome measure: The primary outcome was how accurately the risk score classified patients regarding risk of hospitalization.

Results: The mean age of patients was 45.6 years, 57.7% were female, and 38.4% reported having at least one of the relevant comorbidities for the LOCH risk score. Overall, 194 of 19,456 patients (1.00%) were hospitalized. Overall, the likelihood of hospitalization in low, moderate and high-risk groups was

0.09%, 0.91% and 4.88% respectively. For vaccinated patients, the likelihood of hospitalization in low, moderate and high-risk groups was lower: 0.06%, 0.27% and 3.42% respectively. For unvaccinated patients, the likelihood of hospitalization in low, moderate and high-risk groups was higher: 0.11%, 1.68% and 8.89% respectively.

Conclusions: Low and moderate risk vaccinated patients and low risk unvaccinated patients (68.2% of all patients, 0.16% hospitalized) can be reassured and do not require special follow-up or other investigations. Patients at higher risk should receive either close outpatient follow-up or further evaluation in the emergency department.