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## INTRODUCTION

Sepsis remains a major cause of in-hospital mortality, particularly in low- and middle-income countries. Early identification of high-risk patients at triage is essential to improve outcomes. Rapid clinical scores such as qSOFA, NEWS, and IEWS may support early risk stratification in the emergency department.

## OBJECTIVE

To evaluate and compare the ability of qSOFA, NEWS, and IEWS scores—applied at emergency department triage—to predict in-hospital mortality in patients with suspected sepsis. Additionally, to assess whether adding arterial lactate to IEWS (creating the IEWS\_L score) improves its predictive performance.

## RESULTS

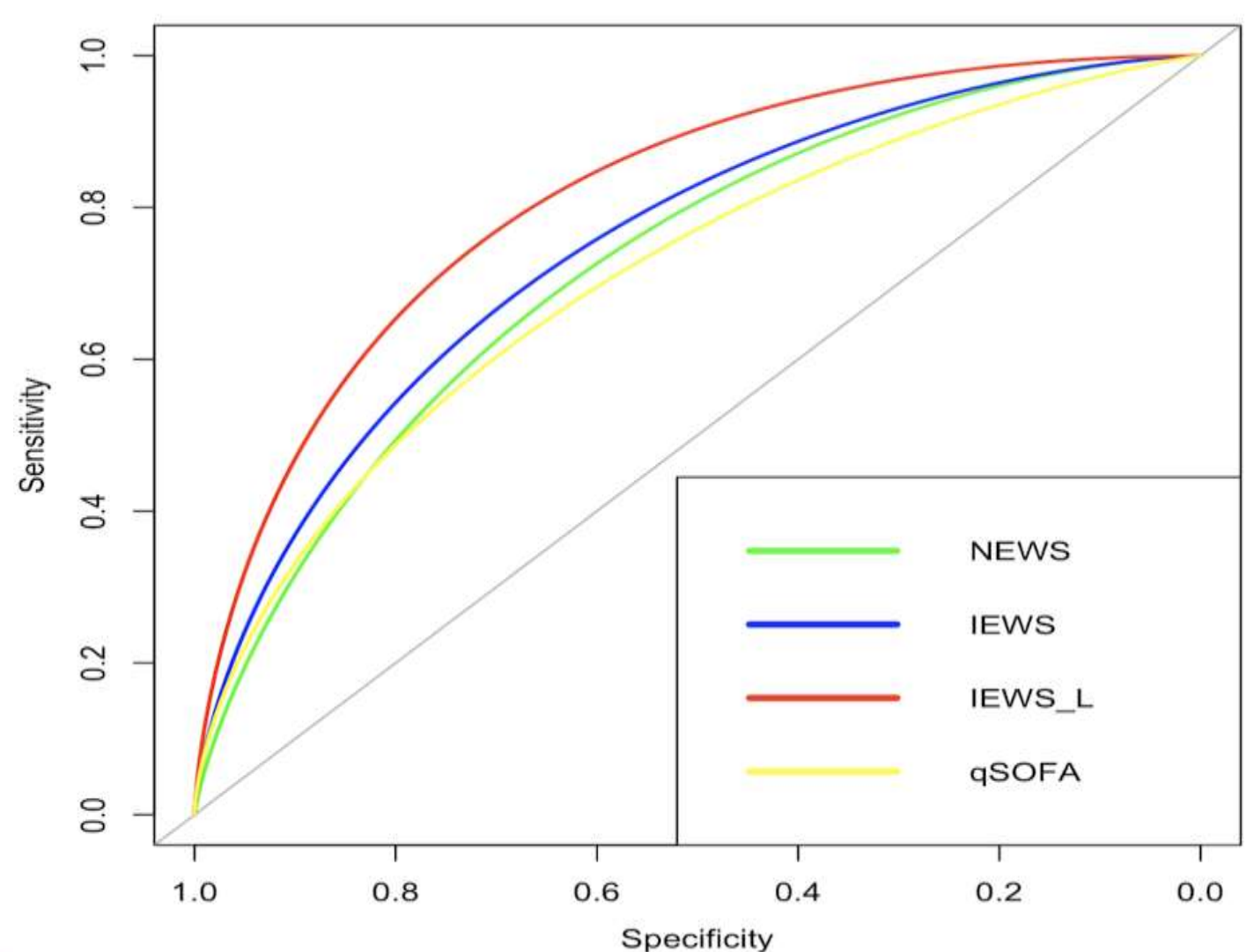
Among 383 patients, overall mortality was 20.6% and 35.2% in septic shock. IEWS\_L showed the highest predictive accuracy (AUC 0.81), outperforming qSOFA (0.68), NEWS (0.71), and IEWS (0.74). IEWS and IEWS\_L were significantly superior ( $p<0.05$ ), with IEWS\_L showing the best discrimination and calibration ( $p<0.001$ ).

## CONCLUSIONS

IEWS\_L showed the highest accuracy for predicting sepsis mortality in the emergency department.

## METHODOLOGY

This was a retrospective cohort study conducted at Fundación Santa Fe de Bogotá, Colombia. It included patients aged 18 and older admitted to the emergency department with suspected sepsis between June 2023 and December 2024. The qSOFA, NEWS, and IEWS scores were applied upon triage. Patients referred from other institutions, previously treated elsewhere, pregnant, or without confirmed infection were excluded. Clinical, laboratory, and outcome data were collected. The performance of each score in predicting in-hospital mortality was assessed through sensitivity, specificity, predictive values, and area under the curve (AUC).



### Affiliazioni

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RESEARCH ABSTRACT: Sepsis, Septic shock, in-hospital mortality, emergency department