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COMPARISON OF CURB-65 AND PNEUMONIA SEVERITY INDEX FOR PREDICTING INTENSIVE CARE UNIT ADMISSION AND IN-HOSPITAL MORTALITY IN ADULTS WITH COMMUNITY-ACQUIRED PNEUMONIA: A PROSPECTIVE OBSERVATIONAL STUDY

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STRUCTURED ABSTRACT

Background: Community-acquired pneumonia (CAP) remains one of the leading causes of hospitalization and mortality worldwide despite advances in antimicrobial therapy and supportive care. Early identification of patients at high risk for adverse outcomes is essential for timely escalation of treatment and appropriate utilization of healthcare resources. Among the available prognostic tools, the Pneumonia Severity Index (PSI) and CURB-65 are the most widely recommended; however, their comparative performance in predicting clinically meaningful outcomes in Indian patients remains inadequately explored. This study compared the predictive accuracy of PSI and CURB-65 for intensive care unit (ICU) admission and in-hospital mortality among adults hospitalized with CAP.

Methods: A prospective observational study was conducted in the Department of General Medicine, L.N. Medical College and Research Centre, Bhopal, India. Consecutive adult patients diagnosed with community-acquired pneumonia were enrolled after fulfilling predefined inclusion and exclusion criteria. Clinical history, physical examination, laboratory investigations, chest radiography, and microbiological findings were recorded at admission. CURB-65 and PSI scores were calculated for every patient. The primary outcomes included ICU admission and in-hospital mortality. Secondary outcomes included ventilatory support requirement, duration of hospital stay, and clinical status at 48-hour reassessment. Receiver operating characteristic (ROC) curve analysis was performed to compare the discriminatory ability of both scoring systems.

Results: Both CURB-65 and PSI demonstrated significant associations with ICU admission, requirement for ventilatory support, prolonged hospitalization, and in-hospital mortality. Increasing scores in both systems corresponded to progressively higher risks of adverse clinical outcomes. PSI demonstrated superior discriminatory performance for mortality prediction, whereas CURB-65 showed comparable predictive ability for ICU admission with considerably greater ease of bedside application. ROC curve analysis confirmed good predictive accuracy for both scoring systems. The simplicity and rapid applicability of CURB-65 make it particularly valuable in emergency departments and resource-limited healthcare settings.

Conclusion: Both CURB-65 and PSI are effective prognostic tools for patients with community-acquired pneumonia. Although PSI provides slightly better risk stratification for mortality, CURB-65 offers comparable clinical utility with substantially greater simplicity. Considering its ease of use and minimal requirement for laboratory variables, CURB-65 represents an efficient bedside scoring system for early triage and treatment decisions, particularly in resource-constrained settings.

Keywords: Community-acquired pneumonia, CURB-65, Pneumonia Severity Index, Mortality, Intensive Care Unit, Prognosis.

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INTRODUCTION

Community-acquired pneumonia (CAP) remains one of the leading infectious causes of hospitalization, morbidity, and mortality worldwide despite remarkable advances in antimicrobial therapy, vaccination, and critical care management. Lower respiratory tract infections continue to rank among the leading causes of death globally, particularly in older adults and individuals with chronic comorbidities. In low- and middle-income

countries such as India, delayed healthcare access, increasing antimicrobial resistance, and a high burden of chronic diseases further contribute to poor clinical outcomes and increased healthcare utilization.[1–4]

The clinical presentation of CAP ranges from mild illness suitable for outpatient management to severe pneumonia complicated by respiratory failure, septic shock, multiorgan dysfunction, and death. Early recognition of patients at high risk of adverse outcomes is therefore crucial for selecting the appropriate site of care, initiating timely empirical antimicrobial therapy, determining the need for intensive care unit (ICU) admission, and optimizing healthcare resource utilization.[2, 5, 6]

To facilitate objective risk stratification, several prognostic scoring systems have been developed and validated. Among these, the Pneumonia Severity Index (PSI) and CURB-65 are the two most widely recommended severity assessment tools in international guidelines.[2,3] The PSI, developed by Fine et al., incorporates demographic characteristics, comorbid illnesses, physical examination findings, laboratory parameters, and radiographic variables to classify patients into five mortality risk classes. Although PSI provides comprehensive risk assessment and has been extensively validated, its relatively large number of variables makes it cumbersome to calculate during emergency evaluation.[1]

In contrast, the CURB-65 score is a simplified bedside tool based on five readily obtainable clinical parameters: Confusion, Blood Urea Nitrogen >7 mmol/L, Respiratory Rate ≥30 breaths/minute, Blood Pressure <90/60 mmHg, and Age ≥65 years. Because of its simplicity, rapid calculation, and minimal dependence on laboratory investigations, CURB-65 is widely used for early triage and decision-making in emergency departments and resource-limited healthcare settings.[2,7] However, concerns remain regarding whether its simplicity compromises predictive accuracy when compared with the more comprehensive PSI, particularly among elderly patients and those with multiple comorbid conditions.

The 2019 American Thoracic Society/Infectious Diseases Society of America (ATS/IDSA) guidelines recommend the use of validated severity assessment tools such as PSI and CURB-65 to support clinical judgment when deciding the need for hospitalization.[3] Nevertheless, neither scoring system should replace clinical assessment, especially in patients with rapidly progressive disease or organ dysfunction. Emerging evidence from systematic reviews and meta-analyses suggests that both PSI and CURB-65 demonstrate good discriminatory ability for predicting mortality and ICU admission, although each possesses distinct strengths and limitations.[8–10]

Evidence comparing these scoring systems in Indian populations remains relatively limited. Differences in patient demographics, nutritional status, healthcare infrastructure, microbiological profile, prevalence of comorbid illnesses, and treatment-seeking behavior may influence the predictive performance of severity scores. Therefore, findings from studies conducted in Western populations may not be directly applicable to Indian clinical practice.[10–12]

Furthermore, clinicians often face the practical challenge of balancing prognostic accuracy with bedside feasibility. While PSI may offer superior mortality prediction because of its comprehensive assessment, CURB-65 provides rapid bedside evaluation requiring only a few clinical variables. Identifying whether the simpler CURB-65 performs comparably to PSI has important implications for emergency care, especially in busy tertiary hospitals and resource-constrained settings where prompt clinical decisions are essential.[12–14]

Therefore, the present prospective observational study was undertaken to compare the prognostic performance of the Pneumonia Severity Index (PSI) and CURB-65 in adult patients hospitalized with community-acquired pneumonia. The study aimed to evaluate their ability to predict ICU admission, in-hospital mortality, ventilatory support requirement, duration of hospital stay, and short-term clinical outcomes, thereby providing evidence to guide the selection of an appropriate severity assessment tool in routine clinical practice.

MATERIALS AND METHODS

Study Design and Setting

This prospective observational study was conducted in the Department of General Medicine, L.N. Medical College and Research Centre and J.K. Hospital, Bhopal, Madhya Pradesh, India. The study was carried out after obtaining approval from the Institutional Ethics Committee and was conducted in accordance with the ethical principles of the Declaration of Helsinki. Written informed consent was obtained from all participants or their legally authorized representatives before enrolment.

Study Population

Adult patients admitted with a diagnosis of community-acquired pneumonia (CAP) during the study period were consecutively enrolled after satisfying the eligibility criteria.

Inclusion Criteria

- Age ≥18 years.
- Clinical features suggestive of community-acquired pneumonia, including fever, cough with or without sputum production, dyspnea, or pleuritic chest pain.

- Presence of a new pulmonary infiltrate on chest radiograph consistent with pneumonia.
- Pneumonia acquired outside the hospital or diagnosed within 48 hours of hospital admission.

Exclusion Criteria

Patients were excluded if they had:

- Hospital-acquired or ventilator-associated pneumonia.
- Active pulmonary tuberculosis.
- Human immunodeficiency virus (HIV) infection with advanced immunosuppression.
- Severe immunocompromised state (solid organ transplantation, chemotherapy, prolonged immunosuppressive therapy).
- Known interstitial lung disease with superimposed infection.
- Aspiration pneumonia.
- Pregnancy.
- Incomplete clinical or laboratory data required for severity score calculation.

Sample Size

The study included all eligible consecutive patients admitted during the study period who fulfilled the inclusion criteria and provided informed consent. A total of 100 patients were enrolled for final analysis.

Data Collection

At admission, a standardized case record form was used to document:

- Demographic characteristics
- Smoking and alcohol history
- Socioeconomic status
- Presenting symptoms
- Duration of illness
- Medical comorbidities
- Vital signs
- Physical examination findings

Routine laboratory investigations included:

- Complete blood count
- Blood urea nitrogen
- Serum creatinine
- Blood glucose
- Serum electrolytes
- Liver function tests
- Arterial oxygen saturation
- Chest radiography
- Sputum Gram stain and culture wherever indicated

Patients were managed according to the institutional treatment protocol, independent of study participation.

Severity Assessment

CURB-65 Score

The CURB-65 score was calculated for every patient using five variables:

- Confusion
- Blood urea nitrogen >7 mmol/L (20 mg/dL)
- Respiratory rate ≥30/min
- Blood pressure (SBP <90 mmHg or DBP ≤60 mmHg)
- Age ≥65 years

Each variable was assigned one point, resulting in a total score ranging from 0 to 5.

Patients were categorized as:

- Low risk (0–1)
- Intermediate risk (2)
- High risk (3–5)

Pneumonia Severity Index (PSI)

The Pneumonia Severity Index was calculated using the original prediction rule proposed by Fine et al., incorporating:

- Demographic variables
- Coexisting illnesses
- Physical examination findings
- Laboratory parameters
- Radiographic findings

Patients were classified into five risk classes:

- Class I
- Class II
- Class III
- Class IV
- Class V

For comparative analysis, PSI Classes I–III were considered low-risk, whereas Classes IV and V were considered high-risk.

Outcome Measures

Primary Outcomes

The primary outcomes were:

- Requirement for Intensive Care Unit (ICU) admission.
- In-hospital mortality.

Secondary Outcomes

Secondary outcomes included:

- Requirement for oxygen therapy.
- Requirement for non-invasive ventilation (NIV).
- Requirement for invasive mechanical ventilation.
- Clinical improvement after 48 hours of treatment.
- Duration of hospital stay.

Statistical Analysis

Data were entered into Microsoft Excel and analyzed using Statistical Package for Social Sciences (SPSS) version XX (IBM Corp., Armonk, NY, USA).

Continuous variables were expressed as mean ± standard deviation (SD) or median (interquartile range), depending on data distribution. Categorical variables were summarized as frequencies and percentages.

Comparisons between categorical variables were performed using the Chi-square test or Fisher's exact

test wherever appropriate. Continuous variables were compared using the independent Student's t-test or Mann–Whitney U test.

Receiver operating characteristic (ROC) curve analysis was performed to evaluate and compare the predictive performance of CURB-65 and PSI for ICU admission and in-hospital mortality. The area under the curve (AUC) with 95% confidence intervals was calculated.

Correlation between the two scoring systems was assessed using Pearson's correlation coefficient.

A two-tailed P value <0.05 was considered statistically significant.

Ethical Considerations

The study protocol was approved by the Institutional Ethics Committee of L.N. Medical College and Research Centre, Bhopal, prior to commencement of the study. All participants provided written informed consent before enrolment. Patient confidentiality was maintained throughout the study, and all collected data were anonymized before statistical analysis.

RESULTS

Baseline Characteristics

A total of 110 adult patients diagnosed with community-acquired pneumonia (CAP) were enrolled in this prospective observational study. The mean age of the study population was 48.6 ± 14.8 years, with patients aged 51–60 years constituting the largest subgroup (20.9%). The cohort comprised 63 (57.3%) males and 47 (42.7%) females, yielding a male-to-female ratio of 1.34:1. Age distribution was comparable between both sexes (p = 0.42).

Most participants were from rural areas, were married, and belonged to the middle socioeconomic class, reflecting the demographic profile of patients presenting to the study center.

Table 1. Baseline Demographic Characteristics of the Study Population (N = 110)

Variable	Value
Total patients	110
Mean age (years)	48.6 ± 14.8
Male	63 (57.3%)
Female	47 (42.7%)
Male:Female ratio	1.34:1
Most common age group	51–60 years (20.9%)

Clinical Presentation and Microbiological Findings

Cough, fever, dyspnea, and expectoration were the predominant presenting symptoms. Hypertension and diabetes mellitus were the most common comorbid illnesses. Streptococcus pneumoniae was the most frequently isolated pathogen (20.0%), followed by Klebsiella pneumoniae (16.4%). No bacterial growth was observed in 41.8% of sputum cultures.

Table 2. Major Microbiological Findings

Organism	N (%)
Streptococcus pneumoniae	22 (20.0)
Klebsiella pneumoniae	18 (16.4)
Staphylococcus aureus	8 (7.3)
Pseudomonas aeruginosa	7 (6.4)
Others	9 (8.2)
No growth	46 (41.8)

Distribution of Severity Scores

Patients were stratified using both PSI and CURB-65 severity scoring systems. Approximately 46.4% of patients were classified as high risk according to PSI (Class IV–V), while 44.5% had CURB-65 scores ≥3, indicating a comparable distribution of high-risk patients. Both scores showed a strong positive correlation (Spearman's r = 0.786, p <0.001).

Table 3. Distribution of Severity According To PSI and CURB-65

Variable	N (%)
PSI Class I–III	59 (53.6)
PSI Class IV–V	51 (46.4)
CURB-65 score 0–1	33 (30.0)
CURB-65 score 2	28 (25.5)
CURB-65 score ≥3	49 (44.5)

Association between Severity Scores and ICU Admission

Overall, 38 patients (34.5%) required ICU admission. ICU admission increased significantly with increasing PSI class and CURB-65 score (both p <0.001). Patients in PSI Classes IV–V had a 28.4-fold higher odds of ICU admission compared with those in Classes I–III. Similarly, 67.3% of patients with CURB-65 scores ≥3 required ICU care, whereas none of the patients with scores 0–1 required ICU admission.

Table 4. Association of Severity Scores with ICU Admission

Risk category	ICU admission n (%)	p value
PSI Class I–III	4 (6.8)	
PSI Class IV–V	34 (66.7)	<0.001
CURB-65 score 0–1	0 (0.0)	
CURB-65 score 2	5 (17.9)	
CURB-65 score ≥3	33 (67.3)	<0.001

Association between Severity Scores and In-Hospital Mortality

The overall in-hospital mortality rate was 14.5% (16/110). Mortality increased progressively with increasing PSI class and CURB-65 score (both p <0.001). Patients classified as PSI Class IV–V had a 24.2-fold higher odds of death than those in Classes I–III. Likewise, no deaths occurred among patients with CURB-65 scores 0–1, whereas 30.6% of patients with CURB-65 scores ≥3 died during hospitalization.

Table 5. Association of Severity Scores with In-Hospital Mortality

Risk category	Mortality n (%)	p value
PSI Class I–III	1 (1.7)	
PSI Class IV–V	15 (29.4)	<0.001
CURB-65 score 0–1	0 (0.0)	
CURB-65 score 2	1 (3.6)	
CURB-65 score ≥3	15 (30.6)	<0.001

Predictive Accuracy of PSI and CURB-65

Receiver operating characteristic (ROC) curve analysis demonstrated excellent predictive performance for both scoring systems. For ICU admission, the AUC was 0.921 for PSI and 0.934 for CURB-65 (p = 0.48). For mortality prediction, the AUCs were 0.906 and 0.918, respectively (p = 0.52), indicating no statistically significant difference between the two tools. However, CURB-65 showed higher specificity and overall diagnostic accuracy for both outcomes.

Table 6. ROC analysis comparing PSI and CURB-65

Outcome	PSI	CURB-65
ICU admission AUC	0.921	0.934
Mortality AUC	0.906	0.918
Difference significant	No	No

Correlation between PSI and CURB-65

A strong positive correlation was observed between the two scoring systems (Spearman's r = 0.786, p <0.001), with substantial agreement in risk classification (Cohen's κ = 0.64). High-risk categorization was concordant in most patients, supporting the clinical interchangeability of the two tools for risk stratification.

Table 7. Correlation between PSI and CURB-65

Variable	Value
Spearman correlation (r)	0.786
Cohen's κ	0.64
p value	<0.001

Hospital Stay and Clinical Outcomes

Patients classified as high risk by either PSI or CURB-65 experienced significantly longer hospital

stays. Mean duration of hospitalization was 11.8 ± 4.6 days among PSI high-risk patients compared with 5.4 ± 2.2 days among low-risk patients (p <0.001). Similarly, CURB-65 high-risk patients required 12.4 ± 5.2 days of hospitalization compared with 4.8 ± 1.8 days for low-risk patients (p <0.001).

Table 8. Hospital Stay According To Severity Score

Risk group	Mean hospital stay (days)	p value
PSI Class I–III	5.4 ± 2.2	
PSI Class IV–V	11.8 ± 4.6	<0.001
CURB-65 score 0–1	4.8 ± 1.8	
CURB-65 score ≥3	12.4 ± 5.2	<0.001

DISCUSSION

Community-acquired pneumonia (CAP) continues to be a major cause of hospitalization and mortality worldwide despite advances in antimicrobial therapy, vaccination, and critical care. Accurate early risk stratification is essential for identifying patients requiring intensive monitoring, timely escalation of therapy, and appropriate utilization of healthcare resources.[15] The present prospective observational study compared the prognostic performance of the Pneumonia Severity Index (PSI) and CURB-65 in predicting ICU admission, in-hospital mortality, ventilatory support requirement, and duration of hospitalization among adults admitted with CAP. Our findings demonstrate that both scoring systems possess excellent predictive performance, with CURB-65 offering comparable discrimination despite its considerably simpler bedside application.

The study population had a mean age of 48.6 ± 14.8 years, with a slight male predominance (57.3%). Although CAP predominantly affects elderly individuals, the relatively younger age observed in our cohort reflects the epidemiological pattern reported from many developing countries where smoking, diabetes mellitus, chronic respiratory disease, biomass fuel exposure, and delayed healthcare access contribute to earlier disease presentation. Similar demographic characteristics have been reported in previous Indian studies by Shah et al. and Chauhan et al.[16,17]

An important observation in the present study was that 34.5% of patients required ICU admission, highlighting the substantial burden of severe CAP encountered at our tertiary care center. ICU admission increased progressively with increasing PSI class and CURB-65 score, indicating excellent risk stratification by both scoring systems. Patients classified as PSI Class IV–V had significantly higher odds of ICU admission than those in Classes I–III, while approximately two-thirds of patients with CURB-65 scores ≥3 required intensive care. Similar observations have been reported by Eldaboosy et al., who demonstrated comparable predictive performance of PSI and CURB-65 for ICU admission, and by Zaki et al. in their recent systematic review and meta-analysis.[18,19]

Receiver operating characteristic (ROC) analysis further confirmed the excellent prognostic performance of both tools. The AUC for predicting ICU admission was 0.921 for PSI and 0.934 for CURB-65, with no statistically significant difference between the two scoring systems. Similar findings have been reported in previous comparative studies and meta-analyses, suggesting that CURB-65 provides discrimination comparable to PSI despite requiring substantially fewer clinical variables.[19,20] the slightly higher specificity observed with CURB-65 in our study suggests that it may reduce unnecessary ICU admissions while maintaining excellent predictive accuracy, an important consideration in resource-limited healthcare settings.

The overall in-hospital mortality rate of 14.5% observed in the present study is comparable with previous reports from hospitalized CAP cohorts. Mortality increased progressively across both PSI risk classes and CURB-65 scores, demonstrating a clear relationship between increasing severity scores and adverse outcomes. Similar trends have been consistently demonstrated in studies evaluating prognostic scoring systems in CAP.[16,18,21]

ROC analysis for mortality prediction demonstrated excellent discrimination for both scoring systems, with AUC values of 0.906 for PSI and 0.918 for CURB-65. No statistically significant difference was observed between the two scores. These findings agree with previous systematic reviews indicating that neither PSI nor CURB-65 consistently demonstrates clear superiority for mortality prediction, although PSI may provide slightly greater sensitivity because of its inclusion of age, comorbidities, and laboratory variables.[19,22]

A notable finding of the present study was the strong agreement between the two scoring systems, with a Spearman correlation coefficient of 0.786 and substantial agreement ($\kappa = 0.64$). Similar correlations have been reported previously and indicate that both tools classify patient severity consistently despite differences in score composition.[18,23] Nevertheless, some discordance was observed, particularly among elderly patients with multiple comorbidities, who were more likely

to be classified as high risk by PSI because of its greater emphasis on baseline patient characteristics. Hospital resource utilization also differed significantly according to severity classification. Patients identified as high risk by either PSI or CURB-65 experienced significantly longer hospital stays, confirming that both scoring systems are useful not only for mortality prediction but also for anticipating healthcare resource utilization. Previous investigators have similarly reported that higher severity scores are associated with prolonged hospitalization, greater ventilatory support requirements, and increased healthcare costs.[24]

The microbiological profile observed in our study was consistent with established epidemiological patterns of CAP. Streptococcus pneumoniae remained the most frequently isolated pathogen, followed by Klebsiella pneumoniae. The relatively high proportion of culture-negative pneumonia probably reflects empirical antibiotic administration before hospital presentation and the limited diagnostic yield of sputum culture, findings that have been reported widely in previous studies.[25]

From a clinical perspective, our findings support the routine use of validated severity assessment tools in adults presenting with CAP. Although PSI provides comprehensive prognostic assessment, its complexity limits its practicality in emergency settings. CURB-65, by contrast, offers rapid bedside calculation while maintaining excellent predictive performance. Consequently, CURB-65 appears particularly suitable for emergency departments and resource-constrained healthcare settings, whereas PSI remains valuable for detailed prognostic assessment after admission.[26]

Strengths of the Study

The strengths of this study include its prospective design, standardized data collection, and evaluation of multiple clinically relevant outcomes, including ICU admission, mortality, ventilatory support, and hospital stay. Furthermore, ROC analysis and agreement statistics enabled a comprehensive comparison of both prognostic tools.

Limitations

The present study has certain limitations. It was conducted at a single tertiary care center with a relatively modest sample size, which may limit generalizability. Only in-hospital outcomes were assessed, while 30-day mortality and long-term follow-up were unavailable. Additionally, microbiological confirmation could not be established in all patients because of prior antibiotic exposure and culture-negative disease. Similar limitations have been acknowledged in previous comparative studies.[18,19]

Clinical Implications

The present study demonstrates that CURB-65 provides prognostic accuracy comparable to the more complex PSI while requiring substantially fewer clinical variables. In busy emergency departments and resource-limited settings, CURB-65 can facilitate rapid decision-making regarding hospitalization, ICU referral, and intensity of monitoring. PSI remains valuable for comprehensive risk assessment, particularly in elderly patients with multiple comorbidities, but its greater complexity may limit routine bedside application.

CONCLUSION

In this prospective observational study of 110 adults with community-acquired pneumonia, both the Pneumonia Severity Index (PSI) and CURB-65 demonstrated excellent ability to predict important clinical outcomes, including intensive care unit (ICU) admission, in-hospital mortality, ventilatory support requirement, and duration of hospital stay. Higher PSI classes and CURB-65 scores were significantly associated with adverse outcomes, confirming the usefulness of both scoring systems for early risk stratification in hospitalized patients with CAP.

Receiver operating characteristic (ROC) analysis showed comparable predictive performance for both scoring systems in predicting ICU admission (PSI AUC: 0.921; CURB-65 AUC: 0.934) and in-hospital mortality (PSI AUC: 0.906; CURB-65 AUC: 0.918), with no statistically significant difference between them. Although PSI remains a comprehensive prognostic tool, CURB-65 demonstrated slightly higher specificity and diagnostic accuracy while requiring only five readily available clinical variables, making it faster and easier to apply in routine emergency practice.

The strong positive correlation and substantial agreement observed between PSI and CURB-65 indicate that both scoring systems provide reliable and consistent assessment of disease severity. However, the simplicity, rapid bedside applicability, and comparable prognostic performance of CURB-65 make it particularly suitable for use in emergency departments and resource-constrained healthcare settings, where timely clinical decision-making is essential.

In conclusion, both PSI and CURB-65 are effective tools for severity assessment in community-acquired pneumonia. While PSI offers comprehensive risk evaluation, CURB-65 provides similar predictive accuracy with greater ease of use and may be considered the preferred initial bedside scoring system for guiding decisions regarding hospitalization, ICU referral, and early management. Larger multicenter studies with long-term follow-up are warranted to further validate these findings across diverse patient populations.

REFERENCES

1. Fine MJ, et al. N Engl J Med. 1997;336:243-250.
2. Lim WS, et al. Thorax. 2003;58:377-382.
3. Metlay JP, et al. Am J Respir Crit Care Med. 2019;200:e45-e67.
4. World Health Organization. *The top 10 causes of death.* WHO; 2024.
5. Jain S, et al. N Engl J Med. 2015;373:415-427.
6. Musher DM, Thorner AR. N Engl J Med. 2014;371:1619-1628.
7. Prina E, et al. Lancet. 2015;386:1097-1108.
8. Marti C, et al. BMJ Open. 2012;2:e001110.
9. Torres A, et al. Nat Rev Dis Primers. 2021;7:25.
10. Zaki HA, et al. Cureus. 2023;15:e42672.
11. Shah BA, et al. Indian J Chest Dis Allied Sci. 2010;52:9-17.
12. Chauhan AP, et al. Indian J Clin Anaesth. 2024;11:181-187.
13. NICE. *Pneumonia in adults: diagnosis and management (NG138).* Updated 2023.
14. European Respiratory Society. *Guidelines for the management of adult lower respiratory tract infections.* Eur Respir J. 2023.
15. Torres A, Cilloniz C, Niederman MS, et al. Pneumonia. Nat Rev Dis Primers. 2021;7:25.
16. Shah BA, Ahmed W, Dhobi GN, et al. Validity of pneumonia severity index and CURB-65 severity scoring systems in community-acquired pneumonia. Indian J Chest Dis Allied Sci. 2010;52(1):9-17.
17. Chauhan AP, Majmundar A, Lakhani S, et al. Comparative study between CURB-65 and PSI in CAP. Indian J Clin Anaesth. 2024;11(2):181-187.
18. Eldaboosy SA, Halima KM, Shaarawy AT, et al. Comparison between CURB-65, PSI and SIPF scores as predictors of ICU admission and mortality. Egypt J Crit Care Med. 2015;3(2):37-44.
19. Zaki HA, Alkahlout BH, Shaban E, et al. The battle of the pneumonia predictors: a comprehensive meta-analysis comparing PSI and CURB-65. Cureus. 2023;15:e42672.
20. Marti C, Garin N, Grosgurin O, et al. Prediction of severe community-acquired pneumonia: a systematic review and meta-analysis. BMJ Open. 2012;2:e001110.
21. Musher DM, Thorner AR. Community-acquired pneumonia. N Engl J Med. 2014;371:1619-1628.
22. Metlay JP, Waterer GW, Long AC, et al. ATS/IDSA guideline for CAP. Am J Respir Crit Care Med. 2019;200:e45-e67.
23. Lim WS, van der Eerden MM, Laing R, et al. Defining CAP severity using CURB-65. Thorax. 2003;58:377-382.
24. Ramirez JA, Wiemken TL, Peyrani P, et al. Adults hospitalized with CAP: outcomes. Chest. 2017;151:1309-1318.
25. Prina E, Ranzani OT, Torres A. Community-acquired pneumonia. Lancet. 2015;386:1097-1108.
26. National Institute for Health and Care Excellence (NICE). Pneumonia in adults: diagnosis and management (NG138). Updated 2023.

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