ERS/ESICM/ESCMID/ALAT guidelines for the management of severe community-acquired pneumonia.

Guideline ID: 3131 Published: 2023 Apr 3

European Respiratory Society (ERS) | European Society of Intensive Care Medicine (ESICM) | European Society of Clinical Microbiology and Infectious Diseases (ESCMID) | Asociación Latinoamericana del Tórax (ALAT)

Martin-Loeches I, Torres A, Nagavci B, et al. ERS/ESICM/ESCMID/ALAT guidelines for the management of severe community-acquired pneumonia. Eur Respir J. 2023 Apr 3;61(4):2200735. [115 references] PubMed

View Original Guideline

Overview

Guideline Objective

To provide guidance on the most effective treatments and management strategies for adult patients with severe community-acquired pneumonia (sCAP), pragmatically defined as those admitted to intensive care unit (ICU)

Patient Population

Adults with sCAP

Note:

- sCAP refers to CAP requiring ICU admission. However, as criterion for ICU admission can be heterogeneous in the absence of shock or need for mechanical ventilation, recommendations for this population should be cautiously provided.

- In these guidelines, we will not consider immunosuppressed patients, e.g., those receiving corticosteroids or chemotherapy, undergoing transplantation, with either hematological malignancies or HIV, with a CD4 count lower than 200.

Recommendations

Recommendation Statements

Question 1: In patients with severe community-acquired pneumonia (sCAP), should rapid microbiological techniques be added to current testing of blood and respiratory tract samples?

If the technology is available, we suggest sending a lower respiratory tract sample (either sputum or endotracheal aspirates) for multiplex polymerase chain reaction (PCR) testing (virus and/or bacterial detection) whenever non-standard sCAP antibiotics are prescribed or considered. (**Conditional recommendation; Very low quality of evidence**)

Question 2: In hypoxaemic patients with sCAP, can either non-invasive mechanical ventilation (NIV) or high-flow nasal oxygen (HFNO) be used initially – rather than supplemental standard oxygen administration – to avoid intubation and reduce mortality?

In patients with sCAP and acute hypoxaemic respiratory failure not needing immediate intubation, we suggest using HFNO instead of standard oxygen. (**Conditional recommendation; Very low quality of evidence**)

NIV might be an option in certain patients with persistent hypoxaemic respiratory failure not needing immediate intubation, irrespective of HFNO. (**Conditional recommendation; Low quality of evidence**)

Question 3: When using initial empirical therapy for sCAP, should a macrolide or fluoroquinolone be used as part of combination therapy, to reduce mortality and adverse clinical outcomes?

We suggest the addition of macrolides, not fluoroquinolones, to beta-lactams as empirical antibiotic therapy in hospitalised patients with sCAP. (**Conditional recommendation; Very low quality of evidence**)

Question 4: In patients with sCAP, can serum PCT be used to reduce the duration of antibiotic therapy and improve other outcomes in comparison to standard of care not guided by serial biomarker measurements?

We suggest the use of PCT to reduce the duration of antibiotic treatment in patients with sCAP. (**Conditional recommendation; Low quality of evidence**)

Question 5: Should oseltamivir be added to standard therapy in patients with sCAP and confirmed influenza?

We suggest the use of oseltamivir for patients with sCAP due to influenza confirmed by PCR. (**Conditional recommendation; Very low quality of evidence**)

When PCR is not available to confirm influenza, we suggest the use of empirical oseltamivir during the influenza season. (**Conditional recommendation; Very low quality of evidence**)

Question 6: Does the addition of steroids to antibiotic therapy in specific sCAP populations lead to better outcomes in comparison to when steroid therapy is not used?

In patients with sCAP, we suggest the use of corticosteroids if shock is present. (**Conditional recommendation; Low quality of evidence**)

Question 7: Does the use of a prediction score for drug-resistant pathogens lead to more appropriate therapy and improved outcomes (mortality, treatment failure, duration of antibiotic therapy, prolonged ICU stay)?

We suggest integrating specific risk factors (eventually computed into clinical scores) based on local epidemiology and previous colonisation to guide decisions regarding drug-resistant pathogens (excluding those immunocompromised) and empirical antibiotic prescription in sCAP patients. (**Conditional recommendation; Moderate quality of evidence**)

Question 8: Do patients with sCAP and aspiration risk factors have better outcomes (mortality, length of stay, treatment failure) if treated with a risk-based therapy regimen instead of standard sCAP antibiotics?

In patients with sCAP and aspiration risk factors we suggest standard CAP therapy regimen and not specific therapy targeting anaerobic bacteria. (**Ungraded; Good practice statement**)

Evidence Rating Scheme

Quality of Evidence Grades and Their Definitions*

Quality	Definition
High	We are very confident that the true effect lies close to that of the estimate of the effect.
Moderate	We are moderately confident in the effect estimate: The true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different.
Low	Our confidence in the effect estimate is limited: The true effect may be substantially different from the estimate of the effect.

Very Low	We have very little confidence in the effect estimate: The true effect is likely to be substantially different from the estimate of effect.

***** Schünemann H, Brożek J, Guyatt G, Oxman A, editors. GRADE Handbook for Grading Quality of Evidence and Strength of Recommendations. Updated October 2013. The GRADE Working Group, 2013.

Recommendation Rating Scheme

Strength of Recommendations and Their Rationale[1,2]

Recommendation Strength	Rationale
Strong recommendation for	The panel is certain that desirable outweigh the undesirable effects
Conditional recommendation for	The panel is less confident that desirable outweigh the undesirable effects
Conditional recommendation against	The panel is less confident that undesirable outweigh the desirable effects
Strong recommendation against	The panel is certain that undesirable outweigh the desirable effects
No recommendation	The confidence in the results might be very low to make a recommendation, or the trade-offs between the desirable and undesirable effects are finely balanced. Or no data is available.

1 Andrews J, Guyatt G, Oxman AD, Alderson P, Dahm P, Falck-Ytter Y, et al. GRADE guidelines: 14. Going from evidence to recommendations: the significance and presentation of recommendations. J Clin Epidemiol. 2013;66(7):719-25.

2 Schünemann H, Brożek J, Guyatt G, Oxman A, editors. GRADE handbook for grading quality of evidence and strength of recommendations. Updated October 2013. The GRADE Working Group, 2013.

Good Practice Statements

Good practice statements are used in situations where there is no direct evidence available for a certain intervention, but a large body of indirect evidence strongly supports the benefit (or harm) of the intervention and the Task Force is highly confident in these estimated.

Related Content

Supporting Documents

- The Original Guideline is also available from the *Intensive Care Medicine Journal*; 2023 Apr 4.
- Supplementary Material.
- Using the GRADE Approach for Guideline Development: A Step-by-Step Guide.
- ERS Handbook for Clinical Practice Guidelines: Methodological Guidance for Developing ERS Clinical Practice Guidelines; 2021 Nov 11.

Implementation Tools

No implementation tools available.

Patient Education

No patient education materials available.

Disclaimer

If you desire to use content from the original clinical practice guideline cited herein, you must contact the guideline developer directly to obtain permission rights.

ECRI's Guideline Profiles are designed to provide information and assist decision-making. Variations in practice will inevitably, and appropriately, occur when clinicians take into account the needs and preferences of individual patients, available resources, and

limitations unique to an institution or type of practice. Every healthcare professional using these Guideline Profiles is responsible for evaluating the appropriateness of applying them in a clinical setting.

TRUST Scorecard

Composition of Guideline Development Group (GDG)

Multidisciplinary GDG Members	**Yes**
Methodologist Involvement	**Yes**
Incorporation of Patient and Public Perspective	★★☆☆☆

Systematic Review of Evidence

Literature Search	★★★★★
Study Selection	★★★★★
Evidence Synthesis	★★★★★

Foundations for Recommendations

Strength of Evidence Grade	★★★★★
Description of Benefits and Harms of Recommendations	★★★★☆
Summary of Evidence Supporting Recommendations	★★★★★
Strength of Recommendations Rating	★★★★☆
Clear Articulation of Recommendations	★★★★★

Funding Source — **Yes**

Disclosure and Management of Financial Conflicts of Interests — ★★★★★

External Review — ★★☆☆☆

Updating — ★☆☆☆☆

Copyright © 2025 ECRI