

Guideline for Hospital Admission

Ministry of Public Health - Lebanon

Note: This guideline does not apply for:

- Pneumonia in non-ambulatory residents of nursing homes and other long-term care
- Hospital-acquired pneumonia

Community-acquired pneumonia

As per the below signs, **admission of patient to hospital is recommended when the presence of radiologic signs in addition to at least one major sign and two biological signs has been documented.**

Major signs:

- 1- Confusion
- 2- Respiratory rate ≥ 30 /minute
- 3- Blood pressure $< 90/60$ mmHg
- 4- Temperature ≤ 35 or $\geq 40^\circ\text{C}$
- 5- Cyanosis
- 6- Heart rate > 125 /minute

Minor signs:

- 1- Cough
- 2- Auscultatory signs
- 3- Chest pain
- 4- Dyspnea

Biological signs:

- 1- Leukopenia (WBC $< 4000/\text{mm}^3$)
- 2- Hyperleukocytosis (WBC $> 20000/\text{mm}^3$)
- 3- Thrombocytopenia (Platelets $< 100000/\text{mm}^3$)
- 4- High creatinine ($> 12\text{mg/l}$)
- 5- Urea $> 7\text{mm/l}$
- 6- Hypoxia (PaO₂ $< 60\text{mmHg}$)
- 7- Hypercapnea (PaCO₂ $> 50\text{mmHg}$)
- 8- Acidosis (Ph $< 7,3$)
- 9- Hemostasis anomalies

Radiological signs:

- 1- Pleural effusion
- 2- Lobar or multilobar consolidations and/or infiltrates

In addition to the above, when limitations exist for timely decision-making regarding hospital admission, the CURB65 score may be also used in deciding hospital admission for suspected pneumonia cases. Although advantageous to making decisions regarding hospital admission, sole reliance on a score for the hospital admission decision is unsafe.

Summary of the CURB65 score:

- **Confusion:** New mental confusion.
- **Urea:** Raised > 7 mmol/l (for patients being seen in hospital).
- **Respiratory rate:** Raised ≥ 30 /min.
- **Blood pressure:** Low blood pressure (systolic < 90 mm Hg and/or diastolic ≤ 60 mm Hg).
- **Age ≥ 65 years.**

Recommendations in using the CURB65 score:

- For all patients, the CURB65 score should be interpreted in conjunction with clinical judgment.
- Patients who have a CURB65 score of 3 or more are at high risk of death. These patients should be reviewed by a senior physician at the earliest opportunity to refine disease severity assessment and should usually be managed as having high severity pneumonia. Patients with CURB65 scores of 4 and 5 should be assessed with specific consideration to the need for transfer to a critical care unit (high dependency unit or intensive care unit).
- Patients who have a CURB65 score of 2 are at moderate risk of death. They should be considered for short-stay inpatient treatment or hospital-supervised outpatient treatment.
- Patients who have a CURB65 score of 0 or 1 are at low risk of death. These patients may be suitable for treatment at home.
- When deciding on home treatment, presence and stability of any co-morbid illnesses and the patient's social circumstances and wishes must be taken into account in all instances.

Checklist:

	Present	Absent
Major signs		
Confusion		
Respiratory rate ≥ 30 /minute		
Blood pressure $<90/60$ mmHg		
Temperature ≤ 35 or $\geq 40^\circ\text{C}$		
Cyanosis		
Heart rate > 125 /minute		
Minor signs		
Cough		
Auscultatory signs		
Chest pain		
Dyspnea		
Biological signs		
Leukopenia (WBC $< 4000/\text{mm}^3$)		
Hyperleukocytosis (WBC $> 20000/\text{mm}^3$)		
Thrombocytopenia (Platelets $< 100000/\text{mm}^3$)		
High creatinine ($> 12\text{mg/l}$)		
Urea $> 7\text{mm/l}$		
Hypoxia (PaO ₂ $< 60\text{mmHg}$)		
Hypercapnea (PaCO ₂ $> 50\text{mmHg}$)		
Acidosis (Ph $< 7,3$)		
Hemostasis anomalies		
Radiological signs		
Pleural effusion		
Lobar or multilobar consolidations and/or infiltrates		
