

Influenza A (H1N1) Preparedness and Response

Centre for Community Health and Disease Control, Maldives

Admission and Discharge Guideline

These guidelines serve to aid clinicians in the diagnostic work-up, assessment of severity of illness, empiric antibiotic/antiviral treatment, and follow-up of patients with community-acquired pneumonia (CAP). The recommendations serve as a guide and clinicians are encouraged to use clinical judgment to manage all cases.

Approach

- Diagnostic studies
- Patient stratification
- Pneumonia Severity Index
- Patients with asthma have increased risk of complications and may warrant hospital admission.
- Need for hospitalization
- In general, patients in risk Class I and II may be managed as outpatients. Outpatient management of patients in risk Class III may be considered after assessment of patient's clinical condition, follow-up, and home environment.
- Need for admission to an intensive care unit

Typical diagnostic work-up

Vital signs

- Chest x-ray (PA and lateral)
- Complete blood count (CBC) with differential
- Basic metabolic panel
- Hepatic profile
- Pulse oximetry and/or ABG

In addition, the following are recommended for Risk Class III-V and should be considered for Risk Class I-II:

- Blood cultures x 2
- Sputum for Gram's stain and culture

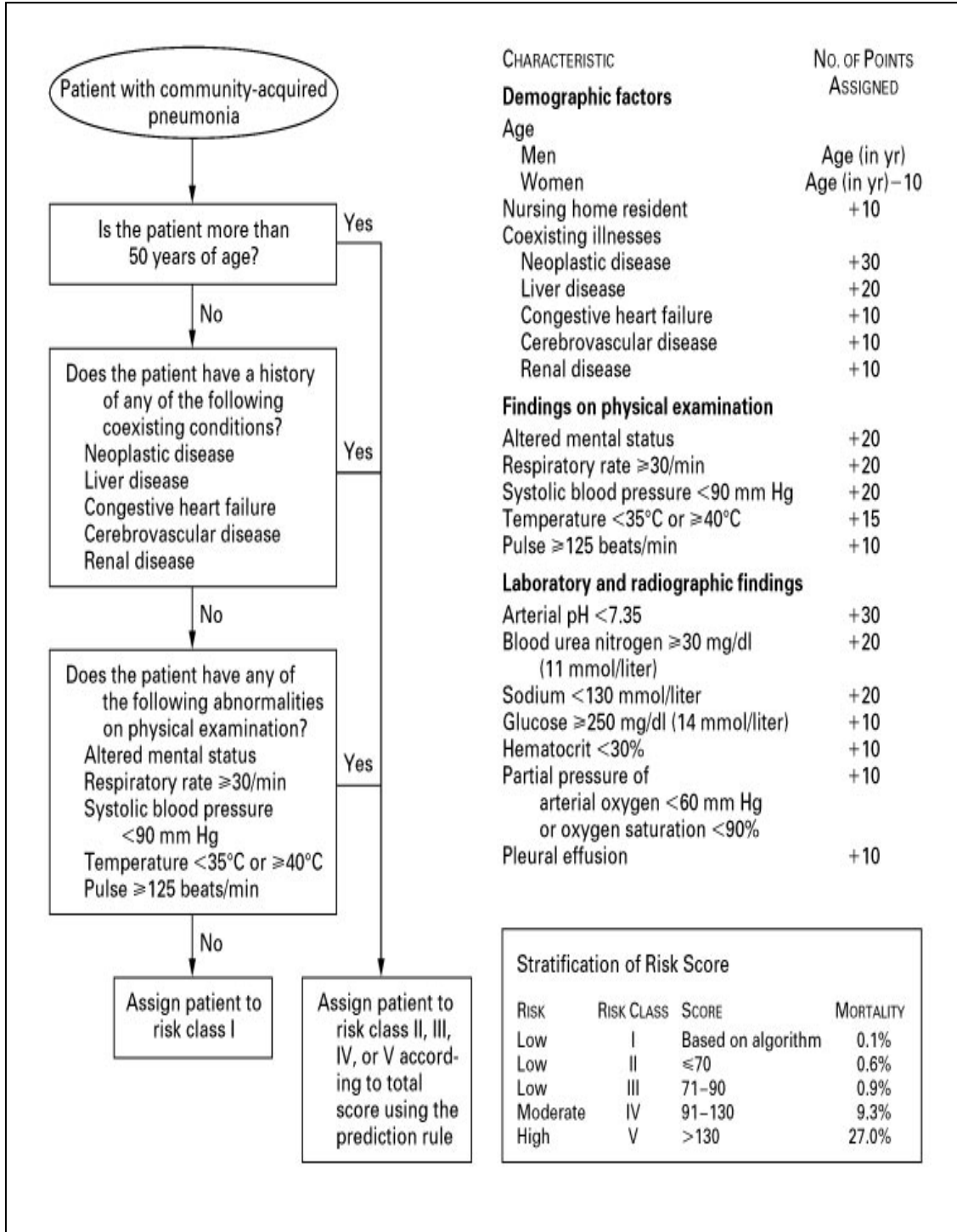
Additional diagnostics to consider:

- HIV test
- ECG-12 leads
- *Immunocompromised (including HIV):*
- Consider other causes of pneumonia (*e.g.* fungal, viral, TB, PCP)/secondary bacterial/atypical pneumonia and other diagnostics

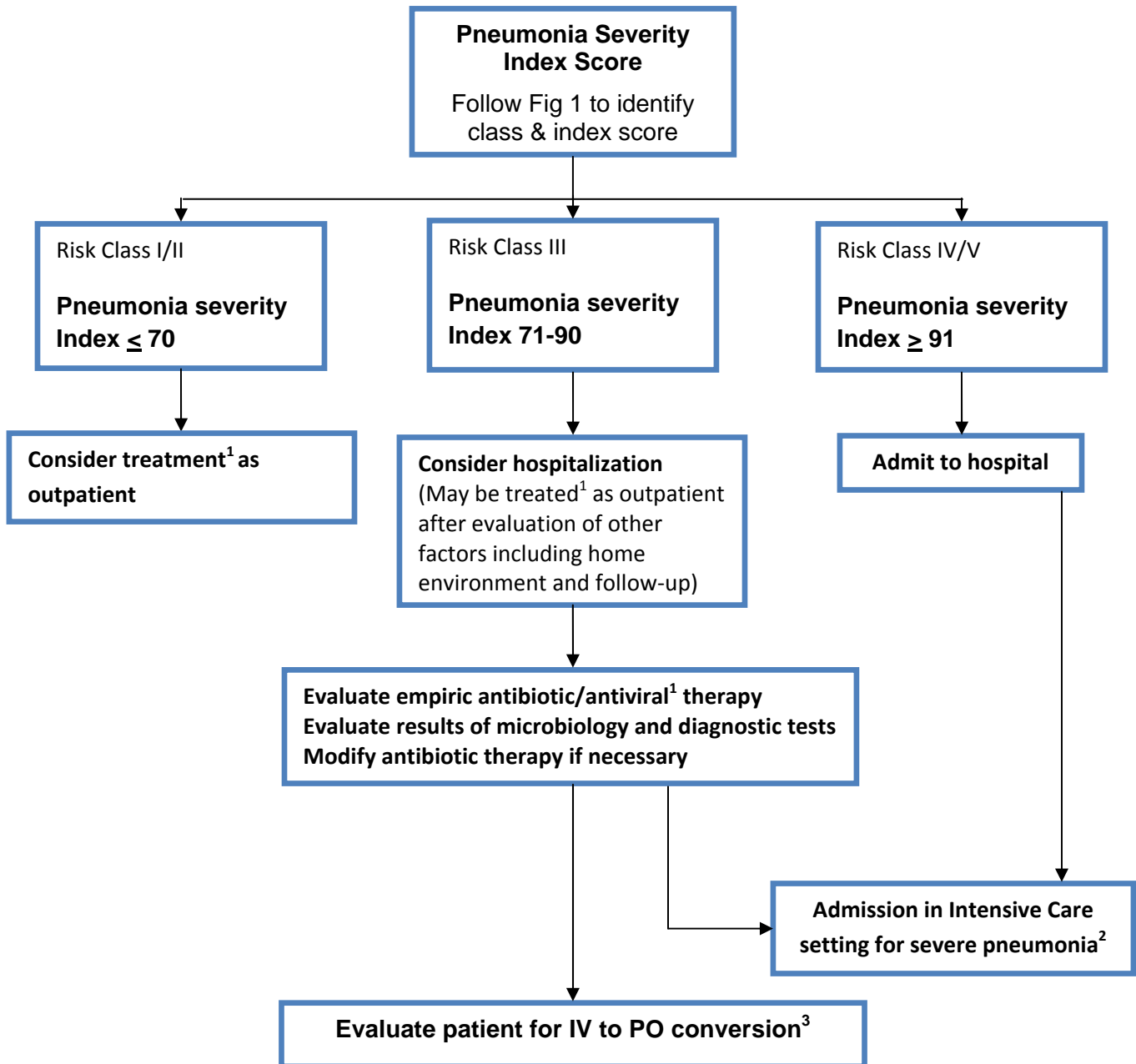
ADMISSION CRITERIA

Patient Stratification

Figure 1. Prediction model for identification of patient risk for persons with community-acquired pneumonia.



Patient Stratification Algorithm



¹ **Start the treatment according to the treatment guidelines for Influenza A H1N1:** refer to treatment protocol and tables

² **Severe pneumonia** (features)

- Respiratory rate > 30 breaths/min
- Need for mechanical ventilation

- Septic shock
- SBP < 90 mmHg
- Multilobar disease
- PaO₂/FiO₂ ratio <250
- Increasing infiltrate by 50% in 48 hours
- Oliguria
- Requiring pressors

In case of children, indications for hospitalization include

- Hypoxemia (oxygen saturation consistently less than 90 percent in room air)
- Dehydration, or inability to maintain hydration orally; inability to feed in an infant
- Moderate to severe respiratory distress: respiratory rate >70 breaths/min in infants <12 months or >50 breaths/min in older children, difficulty breathing, apnea, grunting
- Toxic appearance, which is more common in children with bacterial pneumonia, may suggest a more severe course of pneumonia (e.g., cardiopulmonary compromise)
- Underlying conditions that may predispose to a more serious course of pneumonia (e.g., cardiopulmonary disease), might be worsened by pneumonia (e.g., metabolic disorder), or might adversely affect response to treatment (e.g., immunocompromised host)
- Presence of complications (e.g., effusion/empyema)
- Failure of outpatient therapy (worsening or no response in 24 to 72 hours)

³Criteria for IV to PO conversion

Clinical improvement in pulmonary signs and symptoms

Afebrile or consistent improvement in fever over a 24-hour period

WBC count normalizing

Infection being treated does not require IV therapy

GI absorption likely normal (absence of vomiting or abnormal GI anatomy)

Ability to receive oral dosage form either orally or via tube (concomitant oral or via tube administration of other meds)

DISCHARGE CRITERIA

Evaluate for discharge based on the following criteria:

- Stable co-morbid illnesses and significant improvement in pneumonia

Should also fulfill the following criteria (*unless baseline status*):

- *Temperature < 37.8°C (> 24 hours and in the absence of antipyretics)*
- *Pulse < 100 beats/min*
- *Respiratory rate < 24 breaths/min*
- *SBP > 90 mmHg*
- *O₂ saturation > 90% (at room air)*
- *Ability to maintain oral intake*