

# PSI/PORT Score: Pneumonia Severity Index for CAP **(ADMIT >90)**

<b>Risk (yes/no)</b>	<b>Score</b>	<b>Risk (yes/no)</b>	
<b>Age</b>	<b>1/YEAR</b>	<b>SBP&lt;90</b>	<b>20</b>
<b>Sex (M/F)</b>	<b>F (-10)</b>	<b>T&lt;35C/95F;&gt;39.9/103.8</b>	<b>15</b>
<b>NH resident</b>	<b>10</b>	<b>P&gt;124</b>	<b>10</b>
<b>Neoplastic dz hx</b>	<b>30</b>	<b>pH&lt;7.35</b>	<b>30</b>
<b>Liver dz hx</b>	<b>20</b>	<b>BUN&gt;29</b>	<b>20</b>
<b>CHF hx</b>	<b>10</b>	<b>Na&lt;130</b>	<b>20</b>
<b>CV dz hx</b>	<b>10</b>	<b>Glu&gt;249</b>	<b>10</b>
<b>Renal dz hx</b>	<b>10</b>	<b>Hct&lt;30</b>	<b>10</b>
<b>AMS</b>	<b>20</b>	<b>pO2&lt;60</b>	<b>10</b>
<b>RR&gt;29</b>	<b>20</b>	<b>CXR: Pleural effusion</b>	<b>10</b>

# PSI and Admission Decision

- Class I or II – Outpatient Therapy
- Class III – Outpatient Therapy or Observation
- Class IV or V – Inpatient (>90)
- Utilizing the PSI, <1% mortality in those recommended for outpatient therapy (but 4.3% subsequent admission to the ICU)
- \*Observation \*\*Inpatient

PSI Class, Mortality in PORT Cohort		
Class	Points	Mortality (%)
I	No predictors	0.1
II	<=70	0.6
III*	71-90*	0.9
IV**	91-130**	9.3
V	>130	27.0

<https://www.mdcalc.com/psi-port-score-pneumonia-severity-index-cap>

# CURB-65 and PNA Severity

- CURB-65 provides risk stratification of CAP in ED for patients.
- CURB-65 offers equal sensitivity of mortality prediction due to CAP as PSI but has a higher specificity (74.6%) than PSI (52.2%).
- Clinical Indicator
  - **C**onfusion: +1 for YES
  - **B**UN > 19mg/dl: +1 for YES
  - **R**esp Rate > 30: +1 for YES
  - **S**BP < 90 or **D**BP < 60 +1 for YES
  - **>65** +1 for YES
- Score (> 3 deems inpatient consideration, 2 is OBS consideration)
  - 0-1 Point – Low severity, risk of death < 2%, outpatient therapy
  - 2 Points – Moderate severity, risk of death 9%, consider hospitalization (Obs vs IP)
  - 3-5 Points – High severity, risk of death >22%, Hospitalize as Inpatient and consider ICU if score 4-5

If CURB-65 of 2 or more  
place in house (OBS) and  
reassess on D-Day for IP

## SMART-COP <50/>50 yoa

- Systolic BP <90 2 points
- Multilobar infiltrates 1 point
- Albumin <35g/l 1 point
- Resp Rate >25/>30 1 point
- Tachycardia >125/min 1 point
- Confusion (acute) 1 point
- Oxygen low <93/<90 2 points
- pH < 7.35 2 points

Maximum= 11

Need for intensive respiratory or vasopressor support

- 3-4: 1 in 8 chance of needing IRVS,
- 5-6: **1 in 3 risk,**
- >7: **2 in 3 in needing IRVS.**

# HF Respiratory Failure

- Acute respiratory failure types
  - Hypoxemic: low arterial levels ( $\text{PaO}_2 < 60$  mmHg)
    - 60-80 mmHg is 91  $\rightarrow$  95% sat,  $< 60$  mmHg is “resp failure”
  - Hypercapnic: elevated  $\text{CO}_2$  ( $\text{PaCO}_2 > 50$  mmHg)
- Clinically significant when symptomatic and usually diagnosed with ABG ( $\text{pO}_2 < 60$  mmHg), or **pulse oximetry** ( $< 90\%$ )
- PE findings: tachypnea ( $\text{RR} > 20$ ) or hypopnea ( $< 10$ ), wheezing, increased work of breathing (retractions, acces. muscle use), AMS, cyanosis, impaired speech, DOE, etc.
- Hypoxemia (**NEED BASELINE SAT!!!**)
  - New  $\text{O}_2$  requirement for supplemental  $\text{O}_2$  due to hypoxia
  - Patient with baseline need for supplemental oxygen who now requires increased supplemental oxygen to maintain oxygenation at baseline or acceptable level
    - Decr. baseline  $\text{pO}_2$  by  $> 10$  mmHg OR  $\text{SpO}_2 < 91\%$  on usual home  $\text{O}_2$  amount