

Patient Risk Report

Patient ID: 20251027-Pneumonia-951
Disease: Pneumonia
Generated: 2025-10-27T13:08

Predicted 30-day Readmission Risk: 0.72 (Threshold 0.50) → Flagged High Risk

Index admission (LOS)	9 days
Discharge destination	home_with_care
Prior admissions (90d)	0
Comorbidities count	0
Follow-up scheduled	Yes

Top contributing factors (SHAP)

Feature	Value	Contribution	Direction	Interpretation
WBC_count	12.95	+0.770	↑ Higher risk	Elevated WBC suggests ongoing infection or inflammation. (12.95×10 ⁹ /L — above ref 4.0-11.0×10 ⁹ /L). This feature has a moderate effect and increases the readmission risk. Review infection status; consider antibiotic adjustment if infection persists. May be associated with: Infection, Inflammation, Sepsis.
age	36.00	+0.652	↑ Higher risk	age influences readmission risk.. This feature has a moderate effect and increases the readmission risk.
Oxygen_saturation	92.72	-0.618	↓ Lower risk	Low oxygen levels may indicate unresolved pneumonia or respiratory distress. (92.72%; ref 92-100%). This feature has a moderate effect and reduces the readmission risk. Ensure adequate oxygen therapy; assess for exacerbation or infection. May be associated with: COPD, Pneumonia, Respiratory failure.
Temperature	37.32	+0.508	↑ Higher risk	Persistent fever reflects ongoing infection or poor response to therapy.. This feature has a moderate effect and increases the readmission risk.
ICU_admit	0.00	-0.322	↓ Lower risk	ICU_admit influences readmission risk.. This feature has a minor effect and reduces the readmission risk.
length_of_stay	9.00	+0.322	↑ Higher risk	length_of_stay influences readmission risk.. This feature has a minor effect and increases the readmission risk.
sex	M	-0.186	↓ Lower risk	sex influences readmission risk.. This feature has a minimal effect and reduces the readmission risk.
prior_admissions_90d	0.00	-0.136	↓ Lower risk	prior_admissions_90d influences readmission risk.. This feature has a minimal effect and reduces the readmission risk.

Summary: The model predicts a **high** 30-day readmission risk (0.72) for **Pneumonia**. Key risk factors include **WBC_count**, **age**, **Temperature**. Protective factors include **Oxygen_saturation**, **ICU_admit**, **sex**. Recommend infection monitoring and follow-up chest imaging.

Medicine Recommendations

Key clinical management suggestions: • Review infection status; consider antibiotic adjustment if infection persists. • Ensure adequate oxygen therapy; assess for exacerbation or infection.

■ Potential Disease Correlations

The data suggests possible associations with: **Infection (x1), Inflammation (x1), Sepsis (x1), COPD (x1), Pneumonia (x1)**. Continued monitoring is advised.