PointClickCare®

Predictive Return to Hospital Risk Score Model

Machine learning	A type of computer program that uses patterns in data to predict outcomes.
pRTH Model	Available in select PointClickCare solutions, this proprietary machine learning model **is used to predict the likelihood of a skilled nursing resident to be admitted to the hospital in the next 7 days,** calculated for the first 100 days of a stay.
Risk Level Indicators	Low, Medium, and High
Population	Short-term stay patients in the PointClickCare skilled nursing network
Implementation	The pRTH model was trained using data from over three million skilled nursing residents from the largest electronic health record dataset for skilled nursing facilities in the US. Predictions for all residents are updated every 12 hours.
Use	As part of risk scoring, the pRTH model supplements and may alleviate the time-consuming process of certain manual evaluations and root cause determinations, which can often overlook important indicators.
	Through a transparent display of drivers of return-to-hospital risk, and with twice-daily risk adjustments, it also supports embedded clinical decision support. **By streamlining these processes care teams can:**
	• Identify patients at risk for hospitalization in real time without time-consuming coordination with partners.
	• Prioritize patients to address the greatest needs first.
Model Metrics & Performance	The pRTH model is superior to human predictions. Based on a study involving PointClickCare users, this model is better at predicting 7-day rehospitalizations than skilled nursing staff for 97% of residents.
	pRTH outperforms LACE (a simple index commonly used to predict readmissions) for predicting hospital readmissions from skilled nursing facilities. When comparing the C-statistic scores for predicting 7-day rehospitalization, where a higher number indicates a stronger model:
	• LACE had a C-statistic of 0.58
	• pRTH had a C-statistic of 0.75
	Note: Actual performance metrics vary based on the current data received across our network. Your account team can provide the most current data if requested.

Risk Factors Measured

The pRTH model considers readmission risk factors attributed to the patient during a Skilled Nursing Facility short-term stay, including:

- Day of Stay
- Age
- Weights/Vitals/Blood Pressure
- High-Risk Diagnoses
- Pain Level
- Medications
- Notes
- Heart Rate
- Blood Sugar
- Number of Abnormal/Critical Lab Results
- Food Intake

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