

COVID-19 Predictive Model:

Displaying patient risk scores to clinicians was safe but did not reduce length of stay.

PROBLEM:

We previously developed a model to identify hospitalized adults with COVID-19 who may be ready for discharge given a low risk of adverse events. The goal of this project was to determine whether showing the predictive score to clinicians would decrease their patients' length of stay in the hospital. Earlier discharge of low-risk patients may increase our institution's capacity for new patients with COVID-19.

INTERVENTIONS:

We randomly assigned patients to have their scores displayed or marked as "hidden" in the health record patient list. Further information about the risk score could be viewed from the patient list or each individual's COVID-19 summary report.

Covid-19 Result	Covid-19 Low Risk of Adverse Events
Detected N/A	
Detected Hidden	
Detected	22
Detected	100
Detected	16
Detected Hidden	

Risk scores in the EHR patient list

Control

Covid-19 Low Risk of Adverse Events within 96 hours
*Score calculated a minute ago

N/A

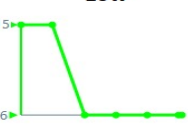
Intervention

Covid-19 Low Risk of Adverse Events within 96 hours

Factors Contributing to Score

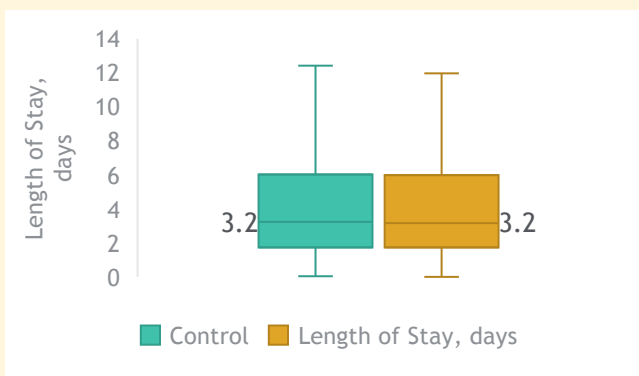
- 13% Blood urea nitrogen Last is 24
- 8% RR Max in last 12 hr is 20
- 7% HR Min in last 12 hr is 93
- 3% RR Min in last 12 hr is 18
- 8% Platelet count Last is 240
- 9% O2 Device is None (Room air)
- 19% Eosinophils % Last is 5
- 29% SpO2 Min in last 12 hr is 97

6
Low



Display of each patient's predictive score

RESULTS:



Length of stay in days

Displaying COVID-19 risk scores to clinicians caring for adults hospitalized with COVID-19 was safe but did not impact length of stay (median = 3.2 days). While AI predictions themselves are accurate, interventions must be tested in real-world clinical scenarios to ensure they improve outcomes.