THE HEALTH CARE IMPROVEMENT FOUNDATION

2020-2021
Delaware Valley
Patient Safety & Quality Award
Top 10 Submission

Partnership for Patient Care
15th Anniversary
2006 – 2021

Holy Redeemer Hospital

Baseline Biomarkers and COVID-19: A Surveillance Initiative

Background

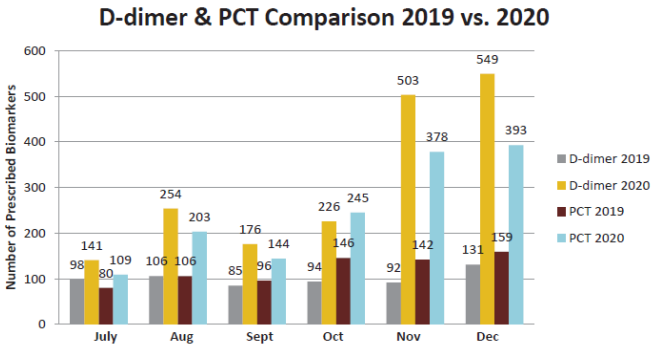
- During the second wave of the COVID-19 pandemic, rising positive cases in Pennsylvania led to an increase in the state mortality rate. In response, Holy Redeemer Hospital identified a need for robust screening tools and rapid assessments to effectively treat severe cases.
- COVID-19 has been associated with inflammation and a prothrombotic state, but guidelines lacked consensus on procalcitonin and D-dimer biomarker implementation for COVID-19 patients.

Goals

- To explore the association between baseline biomarkers (PCT and D-dimer) and mortality.

Approach

- Robust participation of Pharmacy & Therapeutics Committee.
- Compared outcomes of ICU and non-ICU patients and the potential impact of Procalcitonin and D-dimer values on mortality.
- Implemented an inpatient anticoagulant policy that based anticoagulant orders on D-dimer value and bleeding risk.
- Drug utilization evaluation focused on comorbidities in patients receiving remdesivir.



Results & Takeaways

- This study indicates that higher PCT baseline value is an earlier prognostic indicator of mortality in patients with COVID-19 requiring hospitalization.
- Successfully replicating this initiative requires collaboration of a multidisciplinary clinical team, utilizing key interventions, structured monitoring, and data collection and analysis.