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STRONGER

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Sept. 19–21, 2022   #vizientsummit

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Learning Objectives

- Discuss how a predictive modeling tool uses risk stratification to reduce 30-day hospital readmission rates

- Identify multi-disciplinary evidenced-based workflows that optimizes patient care while decreasing 30-day hospital readmission rates

Get Out and Stay Out: Utilizing a Predictive Model to Prevent Readmissions

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Background

- Hospital readmissions = breakdown in care delivery -> compromises quality of care and significant financial costs
  - ~$26B annual cost
  - Penalties charged by CMS and other payers
- Evidence-based interventions to reduce readmissions
  - Early focus on discharge planning
  - Improved communication about post-discharge needs
  - Prompt discharge follow-up
  - Patient education
  - Utilization of predictive analytics
- Readmission Operations Team
  - Multidisciplinary
  - Goal to reduce readmissions by 10%
  - Meet bimonthly
  - Predictive model to identify patients at high risk for readmissions

Intervention Details

- Readmission Predictive Model
  - Patient-specific variables
  - Machine learning model calculates risk score

- Risk stratification & score
  - 3 tiers = low, medium & high risk
  - Target interventions
  - Allows for optimization of time and resources

- Patient interventions prioritized based on risk category
  - Optimize IDT rounds
  - Discharge preparation
  - Post discharge follow-up

Intervention Details

- Patient-centered interventions initiated at admission
  - Case management notified of readmissions in the ED
  - Post discharge follow-up appointments scheduled prior to discharge
    - High risk: within 7 days
    - Medium risk: within 14 days
    - Low risk: within 14 days
  - Documentation of discharge milestones & barriers
  - Disease specific education
  - Medication counseling & review by pharmacy prior to discharge
- End user education
  - eLearning tutorial
  - Tip sheets
  - Communication plan
  - Virtual Q&A sessions

Outcomes and Impact

	Prior to Implementation	10 Months Post Implementation
30-Day All-Cause Readmission Rate	12.0%	9.5%
% High Risk Patients Readmitted	N/A	35.2%
% Medium Risk Patients Readmitted	N/A	15.5%
% Low Risk Patients Readmitted	N/A	5.6%

Lessons Learned

- Provider access and post-discharge follow-up appointment guidance

- Model validation with clinical multidisciplinary team

- Patient-specific variable details and the risk score

- Early engagement of stakeholders in specialty areas

- Allocate resources to assist with scheduling post-discharge follow-up appointments

Key Takeaways

- Incorporating a readmission risk score into discharge planning can help reduce readmissions

- Consider access data when setting High/Medium/Low cut points

- Define contingency plans for model maintenance

- Evidence-based workflows work!

Questions?

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