Clinical Algorithms

ER Dispo: Accelerating Triage for High-Risk Patients Navigating Expected Emergent Care
No Show Clinic: Risk-Stratifying Patients with the Highest Barriers to Care to Increase Care Management and Coordination
Integrated Care Co-Visits: Integrating Behavioral Health and Primary Care in the Same Appointment to Facilitate Improved Care Coordination

The Application of Data Insights in Generating Novel Clinical Care Algorithms

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Methodology

Problem: Does EMR data consistently show consistent and qualitative observation of patient impact? How tight is this issue prioritized for needs to be addressed?

Research: How current solutions address this problem? How many are considered to be improvements so far? What have been tested and tried before?

Stakeholders: Who is impacted by this problem and how frequently and directly? How much pushback or support will you have initially for advancing the problem when discussed?

Algorithm: What are the inputs and outputs of the potential algorithm solutions? What are the key benefits of these possibilities?

Rogue (and unexpected) data: How open is the algorithm to sudden changes? What are accommodations that need to be made to keep the algorithm functional?

Implementation: Can data be integrated? How does the algorithm perform in a real-world implementation? How are the unintended adjustments to be made? What are the best methods and approaches to deal with these changes?

No Show Clinic

High no show rates disrupting clinical care: Data showing unpredictable clinical schedule availability and significant productivity losses
Using the EHR to stratify patients by no show rate: Generate a novel statistic that is applied for all patients week-to-week
Introduce No Show Clinic: Introduce a specialized clinic that is heavily integrated with Care Management and Behavioral Health
Improved Outcomes: Lower overall no show rates alongside increased clinician productivity and behavioral health referrals

Integrated Care Co-Visits

Drug-Seeking Behaviors: Patient sample with high narcotic usage and aggressive behaviors
Behavioral Health Integration: Shared appointments with a Behavioral Health and Primary Care Clinician
Improved Outcomes: Increased Behavioral Health Referrals and Improved Care Integration

Conclusion

Data-driven approaches for algorithm identification and crafting is a rich area for quality improvement
Algorithms are at the intersection of operational, clinical, and staffing constraints
Building a culture of data-driven algorithmic performance improvement is a harbinger of the comprehensive analytics-focused care of the future

Findings

Multiple areas where clinical algorithms can make significant improvements in clinical outcomes
Iteration is important as adjustments in the algorithm will be needed per staffing and operational limitations
Data-driven assessments are critical tools in the identification and surveillance of interventions where iterative adjustments are likely

ER Dispo

Lack of clarity on what to do for emergent cases: Door-In to Door-Out Duration was Heterogeneous and Long
Need to improve communication between front desk, back office and clinicians: No formal program in place for these situations
Itemized list of red flag signs: Shared decision-making on clinical signs to look out for and urgently respond
Improved Outcomes: Shorter door-to-door times alongside improved internal and external staff communications