Improving Safety: Moving from Reaction to Prediction

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Objectives

- Become familiar with high reliability concepts and their application to healthcare.

- Outline approach to developing a system for managing risk via prediction from the front line to senior leadership.

- Learn how to use prediction during huddles to mitigate risks.

- Demonstrate how care givers identify and mitigate patient risk.
Cincinnati Children’s Hospital

- Full-service, tertiary nonprofit pediatric academic medical center
- 577 registered beds, including 85 psychiatry beds and 36 residential psychiatry beds
- $1.69B in revenue and 1M+ patient encounters from 48 states and 50 countries
- 12,650 employees (5300 personnel in Patient Services, including 3039 nurses)
- 1500 active medical staff, with over 600 employed physicians
- #3 pediatric hospital by US News & World Report
Being the Best at Getting Better

- Focus on the outcomes
- Patients and families as Partners
- Integration and alignment
- Theory of knowledge, Building a learning system
- Respecting the science
- Capacity and capability
- Transparency and Trust
- Learning from other industries
- Prediction and management
- Executing with a sense of urgency
Strategic Commitment to Transform Outcomes, Experience and Value

• Focus on large-scale, organizational changes

• Goal setting for systems based on 100% performance and 0% defects

• Emphasis on transparent processes for sharing successes and failures internally and externally with patients
Organizing For Transformation

Board Oversight

Senior Leadership Focus

System-Wide Priorities

Clinical Systems Improvement Priorities

Division/microsystem-Based Priorities

Individual Priorities
Clinical Systems Improvement

Board/CEO’s Leadership Team
- Provides strategic priority setting, resource allocation, organizational alignment
- Serves as champions/coaches to the Clinical Systems Improvement Teams and Sub-teams
- The Clinical System Improvement reports to the Patient Care Committee of the Board

Clinical System Improvement Integrating Team
- Comprised of Patient Services, Faculty, Administrative and Community Physician Leadership
- Develops, reviews & acts on System Level Measures

Microsystems: Monitor & act on a dashboard of measures

Inpatient Team
Outpatient Team
ED Team
Peri-Op Team
Home Care Team
Mental Health Team

Clinical & Non-Clinical Support Processes

PATIENT/FAMILY
Reliable Key Concepts/Processes

- Situation Awareness
- Standardization
- Sustainability built into the system
- Real-time failure awareness
- Data feedback to the microsystems
- Making the right thing, the easy thing
Journey to Reliability – The Next Zero

Optimized Outcomes

Human Factors Integration
- Intuitive design
- Obvious to do the right thing
- Impossible to do the wrong thing

Reliability Culture
- Core values & vertical integration
- Behavior expectations for all
- Hire for fit
- Fair, just, and 200% accountability

Process Design
- Evidence-based best practice
- Focus & Simplify
- Tactical improvements (e.g. process bundles)
Sensitivity to Operations
Beyond reducing harm:
Moving toward Eliminating Harm

- Intuitive design
- Obvious to do the right thing
- Impossible to do the wrong thing

- Core values & vertical integration
- Behavior expectations for all
- Hire for fit
- Fair, just, and 200% accountability

- Evidence-based best practice
- Focus & Simplify
- Tactical improvements (e.g. process bundles)
1. **Preoccupation with failure**
   Regarding small, inconsequential errors as a symptom that something is wrong; Learning everyday

2. **Sensitivity to operations**
   Paying attention to what’s happening on the front-line
   Situation awareness, managing by prediction

3. **Reluctance to simplify**
   Encouraging diversity in experience, perspective, and opinion

4. **Commitment to resilience**
   Developing capabilities to detect, contain, and bounce-back from events that do occur

5. **Deference to expertise**
   Pushing decision making down and around to the person with the most related knowledge and expertise
The Elements of Prediction

• **MEASURABILITY OF OUTCOME** – Will it be clear if the outcome happens or not?

• **VANTAGE** – Is the person making the prediction in a position to observe the predictions and context?

• **IMMINENCE** – Is the event to occur in the next week or years away? Is the prediction before the event?

• **CONTEXT** – Is the context clear to the person predicting?

• **PRE-INCIDENT INDICATORS (PINs)** – Are there detectable pre-incident indicators that will reliably occur before the outcome?

• **EXPERIENCE** – Does the predictor have experience with the specific topic involved?

• **COMPARABLE EVENTS** – Is it possible to study outcomes similar to the one being predicted?

• **OBJECTIVITY** – Is the person who is predicting objective enough to believe either outcome is possible?

• **INVESTMENT** – To what degree is the person predicting invested in the outcome?

• **REPLICABILITY** – Is it practical to test the exact issue being predicted in another situation?

• **KNOWLEDGE** – Does the person making the prediction have accurate knowledge of the topic? Is the knowledge relevant and accurate?
System to Decrease Patient Harm

Organizational Daily Safety Brief
8:35 AM

Department Huddles
8:00 AM

Unit-Clinic-Team Huddles
6:30-7:45 AM
Three Topics

- What Happened in the Previous 24 Hours?

- What’s Predicted for the Next 24 Hours?

- Issues Which Need Resolution.
Situation Awareness Model

Bedside Team
- Intern
- Watcher nurse

Microsystem Team
- Watchstander
- Senior Resident
- PCF/Manager

Organization Team
- MRT
- Safety Team (MPS and SOD) at 800, 1600 & 100

- Family concerns
- High risk therapies
- PEWS>5
- Communication concern

Reliable escalation of risk
Rapid assessment and communication with primary team

Change the outcome
Situational Awareness

• **Predict** – Event / Patient Specific Risks
  - “Huddles” each shift
    • Identify Situations at Risk
    • Patient/Staff Safety
    • Patient/Family Experience

• **Mitigate** - Team based solutions
  - Rounding with a purpose – update, mitigate
  - Provide resources

• **Escalate / Communicate** – System based solutions
  - Automatic increase in resources and help
  - Expected behavior, not sign of failure
Questions?
Psych Huddles
(P3S-SW)

- 10 bed inpatient psychiatric unit
- 8-year-old to 17-year-old patients
- Co-occurring developmental disabilities and psychiatric illnesses
Psych Huddles

- **0700 and 1500 – Shift Report**
  - Standardized across all shifts for team identification and planning for Situation Awareness (SA) Risk using the SA Planning Tool
  - RN/MHS for oncoming shift develop the plan together as a team.
  - Each report room utilizes whiteboards for their chronic and acute risk patients.
    - Seclusion and Restraints = Previous 24 hours and entire hospitalization
    - Overt Aggression Scale = Previous 24 hours
    - High Risk Chronic Behaviors that reflect four domains of aggression: Verbal, Property, Self, Others

- **0720 and 1520 – Crisis Planning/ Risk of Violence Towards Others Huddle**
  - Review of the high risk patients and their action plans
  - Guided by the huddle protocol
Psych Huddles

• **0745 and 1545 – Safety Response Team**
  – One staff member from every unit (usually a mental health specialist) is trained in therapeutic crisis intervention
  – Staff member carries pager and responds to other units in need of support on specific patients.
  – Follows Standard Protocol for reporting off to each other regarding psychiatric support in crisis

• **0800 and 1600 – Departmental Bed Huddle – SA Review/Flow**
  – Charge RN from each unit and the Psychiatric Flow Coordinator
  – SA Acute Risk Review for all Departmental Inpatient Units
System to Decrease Patient Harm

- **Organizational Daily Safety Brief**: 8:35 AM
- **Department Huddles**: 8:00 AM
- **Unit-Clinic-Team Huddles**: 6:30-7:45 AM
Periop Huddle
Periop Huddle

- Average length of time: 10 minutes
- Attendees:
  - Periop assistant vice president
  - OR manager
  - Nursing
  - Periop coordinator
  - Chaplain
  - Same day surgery
  - MRI tech
  - Anesthesia
  - Sterile processing
  - Specialty reps (fetal, ENT, EYE, heart, urology)
Patient Safety Status

- Discuss patient, staffing, procedure, anesthesia, equipment risks
- Color coding patient risk
  - Definitions for the green, yellow, orange, and red indicators for perioperative safety communication system.
  - **Green** is all clear, patient prepared and verified “no threats to patient safety” through the perioperative area.
  - **Yellow** is “watch room”, notes elevated risk factors for patient safety identified. Proceed with caution. Communicate possible additional needs to Patient Care Facilitator.
  - **Orange** is “HIGH ALERT” risk for patient vulnerability during the perioperative process. Requires additional resources and/or support from identified perioperative expert.
  - **Red** is the highest indicator which requires stopping the line until the perioperative safety communication system has resolved the identified threat.
System to Decrease Patient Harm

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Patient Safety Status

Departments Reporting on Daily Safety Brief

Employee Safety
Inpatient and ICU’s
Periop
Emergency Department
Outpatient
Psychiatry
Home Health Care
Pharmacy

Radiology
Family Relations
Laboratory
Infection Control
Supply Chain
Information Systems
Protective Services
Facilities
Others

Cincinnati Children’s
change the outcome
Patient Experience Concerns

Most Common Experience Predictions Reported in Bed Huddle
September 15, 2011 to January 30, 2012

Disruptive/complex family dynamics/other social concerns
Plan of care issues (lack of, disagree, etc)
Communication (lack of, conflicting, feel unheard, etc)
DIC concerns (disagree,AMA)
Add-on/ on-call for OR
Emotional Stress/Anxious
Poor/ declining prognosis
Delay Concerns (test results,dic,admission,etc)
Diagnosis related (complex,new,unknown)
History of concerns
Issues with hospital policy/visitation
Behavioral issues with patient
Suspected/Reported abuse
Other concerns
Family feels care is inadequate
Resource/equipment issues
Safety concerns (previous/potential MRT, other potential safety concerns)
Prediction in Action

Serious Safety Event Rate

Desired Direction of Change

Rate over 7 Years

Rate
Questions?

Comments?