Improving Safety: Moving from Reaction to Prediction

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Cincinnati Children's Hospital Medical Center

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American Hospital Association

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.

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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

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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

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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**

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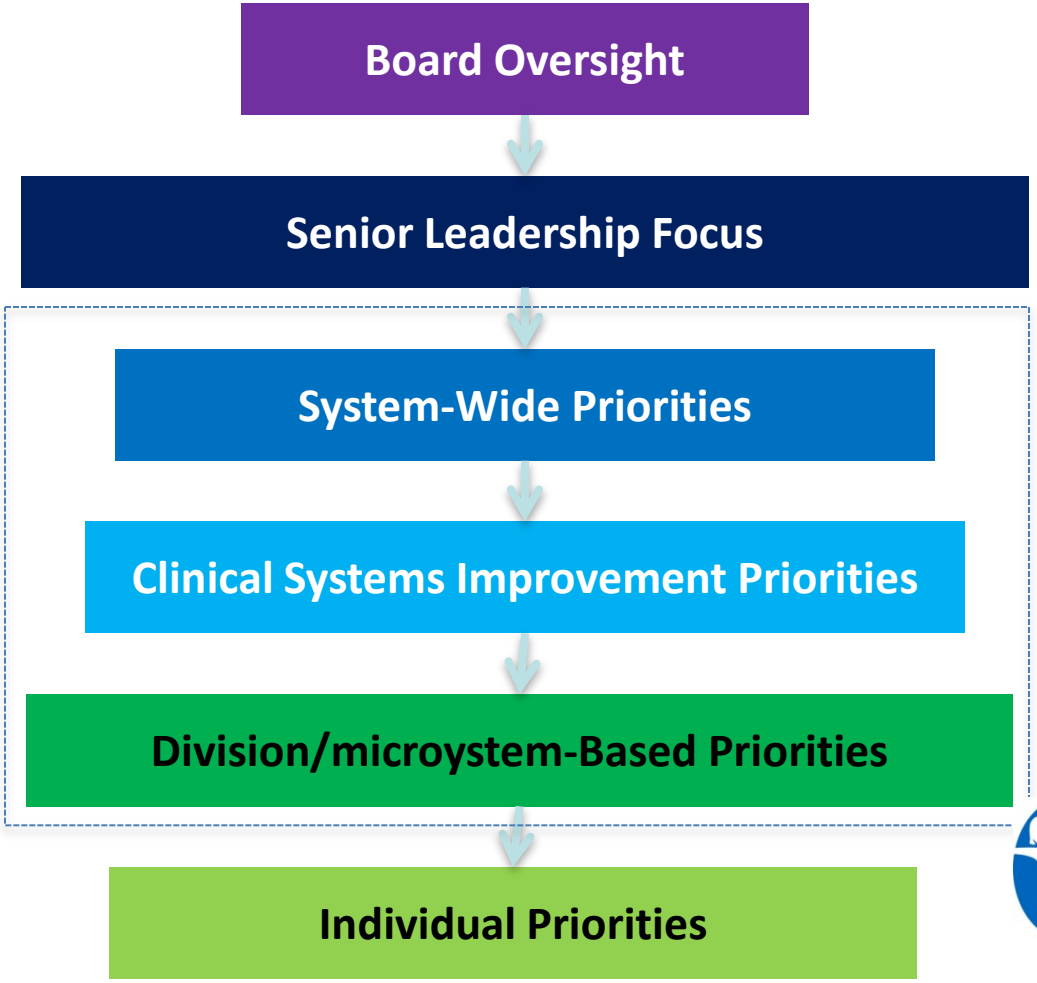
Organizing For Transformation



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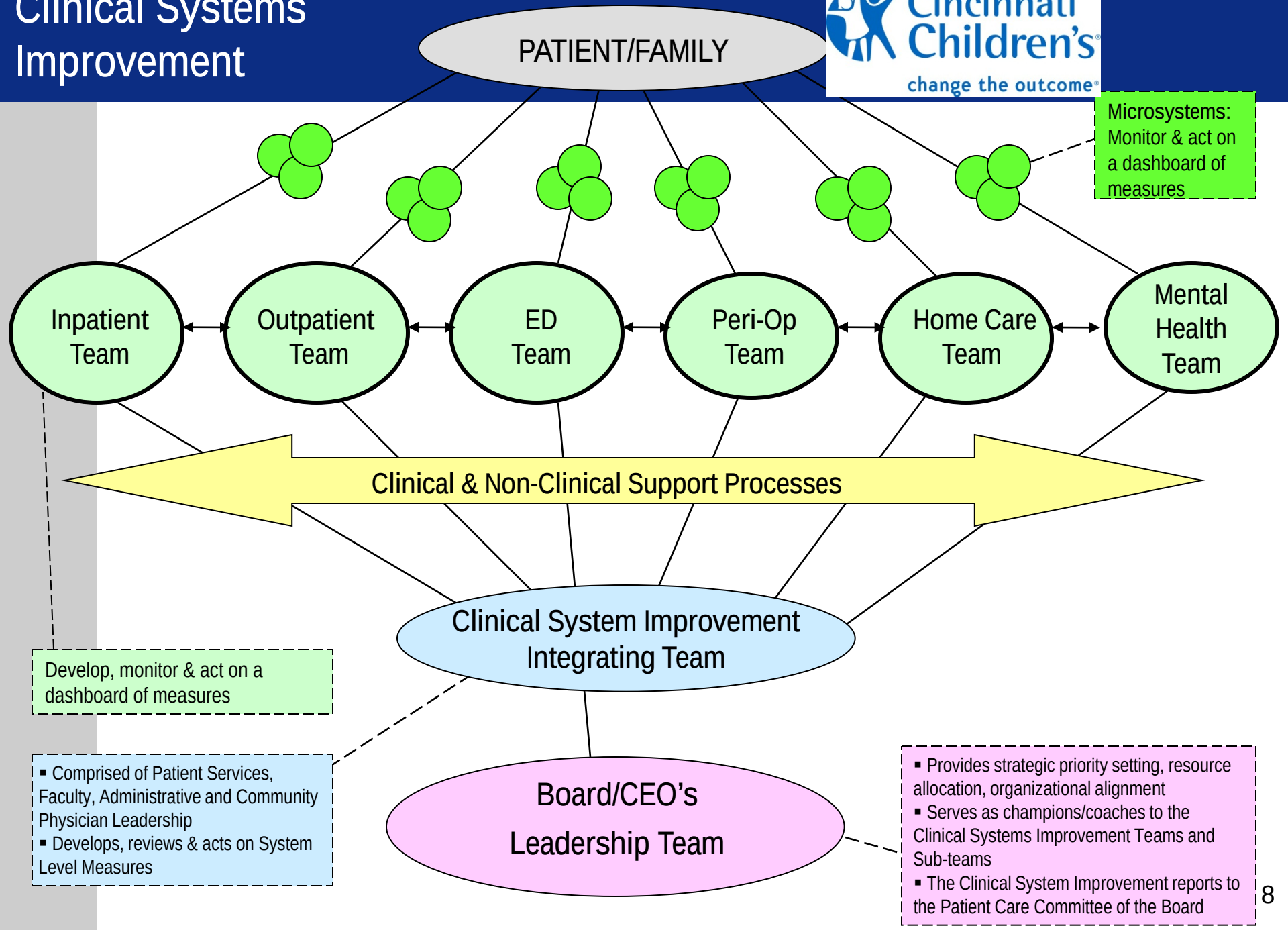
Clinical Systems Improvement



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

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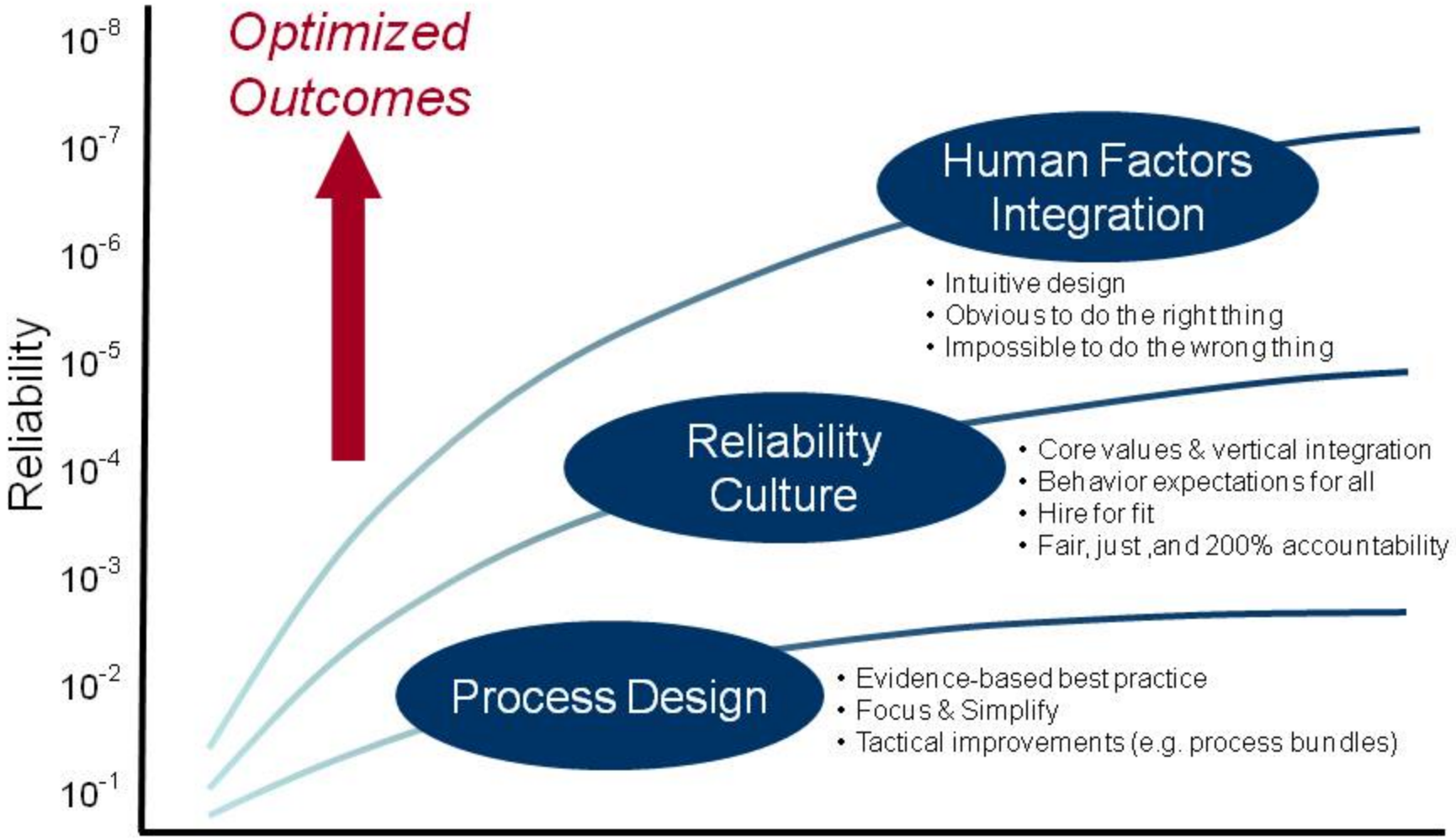
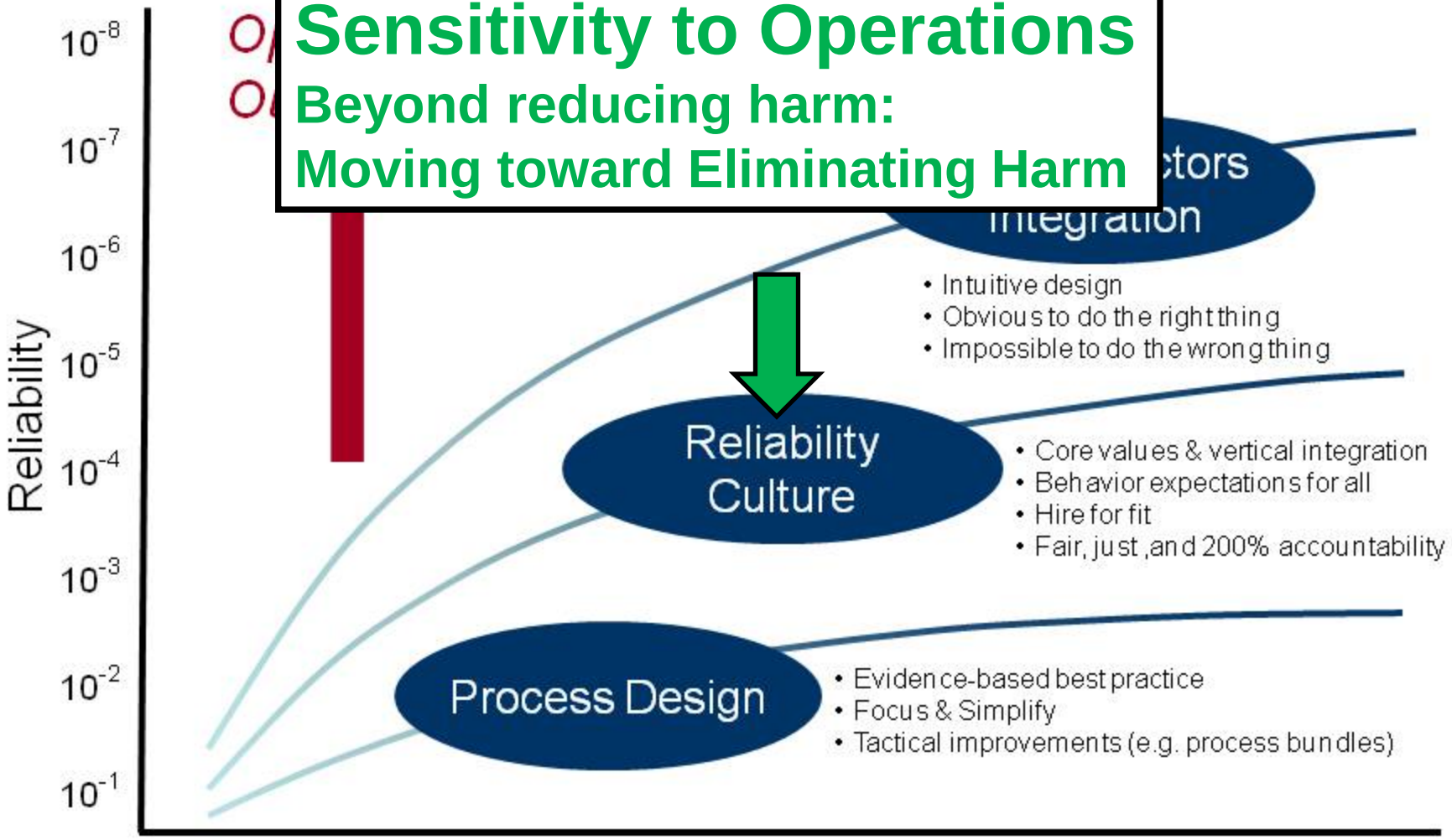
Journey to Reliability – The Next Zero

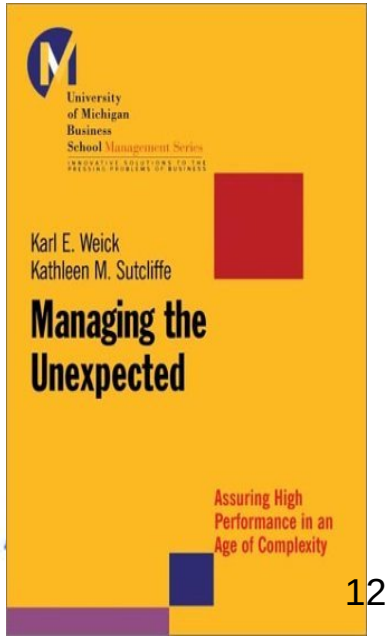


Journey to Reliability – The Next Zero



High Reliability Organizations

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?
- **COMPARABALE 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?

The Gift of Fear and Other Survival Signals that Protect Us from Violence: **Gavin De Becker, Dell Publishing, 1997**

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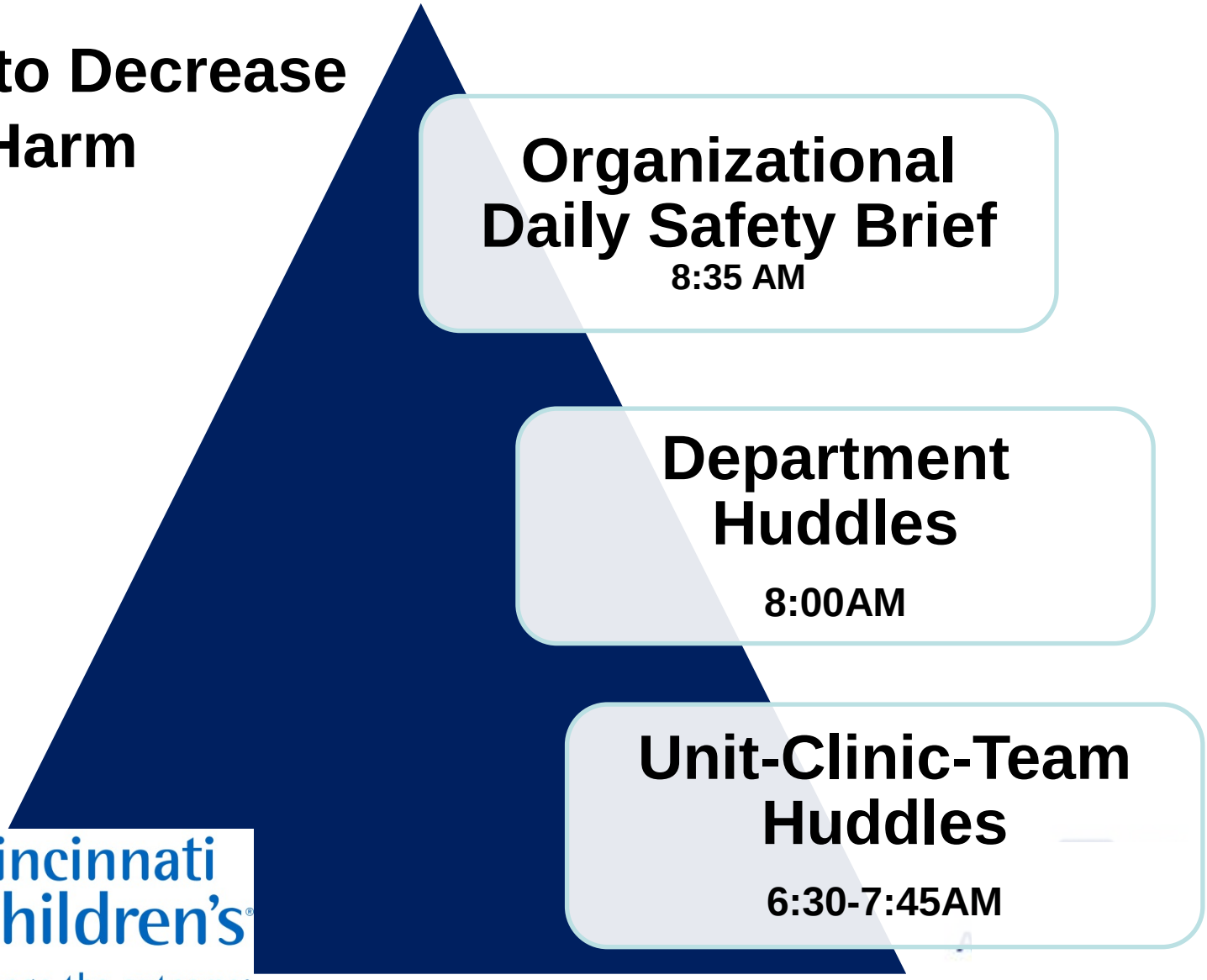
System to Decrease Patient Harm



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Three Topics

- **What Happened in the Previous 24 Hours?**
- **What's Predicted for the Next 24 Hours?**
- **Issues Which Need Resolution.**

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Situation Awareness Model

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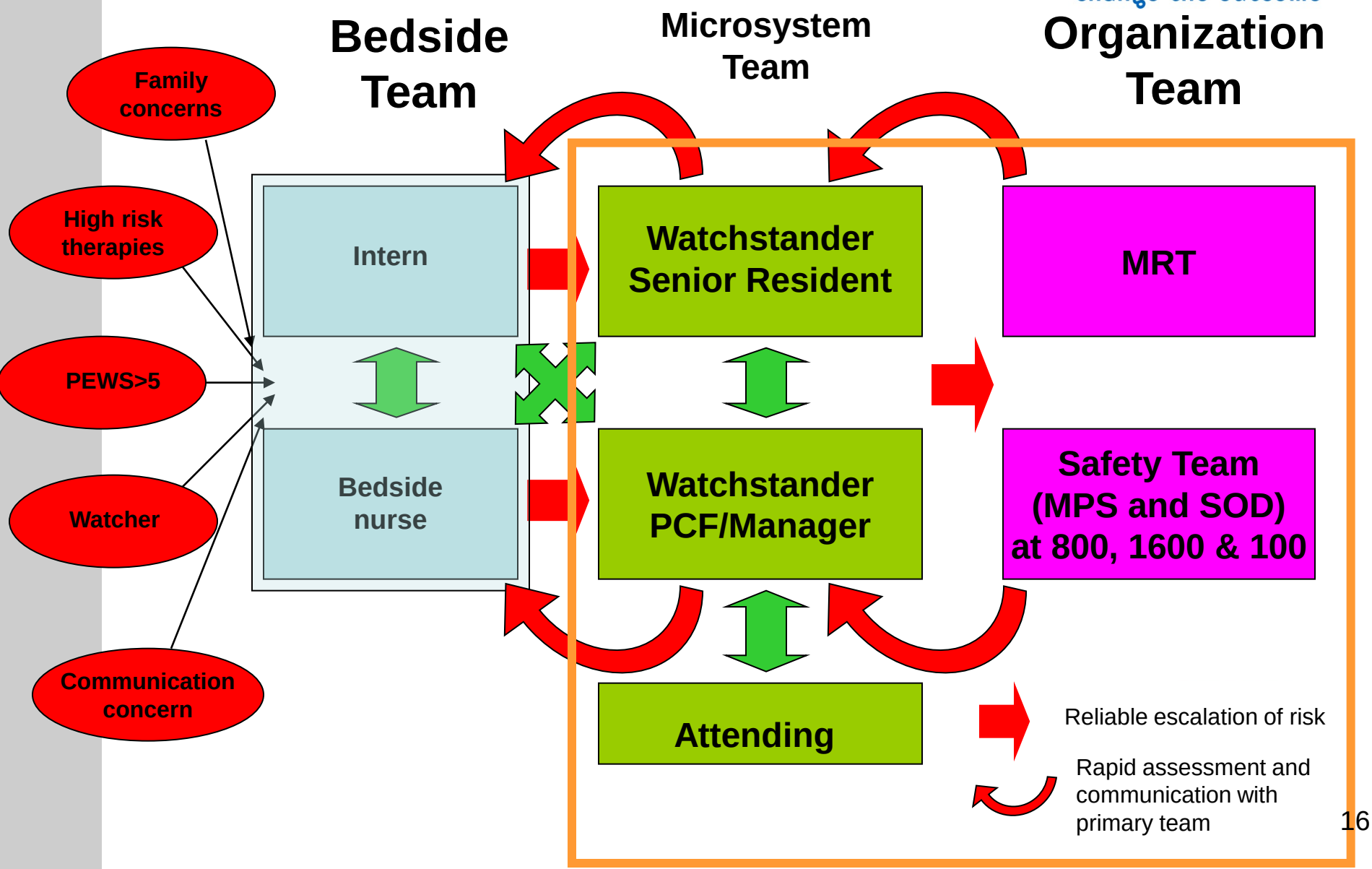

Situational Awareness

- 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

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Questions?

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Psych Huddles

(P3S-SW)

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

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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

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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

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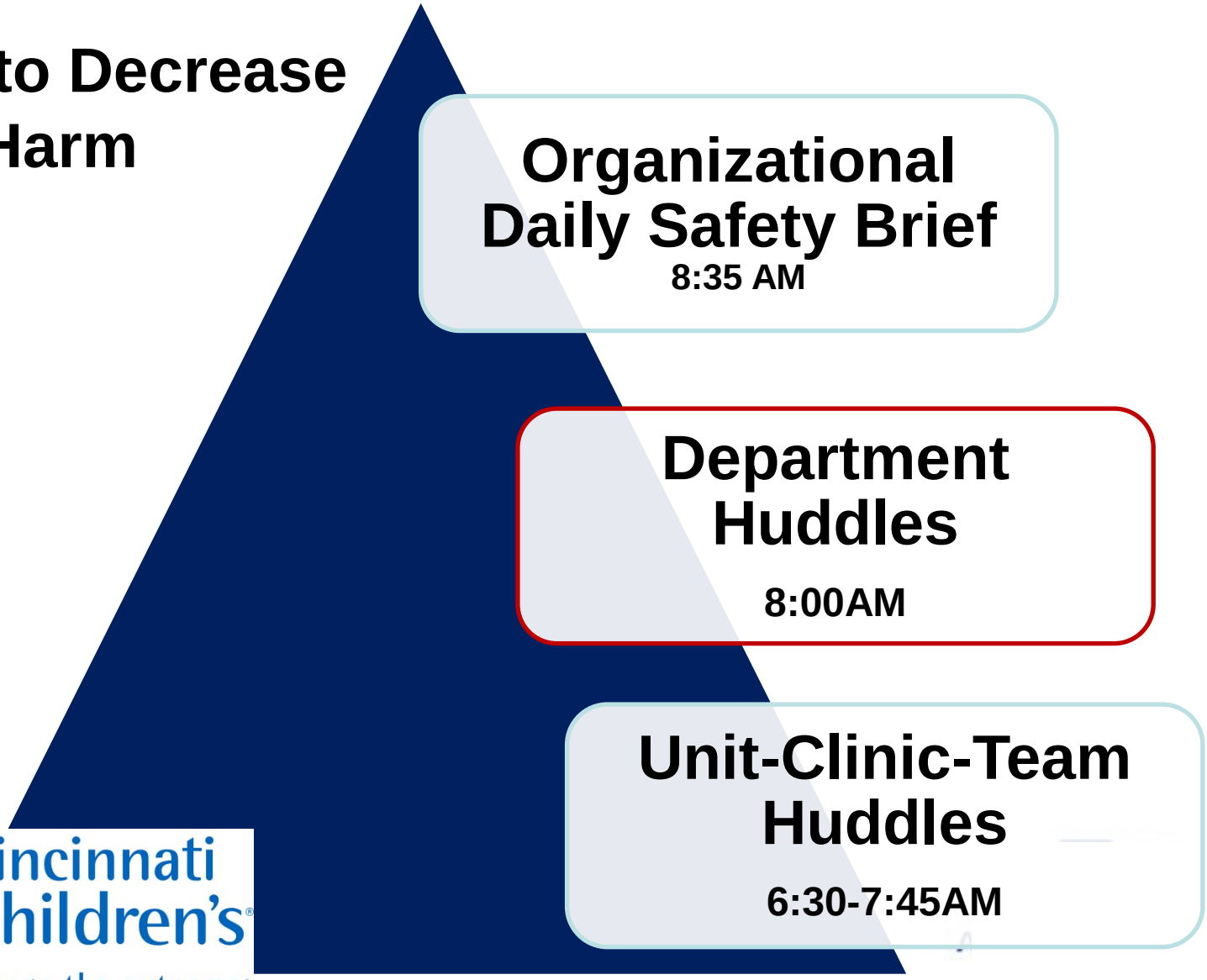

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Periop Huddle

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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)

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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.

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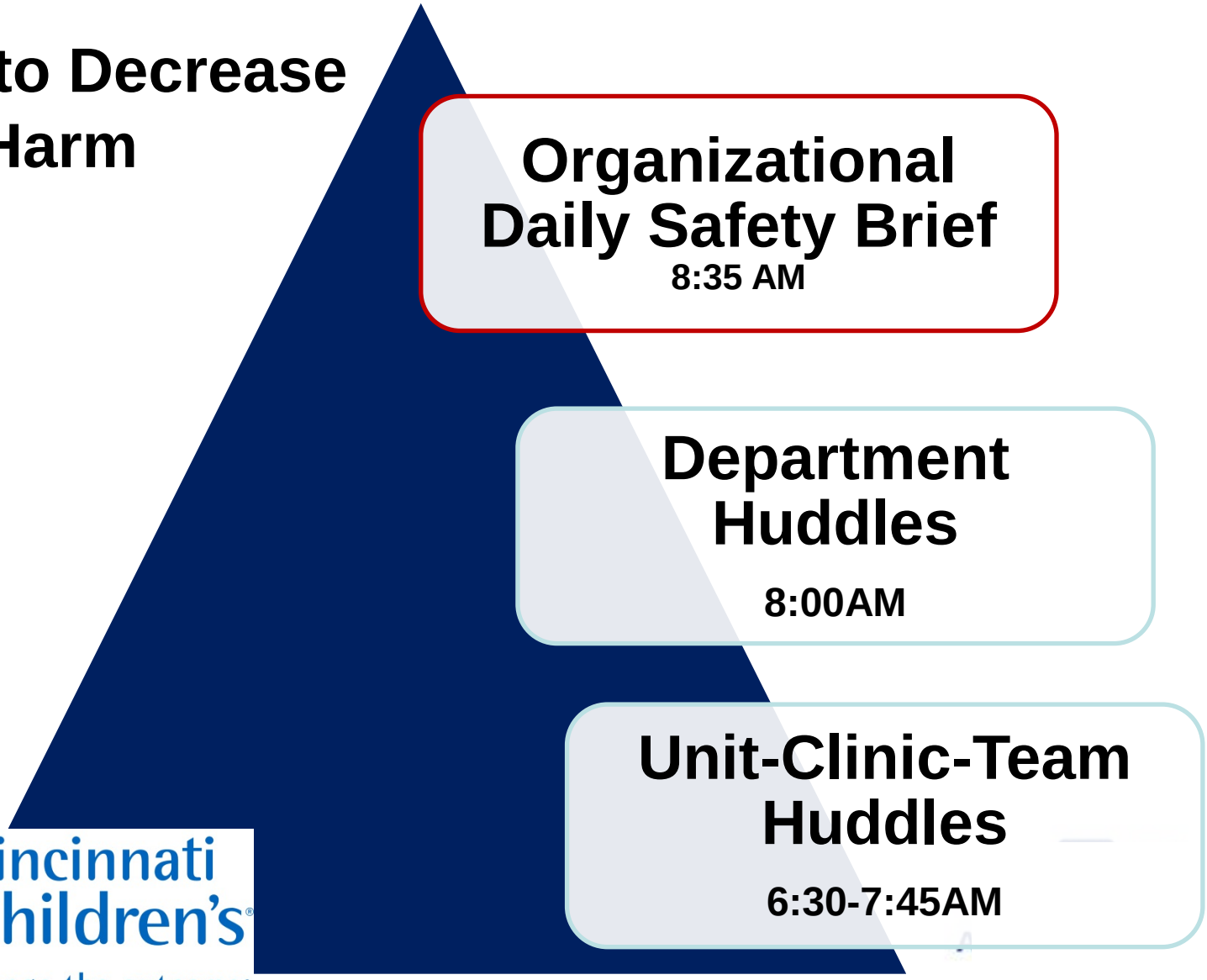

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Patient Safety Status

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

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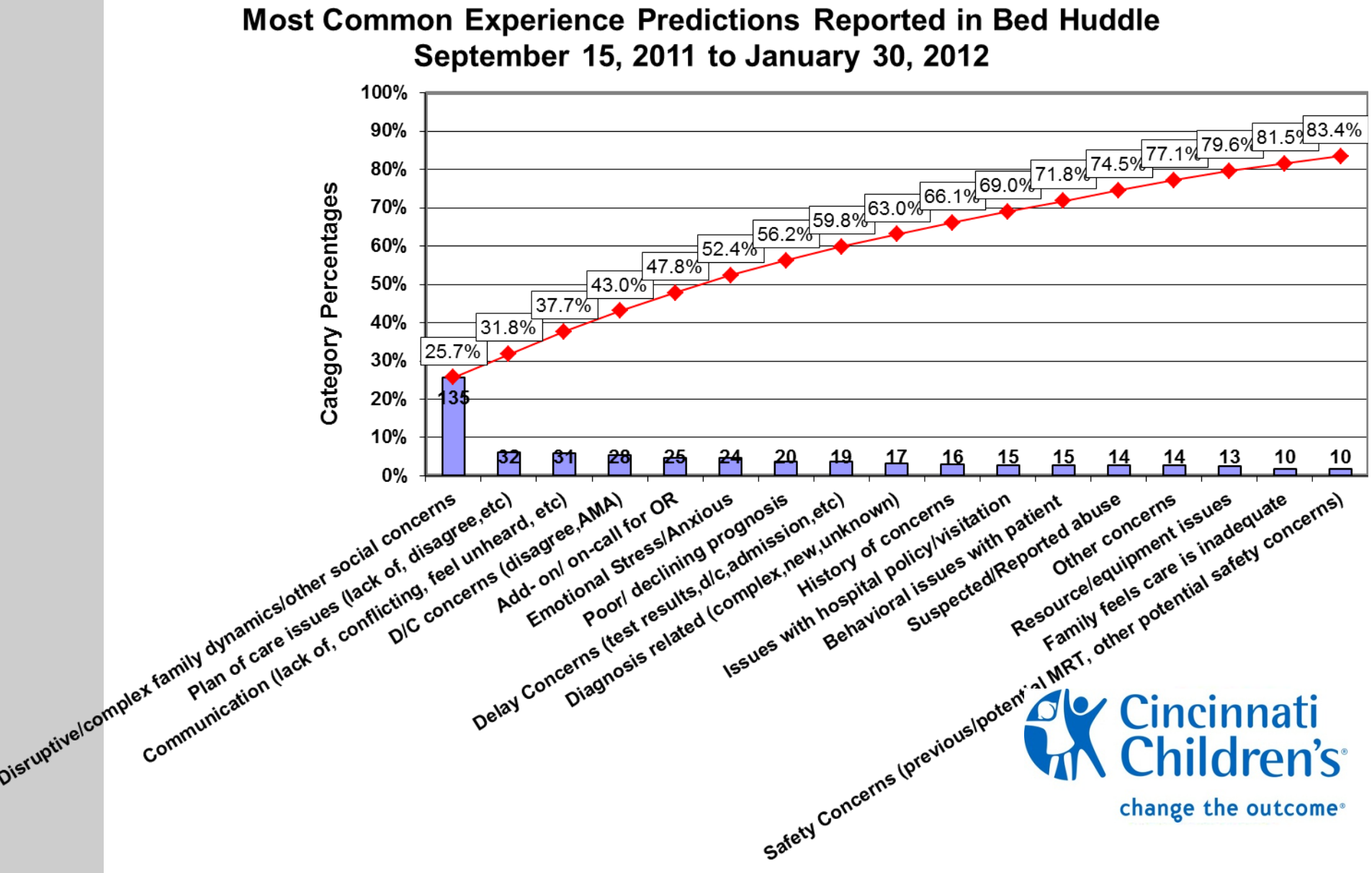
Patient Experience Concerns



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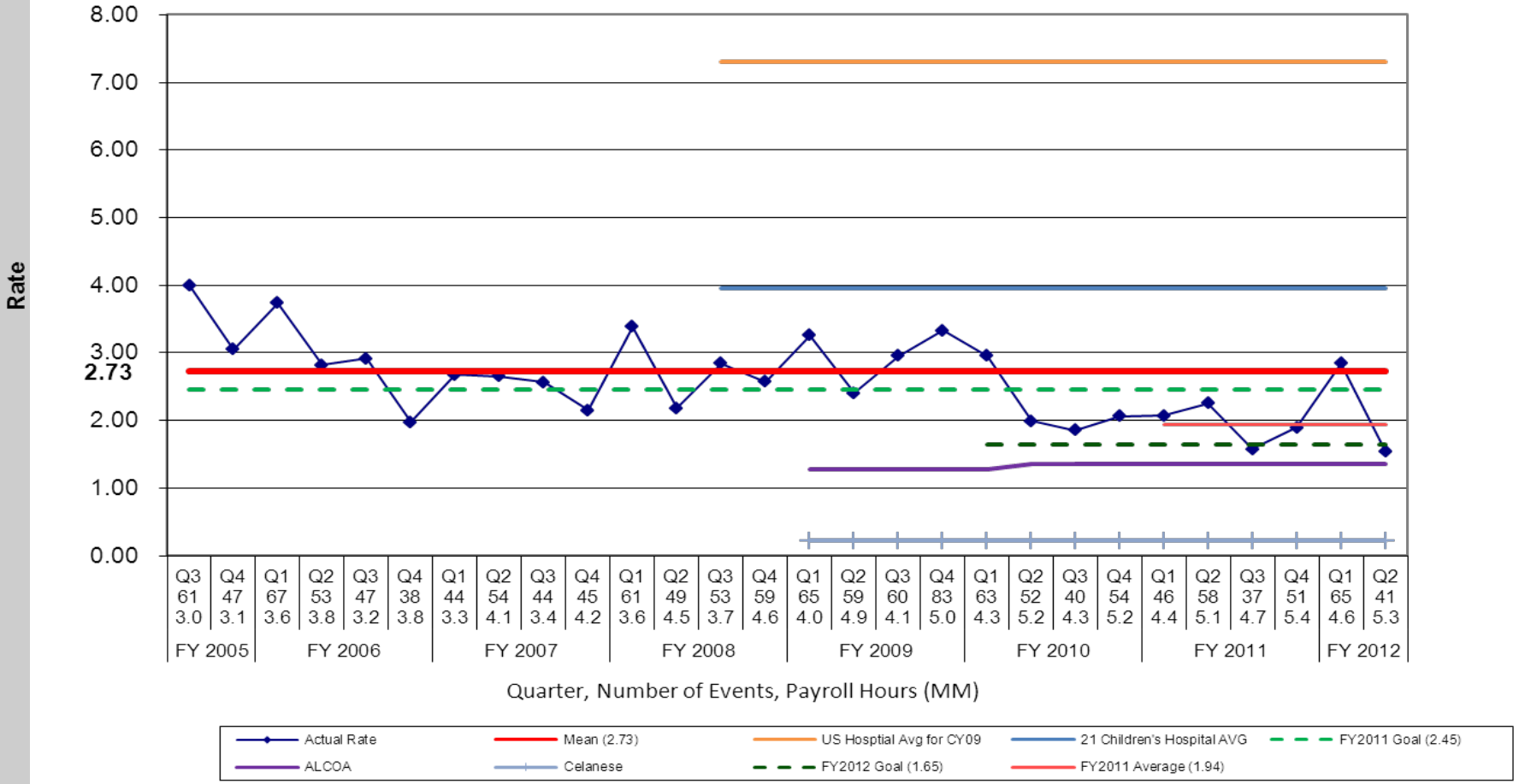
Quarterly Rate Of OSHA Recordable Injuries
(Annualized Rate per 100 FTE)



Last Updated 1/4/12 by U. Bradshaw, AC

Source: CCHMC 2010 OSHA Log 300

Prediction in Action

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Questions?

Comments?

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