Pursuing Zero Harm:
Moving A Strategic Priority- Safety

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Today’s Discussion

- Setting a Strategic Goal
- Measurement
- Theory
- Case Study--CLABSI
- Serving as a Catalyst

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Strategic Goal: Eliminate Serious Harm For All Patients

High Reliability System For Safety
Strategy:
Focus on the top of the pyramid and progressively move down.

Pyramid of Harm
(Patient and Employee)

- Near-Miss Events
  Patient and Employee
- Events of Minimal to Moderate Harm & All Employee Injuries
- Serious Harm Index & OSHA Recordable Injuries
- SSE’s & Lost-time Injuries
Setting a Strategic Goal

Measurement

Theory

Case Study--CLABSI

Serving as a Catalyst
Rate of Serious Harm per 10,000 Adjusted Patient Days

Updated 071717. K Simon, AC

- Rate - Current Definition
- Rate - Old VTE, SSI Definition
- Control Chart Centerline
- Control UCL
- Control LCL

Note: JAN 2017 Change to SM Definition to include non-CVC related events in patients >=12 yrs old only
CCHMC OSHA Rate
 Serious Harm FY Comparison

<table>
<thead>
<tr>
<th>Condition</th>
<th>2017 JUNE</th>
<th>2016 JUN</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLABSI</td>
<td>87</td>
<td>122</td>
</tr>
<tr>
<td>SSI</td>
<td>20</td>
<td>16</td>
</tr>
<tr>
<td>PU</td>
<td>26</td>
<td>8</td>
</tr>
<tr>
<td>VTE</td>
<td>31</td>
<td>46</td>
</tr>
<tr>
<td>VAP</td>
<td>13</td>
<td>3</td>
</tr>
<tr>
<td>OBae</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>FALLS</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>CAUTI</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>ADE</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Jan 2017: Serious Harm VTE Definition Change to include non-CVC related events in patients >=12 years old only.
OSHA Fiscal Year Comparison

- Aggressive Patient: FY2017 (168) - 19, FY2016 (227) - 29
- BBP Exposure: FY2017 (168) - 67, FY2016 (227) - 92
- Caught / Struck: FY2017 (168) - 21, FY2016 (227) - 22
- Exposure: FY2017 (168) - 7, FY2016 (227) - 20
- Motor Vehicle Accident: FY2017 (168) - 1, FY2016 (227) - 1
- Other: FY2017 (168) - 1, FY2016 (227) - 1
- Overexertion: FY2017 (168) - 35, FY2016 (227) - 32
- Slip, Trip or Fall: FY2017 (168) - 18, FY2016 (227) - 30
Children's Hospitals' Solutions for Patient Safety (SPS) National Network

Cincinnati Children's Hospital Medical Center

Central Line Associated Blood Stream Infections (CLABSI)
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ELIMINATING SERIOUS HARM IN HEALTHCARE

OPTIMIZED OUTCOMES

HUMAN FACTORS INTEGRATION
- Right Thing Is Easier
- Technology Designed For Safety

SAFETY CULTURE
- High Reliability Practices
- Senior Leader Commitment
- Staff & Patients

RELIABLE PROCESS/BUNDLES
- Standardize Best Practice
- Process Reliability
- Drive Out Waste

RISK OF HARM DECREASES

IMPROVEMENT OVER TIME
Key Processes

- VAP Bundle
- CLA-BSI Bundle
- Pressure Ulcer Bundle
- Discharge Bundle
- CA-UTI Bundle
- Etc, etc, etc............
ELIMINATING SERIOUS HARM IN HEALTHCARE

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IMPROVEMENT OVER TIME

RISK OF HARM DECREASES

100,000,000
10,000,000
1,000,000
100,000
10,000
1000
100
10
High Reliability Organizations

- Environment rich with potential for errors
- Unforgiving social and political environment
- Learning through experimentation difficult
- Complex processes
- Complex technology

Karl E. Weick, PhD

Kathleen M. Sutcliffe, MSN, PhD
DEVELOPING MINDFULNESS

Aware of All Harm – Immediately
Aware of All Risk – Continuously
Harm Reduction Owned – By All Leaders
Front Line Teams Feel Supported – Every Shift
We Learn From Errors – Every Day
Organizational Mindfulness

1. Preoccupation with failure
2. Sensitivity to operations
3. Reluctance to simplify
4. Commitment to resilience
5. Deference to expertise
Preoccupation With Failure

Regarding small, inconsequential errors as a symptom that something is wrong; finding the half event

- We treat near misses and errors as information about the health of our system and try to learn from them
- Managers seek out and encourage bad news
- People are rewarded if they spot problems, mistakes, errors or failures
Sensitivity To Operations
Paying attention to what’s happening on the front line

- Should problems occur, someone with the authority to act is always accessible and available, especially to people on the front lines

- People are familiar with operations *beyond one’s own job*

- Managers constantly monitor workloads and are able to obtain additional resources if the workload starts to become excessive
Reluctance To Simplify Interpretations

Encouraging diversity in experience, perspective and opinion

- Questioning is encouraged
- People are not attacked when they report information that could interrupt operations
- People show considerable respect for one another
Commitment To Resilience

Developing capabilities to detect, contain, and bounce-back from events that do occur

- Resources are continually devoted to *training and retraining* people to operate the technical system
- People want to learn and do learn from mistakes
- Asking “What If…?” is a normal part of work
Deference To Expertise
Pushing decision making down and around to the person with the most related knowledge and expertise

- People respect the nature of one another’s job activities
- People in this organization value expertise and experience over hierarchical rank
- People typically “own” a problem until it is resolved
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High Reliability Case Study

Lessons learned from CCHMC CLABSI experience 2015-2017
Theory:
If improve process reliability will improve outcomes
Results in 2014: As process reliability increased to >90%, outcomes improved

But, in 2015: The rules changed
CDC/NHSN expanded CLABSI definition

- 2015: Outcomes worsened
- But our process remained reliable
Upon further review:

- New definitions didn’t explain the whole story
- Through interviews/observation we learned about practice variability as a result of...
  - Unit-specific improvement work
  - Rapid implementation of new equipment

December 2015:

- Cease and desist all testing
- Develop ONE standard of CLABSI care
Key Aspects of ONE standard

• Direct observation to see variation and understand barriers
• Commit to consensus
• Human Factors lens to simplify practice where possible, and better articulate rationale
• Staged roll-out to sustain fidelity of training
• Gather ongoing “chatter” to reveal barriers
  • “TRIP Tank”
• Process measurement paradigm shift
  • Observing to coach instead of checking boxes
CLABSI Prevention Standard Rate of Compliance: Central Line Associated Bloodstream Infection System
Children's Hospitals' Solutions for Patient Safety (SPS) National Network
Cincinnati Children's Hospital Medical Center
Central Line Associated Blood Stream Infections (CLABSI)
### Partnership 4 SPS hospitals & Toyota (June 2016)

- **1 Pilot unit @ CCHMC**
- Spread other HACs and Units

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#### K-Card CLABSI

<table>
<thead>
<tr>
<th>Shift</th>
<th>AM/PM / D/E/N</th>
<th>Shift handoff effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Necessity of line discussed in past 24 hours</td>
<td>Ask which line maintenance requirements were discussed and if anything was omitted.</td>
<td></td>
</tr>
<tr>
<td>Patient (Pt) assessment</td>
<td>Ask if the Pt is a CLABSI Watcher. Is so, are effective mitigation strategies in place?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ask if Pt/family engagement in central line care has been considered? If Pt/family are not supporting line care, is the nurse effectively mitigating?</td>
<td></td>
</tr>
</tbody>
</table>

#### Daily / shift routine

- Ask to see where hourly line checks are documented and discuss reasons if not current.
- Ensure line maintenance is current. Ask to see dressing, cap, and tubing change documentation and verify that nothing is past due (7 day for dressing & 96 hrs for cap). Note: pm for NICU
- Verify bathing/CHG treatment per protocol.
- Ask what unexpected events occurred with Pt and verify that they were mitigated and documented as needed (ex: line became disconnected, non-occlusive dressing, vomit on line, etc.).
- Ask if there are any environment concerns (ex: wipe down high touch areas, change out of beds/cribs, room clutter) & how they can be addressed.

#### Direct observation of dressing

- Visually inspect dressing for damp, loose or visibly soiled. If so, observe the dressing change.
- Observe (if possible) a dressing change or some type of line maintenance (cap change, medi/med fluid administration, or line change).
- If unable to observe an actual procedure, assess CLABSI One standard knowledge.

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**Reliability Criteria: Card is GREEN if “all items are compliant.”**

**Perfect Central Line Care was achieved!**

**Barriers to Perfect Central Line Care discovered**

#### Following the review:

- Discuss any barriers to perfect line care/improvement opportunities.
- Ask the nurse for their ideas to resolve barriers.
- Reinforce the perfect central line care concept. (Use perfect line care process map as a visual aid.)
- Thank the nurse for everything they do to keep patients safe every day.
- Update the K-card board.
<table>
<thead>
<tr>
<th>Perfect care Maps</th>
<th>HAC Hospital acquired condition/Project</th>
<th>M 7/17</th>
<th>T 7/18</th>
<th>W 7/19</th>
<th>R 7/20</th>
<th>F 7/21</th>
<th>S 7/22</th>
<th>Su 7/23</th>
<th>Days since last event</th>
<th>Top 1-3 Opportunities for Improvement</th>
</tr>
</thead>
</table>
| CLABSI           | X 3                                   | X 5    | X 1    |        |        |        |        | 14                 | • CHG bathing  
• Environment wipe down  
• Date dressing |
| PI               | X 1                                   | X 3    | X 3    |        |        |        |        | 74                 | • PPOC skin plan updated and reviewed each shift |
| UE               | X 4                                   | X 3    | X 2    |        |        |        |        | 31                 | • 2 person repositioning |
| VAP              | X 3                                   | X 1    | X 3    |        |        |        |        | 242                | • shift hand-off, frequency of MC (acute or chronic)  
• Educate the family |
| CAUTI            | X 3                                   | X 2    | X 2    |        |        |        |        | 159                | • Daily discussion for the indication |
| PIVIE            | X 1                                   | X 1    | X 2    |        |        |        |        | 30                 | • TLC (really comparing side by side)  
• Educate family |

PICU Visual Display Board
ELIMINATING SERIOUS HARM IN HEALTHCARE

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RISK OF HARM DECREASES

IMPROVEMENT OVER TIME
Human Factors (HF) Support for CLABSI ONE Standard

• Two primary objectives of human factors support:

1. Enhance the effectiveness and efficiency with which work is carried out
   • For this task, specifically looking at optimizing workflow for CVC maintenance bundles

2. Enhance desirable human values, such as improved safety, reduced stress, greater user acceptance, etc
HF Involved at throughout

**Design Phase**

- Active member of the CLABSI Team to support the design and implementation
- Conducted observations of frontline staff while performing key CVC maintenance to get to know their work environment
- Partnered to facilitate focus group sessions to redesign/optimize the current workflows and engage staff to help solve the problem from their perspective

**Implementation Phase**

- Collaborated to develop a training model for educating the frontline staff
- Participated in interactive training sessions
  - Small trainer to learner ratio (1:2).
  - Fostered staff engagement to encourage them to troubleshoot barriers and challenges
How? HF Involved at All Level (con’t)

• **Implementation Phase (continued)**
  - Partnered to redesign and optimize the dressing change, hub entry, and needless connector entry kits
  - **Ensure staff have the tools they need to do their jobs**

• **Execution (“Go Live”)**
  - Provided continued support during the training and Go Live
  - **Support staff during the transition to increase confidence and reinforce issues before they become a habit**
  - Active participant in the CLABSI TRIP TANK
    - Monitor and influence the adoption of the new changes from the frontline staff
Outcomes

• The CLABSI One Standard reduced the number of hand hygiene moments by 20% in the Dressing Change workflow

• The CLABSI One Standard optimized the workflow by reordering steps to support the natural sequence performed by the RNs

• The CLABSI One Standard reduced the number of instructional steps by 50%, supporting the reduction of human error
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Solutions for Patient Safety

OUR MISSION:
Working together to eliminate serious harm across all children’s hospitals
500 \text{ ZERO} \text{ Month}
Working Together

National Children’s Network
130+ Children’s Hospitals
Greater than 50% of Admissions
Our Approach

Leadership Matters
Executive leadership is a critical aspect of successful improvement in pediatric patient safety. The network has designed efforts to inspire and continuously develop the safety leadership skills of the executives who lead our network hospitals.

Our mission motivates all that we do
We must act with urgency and discipline, focusing on outcomes through a combination of high reliability concepts and quality improvement science methods. We learn through testing and partnering with families and front-line staff.

Network hospitals will NOT compete on safety
Instead, the SPS network is built on the fundamental belief that by sharing successes and failures transparently and learning from one another, children’s hospitals can achieve their goals more effectively and quickly than working alone.
Our Approach (continued)

“All Teach, All Learn”

SPS network hospitals must humbly share and gratefully learn from others. Accomplishing our goals requires focus on the detailed processes and cultural elements that lead to safer hospitals; guidance and support for hospital teams as they build the capacity for change; and facilitating relationships within the network to broaden and accelerate learning.

Network hospitals must commit to building a “culture of safety”

Hospitals within the network are employing the cultural transformation strategies of other high reliability industries to significantly reduce harm in their institutions. This emphasis on creating a culture of safety within pediatric institutions is a unique aspect of SPS’s approach.
Our Approach

SAFETY GOVERNANCE (SG) & CAUSE ANALYSIS (CA)
LEADERSHIP METHODS (LM)
ERROR PREVENTION (EP)
PATIENT AND FAMILY ENGAGEMENT (PFE)
DISCLOSURE
EMPLOYEE/STAFF SAFETY

ADVERSE DRUG EVENTS
CDIFF AND ANTIMICROB
CA-URINARY TRACT INF
CLA-BLOOD STREAM INF
PERIPHERAL INTRAVENO
PRESSURE INJURIES (PI)
READEMISSIONS
SERIOUS FALLS
SURGICAL SITE INFECTION (SSI)
UNPLANNED EXTUBATION
VENOUS THROMBOEMBOLISM
VENTILATOR-ASSOCIATED INFECTION

50% reduction in SSEs by 12/31/18
40% reduction in pediatric HACs and 20% reduction in the readmit rate across SPS by 12/31/18
25% reduction in DART by 6/30/19
Thank you

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