High Reliability:
From “Harm Happened” to “Harm Won’t Happen”

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Our Numbers:

ONE OF THE 5 LARGEST Catholic health care systems in the nation

OVER 1,000 SITES OF CARE ACROSS 7 STATES

OVER $8 BILLION in net operating revenue

NEARLY $2 MILLION A DAY IN COMMUNITY BENEFITS

43 HOSPITALS

2,100 EMPLOYED PHYSICIANS & 57,000 TOTAL EMPLOYEES
Bon Secours Mercy Health extends the compassionate ministry of Jesus by improving the health and well-being of our communities and brings good help to those in need, especially people who are poor, dying and underserved.
OUR VALUES:

Human Dignity
Integrity
Compassion
Stewardship
Service
All the safety tools…

• Nurse driven protocols
• Sepsis Screening tools
• Best Practice alerts
• Hard Stops
• Tall man lettering
• Medication Scanning
• Standardized orders

...Yet Harm Happens
Harm is... an Unexpected Outcome

Care

Variation

HARM

people
process
technology
gaps
lapse
Unexpected outcome
Human Factors Engineering

1. Occam’s Razor
2. Workaround
3. Failure to engage a questioning attitude
4. Failure to engage in reluctance to simplify
5. Tired, pressed for time, competing priorities

a. There is an intentional hole in the cake mold
b. Creatively, the user covered the hole with wax paper for cake #1

Top: result #1
Bottom: result #2
Unexpected Outcomes: the results of gaps and lapses

*The best laid plans are threatened by the real world*

- Gaps and Lapses:
  - “Emergent situation- we had to take a verbal order”
  - “The medical record had an incorrect date of conception”
  - “The drug was not in the smart pump look up”
  - “The batteries were removed from the monitor”
  - “The oxygen tubing was not connected to the flow meter”
  - “We didn’t know the patient was in the room”
  - “The medication was not in the pyxis”
Reliability = reducing variation (gaps and lapses) to prevent harm

*Subaru* Forrester Story

*presenter has no financial interests in Subaru is grateful for safety features

**All the safety tools:**
- Blind spot cameras
- Back up cameras
- Steering correction
- Speed correction
- Notification that car in front has moved
- Icy road notification
- And more!

Variation/major threat

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In our Subaru Example, we cannot reasonably eliminate the #1 variation

- **Processes:**
  - No texting
  - No loud music
  - No sloppy snacks
  - Straws only
  - No changing shoes while driving
  - No presenting while driving

- **Tools**
  - Seatbelt
  - Hands free options
  - Forcing functions
  - Visability features

- **People**
  - No children touching driver
  - No dogs

- **Mobile distractions**
- **Child/dog distractions**
- **Eating/drinking distractions**
- **Time constraints**
- **Working from the road**
High Reliability: Achieving Expected Outcome

Recognizing the world is full of threats and a commitment to minimize them

Eliminate *all* known threats

(*process improvement*)

Continual reassessment of *new* threats

(*culture of safety*)
The Integrated Bon Secours Mercy Quality/Safety Operating Model is based on the principles of **High Reliability**

“High reliability is an ongoing process or an organizational frame of mind, not a specific structure”

(AHRQ)
A Mature Quality/Safety Operating Model moves from *maintenance* and *reactionary functions* to *transformative actions* via the incorporation of high reliability drivers.

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**Quality/Safety Maturity Paradigm**

- **Transforming**
  - Proactive, shared learning

- **Improving**
  - Reacting, responding, incidental improvement

- **Maintenance**
  - Reviewing, reporting, required activities

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*Status quo to better*
Safety and Reliability Continuum

From “Harm Happened” to “Harm Won’t Happen”

**Foundational**
*Commitment to Resilience*
- Safety huddles
- Check ins
- Leadership Rounding
- Event Reporting
- Event Analysis
- Stand down

**Transitional**
*Deference to Expertise*
*Sensitivity to Operations*
- RCAs
- Action Plans
- Change Management
- Project Management
- Process Improvement

**Proactive**
*Preoccupation with Failure*
*Reluctance to Simplify*
- Lessons Learned
- Near Miss Reporting
- Global Trigger Review
- Predictive Analytics
- FEMA
- Standardized workflows
### BSMH Scope of Services – Safety and Reliability

#### Culture of Safety

**Outcomes:** Increase in near miss event reporting

**Goal:** Increase near miss reporting while decreasing events that reach the pt

- Education/training Culture of Safety
- Oversight of Safety Coach/Safety Huddles
- Oversight of Safety/PSO contracted services
- Responsible for SSE review/reporting

#### Process Improvement

**Outcomes:** 12 month ROI for completed projects

**Goal:** Increase capacity for change and improvement through provision of skilled PI expertise across the system

- Process improvement
- Lean transformation
- Labor optimization
- Systems engineering design
- Facility design
- Leadership development
- Data analysis, trending and modeling
- Project management
- Change management
- Coaching

#### High Reliability

**Outcomes:** Decrease in events that reach the patient

**Goal:** Identify and implement harm reduction strategies through global trigger review and precursor event monitoring, spread of HRO tactics to reduce harm

- Responsible for oversight of high reliability tactics,
- Identification/prioritization/implementation of standardized EBP/clinical pathways/tools/technology/processes,
- Monitoring and measuring impact of standardization, oversight of forecasting/harm reduction initiatives such as global trigger reviews and predictive analytics
Sepsis Focused Population Initiative (FPI) Care Bundles

Using people/process/technology to reduce care variation

Launched May 10, 2019
**BSMH cares for over 22,000 severe sepsis/septic shock patients a year**

| Opportunity for Top Volume BSMH Hospitals if Peer Group Performance is Reached | $61M cost savings | 16,761 fewer days | 351 fewer deaths | 787 fewer readmissions | 569 fewer complications |
What happens to our patients with sepsis after 6 hours?

- Fluid management
- f/u on blood cultures
- IV-PO conversions
- Follow up appointment
- Nutrition
- Respiratory management
- Ambulation
- Homecare referrals
- Palliative referrals
Using the checkpoint process to minimize variability in sepsis care after the first 6 hours

**Time zero**

Screening
- 3 Hour bundle
- 6 hour bundle

**12 hours**

Checkpoint:
- Has sepsis score improved?
- If yes: continue care
- If no: action

**24 hours**

Checkpoint:
- Has sepsis score improved?
- Have milestones been met?
- What is the Risk of Readmission score?

**36 hours**

Checkpoint:
- Has sepsis score improved?
- Have milestones been met?
- Monitor/act on Risk of Readmission score

**48 hours**

Checkpoint:
- Has sepsis score improved?
- Have milestones been met?
- Monitor/act on Risk of Readmission score

**60 hours**

Checkpoint:
- Has sepsis score improved?
- Have milestones been met?
- Monitor/act on Risk of Readmissions score

**72 hours**

Checkpoint:
- Has sepsis score improved?
- Have milestones been met?
- Monitor/act on Risk of Readmissions score
What is a “Care Bundle”?

• Identifies key care drivers by timeframe of patient stay

• Tool to assist healthcare professionals

• Provides interprofessional care approach

• Helps establish care timelines

• Provides specifics of the care plan

• Overall helps to standardize care
How can bundles help improve outcomes across sepsis LOS/mortality/CPC?

- Standardize best practices for pulmonary/respiratory care to prevent respiratory failure
- Standardize best practices for monitoring renal function/I&O to prevent ARF
- Standardize post d/c follow up to prevent bounce back readmissions (home care/primary care appt/discharge calls)
- Build in prompts to address holistic patient care such as nutrition, hydration, mobility
- Prompt actions for VS/assessments/metrics that are not improving
- Prompt consideration of a huddle to address early failure to progress
- Standardize overall plan of care to improve flow, reduce complications and reduce LOS/cost per case
- **Build in checkpoints and flags for early recognition of failure to progress towards recovery and prompt action**
**Goal:** Improve our care of sepsis patients from admit through discharge

**Tactic:** Expand the sepsis ‘bundle’ model through 72 hours

**Leadership meetings to identify FPI hospitals**
Identify Clinical Leads @ FPI hospitals
Introduce PI partner

**Form Sepsis FPI Workgroup**
Identify CC/Epic/Analytic support
Vet/approve/improve Sepsis Pathways

**Identify/expand Hospital level Sepsis Workgroups at target hospitals**
Using LEAN tactics, identify current state sepsis care pathways and future state
Design and implement workflows to support pathway compliance

**Optimize tools for Sepsis Care (launched 5/10/19)**

**Leadership/stakeholder engagement (complete)**

**Pilot future state (8/1/19)**
Sepsis FPI Workgroup: Current State

- Create standard care bundles to drive care.
- Build in checkpoints at regular intervals
- Define bundle elements - drivers of sepsis care
- Identify early deviations to allow course correction and prompt actions

Leadership meetings to identify FPI hospitals
Identify Clinical Leads @ FPI hospitals
Introduce PI partner

Leadership/stakeholder engagement (complete)

Form Sepsis FPI Workgroup
Identify CC/Epic/Analytic support
Design/develop the Sepsis 12-72 hour bundles

Optimize tools for Sepsis Care (launched 5/10/19)

Identify/expand Hospital level Sepsis Workgroups at target hospitals
Using LEAN tactics, identify current state sepsis care pathways and future state
Design and implement workflows to support pathway compliance

Pilot future state (8/1/19)
Key Reliability Tactics for the Bundle Work

• Optimize technology: Sepsis predictive score; Risk for Readmissions
• Maximize tools: checklists; if/then algorithms; forcing functions
• Incorporate people: workflow design
• Monitor, measure, assess, revise and spread
BSMH 2019: Reducing variability and reactivity through reliability tactics

<table>
<thead>
<tr>
<th>PREVIOUS ACTION ITEMS</th>
<th>2019 RELIABILITY TACTICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Falls: signage/policy/education, rounding</td>
<td>• Process/workflow: Stay with me; virtual sitters; work-flow assessments, validations</td>
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<tr>
<td>Sepsis: Sepsis BPA, order sets, Code Sepsis</td>
<td>• Technology/workflow: Sepsis Predictive Score and the Virtual Care Center, Sepsis 12-72 hour bundles</td>
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<tr>
<td>Readmissions: CM discharge planning</td>
<td>• Technology/workflow: Risk of Readmission score to drive d/c protocols, Bundle check points</td>
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<tr>
<td>Perinatal: education, competencies, protocols</td>
<td>• Technology/workflow: closing gaps in fetal monitoring capability; standardizing postpartum EBL measurement</td>
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<tr>
<td>Depression screening/remission: education, registries</td>
<td>• Technology/workflow: registry driven proactive telephone outreach</td>
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<tr>
<td>Opioids: education, best practice alerts</td>
<td>• Technology/workflow: ordersets, elimination of free text, MEDD scores, hard stops, SBIRT screening (spread)</td>
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Statistics are patients with the tears wiped off.

Let’s wipe out harm…more nights in one’s own bed, more graduations and anniversaries, more travels and adventures and more storybook endings.