Practical Approaches to Achieving Quality, Safety, and Population Health

April 17, 2017
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Baton Rouge General Medical Center
Learning to Fly
Journey to High Reliability

Safety and Quality
Process

How something *should* be done…
Culture

Why Culture Matters

Culture

Assumptions

- The assumptions and beliefs of employees drive behavior.

Collective behavior of employees determines results.

Results

- The results measure performance and indicate if strategic business objectives have been achieved.

How something is actually done...
Why Hospitals Should Fly

Fictional book describes a hospital where high reliability has already been achieved, which hasn’t yet become a reality.

"This book should be required reading for anyone willing to face the facts about what it will take for health care to be as safe as it truly can be.

Donald M. Berwick, MD, MPP
Former President and CEO
Institute for Healthcare Improvement (IHI)
How Hospitals Can Fly

Transformation

Strategy
Organizational Structure
Culture

Data & Analytics
Outcomes
Measured Results

Processes
Craft-based vs. Lean Production
Sequential vs. Iterative Care Processes
Southwest Airlines

Only commercial airline to win the “Triple Crown”

Secret Sauce: Relational Coordination

- Shared Goals
- Shared Knowledge
- Mutual Respect

“Culture is what you do when no one is looking.”

- Herb Kelleher, CEO of Southwest Airlines
Work Excellence Toolbox

The Change Acceleration Process Model

1. Define
   - Define the project focus and scope.
   - Identify key metrics and success factors.

2. Measure
   - Identify and define key performance indicators (KPIs).
   - Collect baseline data on current performance.

3. Analyze
   - Analyze data to identify opportunities for improvement.
   - Identify root causes of problems or inefficiencies.

4. Improve
   - Implement improvements based on findings.
   - Monitor progress and adjust strategies accordingly.

5. Control
   - Establish controls to maintain improvements.
   - Monitor and control outputs to ensure desired outcomes.

6. Standardize
   - Standardize processes and procedures.
   - Continuously review and refine processes.

Change Acceleration Process Model:

- Leading Change
  - Creating a Shared Need
  - Shaping a Vision
  - Mobilizing Commitment

- Changing Systems and Structures
  - Current State
  - Transition State
  - Improved State
  - Making Change Last
  - Monitoring Progress

Goal Customer focus:
- Highest-quality, lowest-cost, shortest lead time by continually eliminating waste

Involvement:
- Flexible, motivated team members continually seeking a better way

Standardization
- Stability

Team Competency Outcomes

Knowledge
- Shared Mental Model

Attitudes
- Mutual Trust
- Team Orientation

Performance
- Adaptability
- Accuracy
- Productivity
- Efficiency
- Safety
BRG Transformation Plane

Vision: We will heal, lead, and inspire communities to live the healthiest lives possible.
Level of Risk for Harm

- Being in a Hospital
- Base Jumping
- Hang Gliding
- Parachuting
- Taking a Drive
- Going for a Walk
- Flying on a Commercial Airline

Unsafe → High Reliability → Very Safe
Why the need for High Reliability?

Number of Deaths per Year Associated with Preventable Harm in Hospitals

2000: Up to 98,000

2013: Up to 400,000

James, John. A New Evidence-based Assessment of Harms Associated with Hospital Care. J Patient Saf;9:122-128
A high reliability organization (HRO) is an organization that has succeeded in avoiding near accidents and catastrophes in an environment where normal accidents can be expected due to risk factors and complexity.

Many organizations and even a few industries have achieved high reliability:

- Healthcare is NOT one of them
- Commercial Aviation IS
Low Reliability vs. High Reliability

- **Low reliability organizations** → dismiss the regular chatter of imperfect processes as unavoidable noise

- **High reliability organizations** → recognize that complex systems are imperfect and prone to mistakes and defects

- When operations of high reliability organizations speak up—in the language of *problems* or unexpected *outcomes*—they *stop the line*, listen, communicate, collaborate, *learn*, innovate, and *IMPROVE*—propagating what is learned in one situation to have maximum impact throughout the organization.

*High Reliability organizations continually improve and advance their expertise*
# The Launch of High Reliability Teams

## BRG’s Mission

- “We Create *Exceptional* Experiences and Value for the People We Serve, Through Health and Healing”

## Early Wins

- Every department has a HRT team
  - Clinical and Non-clinical
- Identified 70 HRT Champions from the front line to lead the teams
- Training Started in March 2016 and all 70 have been trained

## Values

- **Excellence** → an allegiance to the *relentless pursuit of perfection*, we individually and collectively demonstrate expertise, innovation, and accountability in *all* that we do
Stop the Line

- Kudos to Lakisha Dunn, RN who recognized that D5W was hanging with the unit of blood instead of saline; and STOPPED THE LINE!

Compatible solutions with blood products

- 5% Dextrose in water causes hemolysis
- Storage: Found D5W mixed up with Saline products
- Staff Hurried: Grabbed from where D5W is normally stored without really looking at the label closely
- Realized that the staff needed a Visual Cue and a 5-S

April 12, 2016
High Reliability Organizations (HRO)

- High reliability organizations Interpret deviations and departures from prediction as important signals—not noise
- Low reliability organizations manage functional specialties in silos
- HRO leaders invest continually in the integration of specialties into a process in order to learn and create new knowledge
Learning to Fly: B5, ICU, CT, Pharmacy

Lessons Learned: Teamwork

For the end result to happen perfectly, each member of the team:
- Knew their role
- Executed their assignments - perfectly
- Didn’t pass on defects

May 24, 2016
Idiosyncratic confluences and coincidences of people, processes, products, places, and circumstances can create a hazardous situation where none had been known to exist.

- No team can design a perfect system in advance, planning for every contingency and nuance.
- **BUT**...people can discover great systems and keep discovering how to make them better.
Chasing Zero

It’s NOT about a surveillance program to monitor for infections.

It IS about a high reliability culture that’s constantly…

- Obsessed with preventing defects
- Continuous improvement
- Catching near misses
• **Goal:** To increase hand-hygiene practices of our staff and any other staff member that enters our patients’ room. To also hold each other accountable for adhering to cleaning hands prior to providing care to hour patients.

• **Problem Statement:** Hospital staff have not embraced proper hand hygiene practice prior to patient care. B3 has had two nosocomial infections of c-diff for quarter 4-2015 and quarter 1&2 of 2016.

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### Improvements

- Signage is a good visual tool, but is often overlooked and can become part of the background in a hospital. Information that is repeated is usually more effective.
- Nursing staff presents the tent card to patients on admit as part of AIDET.
- The tent card is signed by the nursing staff.
- Hand Hygiene is discussed during huddle with MD and nursing staff to make hand hygiene a priority.
- Secret Hand Hygiene Shopper is performed monthly, including staff name and compliance and placed on bulletin board.

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### Improved Key Metric

![Hand Hygiene Compliance Chart]

- **Secret Shopper Hand Hygiene Compliance Goal 100%**
  - JAN: 54
  - FEB: 50
  - MARCH: 66
  - APRIL: 91
  - MAY: 0
  - JUNE: 0
  - JULY: 75.5
  - AUGUST: 100

  **Note:** For the months of Jan-Feb, no intervention was performed prior to survey.

  **No survey performed May/June**

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### Project Benefits

- **HCAHPS Survey Results of Staff washing/sanitizing their hands**

  ![Survey Results Chart]

  - **Nurses**
    - June: 30, July: 50, August: 70
  - **Doctors**
    - June: 50, July: 80, August: 100

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### Team Members

- **Team Members:** Lakisha Dunn RN, Savanah Creaghan RN, Sonya Bourgeois, Martha Scott PCA, Jessica Smith RN, Rochelle Howard, MSN, Dr. Raju
  (some members not pictured)

- **Physician Champion:** Dr. Raju
# Progress of HRT Teams from June to Jan 2017

## Projects to Date
- Completed Projects: 22
- Projects actively in Progress: 21
- Projects identified and teams started: 12

## Involvement
- Physicians: 4
- Coaches: 55
- Champions: 55
- Front Line: 288
## The 4 Capabilities of HRO’s

### Capability 1: Seeing problems as they occur
- Strong leadership
- Create a deliberate effort to create urgency around seeing and solving problems
- Convey urgency and accuracy of reported information

### Early Wins
- Front line staff bringing ideas for improvements through emails, surveys, posters in lounges, staff meetings & unit huddles
- Lean concept of Visual Management
Understanding Failure to Rescue?

- Failure to recognize clinical deterioration
- Failure to communicate and escalate concerns
- Failure to physically assess the patient
- Failure to diagnose and treat appropriately

Success depends on astute bedside care, as well as vigilance in patient assessment, to detect changes that could be a sign of impending critical event.

April 26, 2016
**Huddle Boards**

- **Problem Statement:** Nursing staff encounter issues that arise throughout each shift on a daily basis and solve problems in isolation and/or encounter recurring issues.
- **Goal:** Provide staff with a Huddle Board as a mechanism for staff to identify safety concerns and opportunities for improvement as they arise, offer suggestions for improvement on a daily basis, prioritize and solve problems, and share the knowledge.

**Team Members**

- Cherita Washington, RN
- Breona Sands, Unit Clerk
- Arian Snell, RN

**Shared Tools Used**

- Signal (identify problem), Swarm, Solve, Share
- PICK Chart

**Opportunity/Goal**

**Huddle Boards**

- **Deprioritized**
  - Opportunity/Suggestion Cards
  - Daily discussions (huddles) using board which consists of 4 main sections:
    - New Improvement Opportunities
    - PICK Chart
    - Works in Progress
    - Improvement Ideas Implemented

**Improved Key Metric**

- Key Metrics – we expect to see improved employee engagement scores and patient safety
- Huddle Board has provided staff with a structured approach for daily problem solving and resolution of problems.
- 2 issues/suggestions have been resolved via a “Just Do It” approach while others will require a HRT project

**Project Benefits**

- Empowers staff
- Encourages everyday improvement from all employees
- Builds a culture of safety and continuous improvement
The 4 Capabilities of HRO’s

Capability 2
Swarming and solving problems as they occur

- Go through a disciplined cycle of real-time problem recognition, diagnosis (root-cause analysis), and treatment
- It is the disciplined use of process improvement tools

Early Wins

- Each HRT Champion attended a 4 hour workshop learn tools to be able to solve in a systematic fashion
- Connecting the dots with methodologies used at BRG
The 4 Capabilities of HRO’s

Capability 3

Spreading new knowledge

- Coping, firefighting, and making do are gradually replaced throughout the organization by a dynamic of identifying opportunities for process and product improvement.

- As opportunities are identified and the problems are investigated, pockets of ignorance are converted into nuggets of knowledge.

Early Wins

- Excel spreadsheet to share the new knowledge to other units that would benefit from the improvements learned.

- OPSOC presentations by front line.

### Early Wins

<table>
<thead>
<tr>
<th>HRT Champion</th>
<th>Project</th>
<th>Hand Hygiene</th>
<th>Increasing compliancy with isolation precautions</th>
<th>Prevention of spread of infection with equipment</th>
<th>Pressure Ulcer rate</th>
<th>Prevention of Pressure Ulcers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lakisha Dunn</td>
<td>A2 B3</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Addie Will</td>
<td>A3 B6</td>
<td></td>
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<tr>
<td>(Cloutre)</td>
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<tr>
<td>Mary Malloy</td>
<td>A4</td>
<td></td>
<td></td>
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<tr>
<td>Jessica Troxclair</td>
<td>Arts and Medicine</td>
<td>Post Acute (SNF/Rehab)</td>
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<tr>
<td>Meredith Cooper</td>
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</tbody>
</table>

### Initiating Unit

- B3
- B6
- B4 Orthopedics
- B5
- B6

### Dates

- Jan-17
- Jun-16
- Nov-16
- Jan-17
- Jan-17
- Jan-17

### Knowledge is contagious.

Increasing the contact rate means researchers “catch” an idea faster.
Sharing of Projects

HRTs Soaring to Success

High Reliability Teams
## The 4 Capabilities of HRO’s

### Capability 4
**Leading by Developing Capabilities 1, 2, & 3**

- Expect leaders at all levels to develop the organization’s ability to manage work in such a way as to see problems, solve problems where they were seen in order to **build new knowledge** to be useful throughout the organization.

### Early Wins

- Directors/ managers making it possible for front line staff to attend HRT meetings.
# Cath Lab Events

<table>
<thead>
<tr>
<th>Issues</th>
<th>Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1\textsuperscript{st} critical event occurred-</td>
<td>Hospital effort to improve weighing of patients</td>
</tr>
<tr>
<td></td>
<td>Cath LAB added double verification of patient weight</td>
</tr>
<tr>
<td></td>
<td>Dosing charts made for 2 drugs commonly used</td>
</tr>
<tr>
<td>2\textsuperscript{nd} critical event occurred</td>
<td>Cath Lab HRT placed mistake proof concept to prevent from occurring again</td>
</tr>
<tr>
<td></td>
<td>Continuous improvement….</td>
</tr>
</tbody>
</table>
High Reliable Organizations

Preoccupied with Failure

“Every step in a process has the potential for failure. The ideal system is analogous to a stack of Swiss Cheese slices; where the holes are opportunities for failure.

The layers are defensive mechanisms to catch the error.”

- James Reason
Cath Lab HRT

Cath Lab HRT Members

• Cath Lab Tech- HRT Champion
• Cath Lab Manager- HRT Coach
• Team members, 3 Cath Lab RNs and a pharmacist

Solution

• Medication kits were made in advance which included: drug, dosing chart and supplies
• Each bag was color coded and laminated dosing chart which matched the bag were included in each bag
• Since these medications are need quickly, they can grab the bag and everything is there to safely administer medication
Early Wins

- Arts and Medicine identified an opportunity to assure musical instruments, art supplies and other items brought in and out of patient rooms were cleaned between patients. They now have a new process in place.

They submitted their project to the National Organization for Arts in Health (NOAH) for possible inclusion in their “State of the Union” at their first conference this fall.
<table>
<thead>
<tr>
<th>Team Members</th>
<th>Solutions Team Working On</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICU Nurses: Laken Cook, Emily Galjour, Emily Harrington, and Mallory Price</td>
<td>Audited documentation of turns and current prevention protocol compliance</td>
</tr>
<tr>
<td>Physical Therapy: Rachael Feirman</td>
<td>Preventative sacral dressing placed on all at risk patients</td>
</tr>
<tr>
<td>Wound care: Laura Hodges</td>
<td>Trialed and ordered repositioning device with fluidized positioner (the Tortoise)</td>
</tr>
<tr>
<td>PCAs: Kay Stewart, Marshall Wheeler</td>
<td>Reinforced use of heel protection boot</td>
</tr>
<tr>
<td>Dietary: Chuck Mouton</td>
<td>Encouraged skin assessment at change of shift with bedside handoff</td>
</tr>
<tr>
<td>Physician Champion: Dr. Godke</td>
<td>Results: ICU acquired PI rate from June-December decreased to 4.14 per 1000 patient days from 11.12 in Q1-Q2 of 2016.</td>
</tr>
<tr>
<td>HRT Facilitator: Darcy Stafford</td>
<td></td>
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</table>

**Problem Statement**

- The ICU acquired pressure injury (PI) rate increased dramatically from October 2015 to April 2016 to a rate of 11.12/1000 patient days (total of 42 pressure injuries)
- **Impact:**
  - Patient and family distress; decreased satisfaction with care
  - Extreme pain to patient
  - Caregivers expressed feeling of inadequacy of care provided
  - Negatively affects staff morale
  - Increased cost of care as the average cost of treatment for a Stage II Pressure Injury ~ $10,000

**Goal Statement**

- Our goal is to decrease the incidence of non-device-related ICU acquired pressure injuries from 11.12 per 1000 patient days (Q1-Q2 2016) to below national average (8.8-10.3/1000 pt days) by December 31, 2016.
ICU Pressure Ulcer Results

Pressure Ulcer Rate (per 1000 patient days)  
January 2016- December 2016

<table>
<thead>
<tr>
<th></th>
<th>Jan-16</th>
<th>Feb-16</th>
<th>Mar-16</th>
<th>Apr-16</th>
<th>May-16</th>
<th>Jun-16</th>
<th>Jul-16</th>
<th>Aug-16</th>
<th>Sep-16</th>
<th>Oct-16</th>
<th>Nov-16</th>
<th>Dec-16</th>
</tr>
</thead>
</table>
Congratulations to Units with:
ZERO HARM October & November: A4, B5, GERI
ZERO HARM AUG, SEPT, OCT, NOV: A3, B3, SNF, Rehab

FY'17 Harm by Type (August - November, 2016)

- **SSI**: 16
- **CAUTI**: 7
- **CDIFF**: 7
- **MED ERROR >=4**: 6
- **PE/DVT**: 1
- **Pressure Ulcer**: 1
- **CLABSI**: 1

Certificates of Excellence:
- **A3 - ZERO Harm October & Nov, 2016**
- **B3 - ZERO Harm October & Nov, 2016**
- **SNF - ZERO Harm October & Nov, 2016**
- **Rehab - ZERO Harm October & Nov, 2016**
Near Misses and Zero Harm
Celebrating our pursuit of High Reliability

Last but not least we are now rewarding and recognizing our front line staff for the part they play.
Culture Change

- Helping us to achieve a “just culture” by
  - Empowering front line to stop the line when they see near mishaps
  - Involving front line staff to come up with solutions to prevent from happening again
- We now have a more transparent culture
  - Sharing mishaps so staff is aware we have opportunities for improvement
- Has truly created an excitement in the front line staff- We receive phenomenal comments on survey from HRT workshop- “Loved explanation of HRTs and realized how important it is to “chase zero”
- Helping to eliminate the “we- they” culture
Journey to Value

Improving Population Health
What’s Value?

- Quality of outcomes that matter to patients and payers
- Cost of delivering those outcomes
How to Create Value?

Care Model Redesign
Population Health Primary Care
Care, Case, & Disease Management

Utilization Management
Elimination of Unnecessary Imaging, Procedures, & Surgeries

Site of Service
More Expensive → Less Expensive
Inpatient → Outpatient

Better Health Outcomes
Lower Per Capita Costs

We Create Exceptional Experiences and Value for the People we Serve

Baton Rouge General
A Community of Caring
Population Health

- Sum total of improved *individual* outcomes
  - Reduced complications of chronic disease
  - Greater percentage of people receiving up-to-date evidence-based care
  - Fewer potentially preventable ER visits and admissions
  - Proactive patient outreach and patient engagement
  - Improved patient experience

- Redesigned Primary Care
- More Reliable Systems and Processes
- Robust Care Coordination

New financing mechanisms
Infrastructure investment
Clinical Integration

VALUE + PHYSICIAN ALIGNMENT = MARKET GROWTH

Quality of outcomes that matter to patients and payers

Quality of outcomes that matter to physicians and payers

Volume Through Value
Baton Rouge General
A Community of Caring
Predicting ACO/CIN Failure

1. Persistence of fee-for-service reimbursement >>> fee-for-value as the predominant source of revenue for network
2. Wrong staffing model with poor PCP-to-specialist ratio
3. Failure to adopt comprehensive integrated population health focused IT platform
4. Lack of physician leadership and management (who understand value)
5. Failure to redesign primary care to effectively and efficiently manage population health
6. Large hospital systems that have traditionally relied on market power

Failure to Create Value
Predicting ACO/CIN Failure

7. Failure to adequately invest in the appropriate infrastructure design
8. Provider culture habituated to fee-for-service payment
9. Patient culture habituated to being passive consumers of healthcare (lack of consumerism)
10. Entrenched provider and patient culture with fixed mindsets that *more care is better*
11. Failure to corral unwarranted variation and control excessive utilization
12. Failure to overcome inertia