Summary of Major Concepts from

High Reliability Care: Getting There from Here:
Insights from Dr. Mark Chassin and Dr. Jerod M. Loeb
The Joint Commission

High Reliability Care is the goal of each healthcare organization and it is a goal that takes constant attention by leaders and managers. Dr. Mark Chassin and Dr. Jerod Loeb published an excellent article in The Milbank Quarterly (Volume 91, No. 3, 2013, pp. 459-490) describing how organizations can reach high-reliability care. This website paper summarizes the major topics addressed by Dr. Chassin and Dr. Loeb.

While health care quality improvement has made great progress in the past twenty years, reaching high-reliability care is a significant challenge for most organizations. This paper describes the challenges that hospitals and other healthcare organizations must address to reach high-reliability care. Here are three major changes that must be addressed:

1. Leaders must commit to the ultimate goal of zero patient harm.
2. Principles of a Safety Culture are implemented throughout the organization.
3. Leaders must adopt/deploy widely the most effective process improvement tools and methods.

And, creating an improvement plan for High-Reliability Care has these three major components:

1. Leaders at each level in the organization must focus on quality improvement.
2. A safety culture must be implemented with trust, accountability, systems and assessment.
3. Performance improvement methods and training must be spread throughout the organization.

The following pages summarize the major concepts in High-Reliability Care and how organizations can begin the journey, as defined by Dr. Chassin and Dr. Loeb.
High-Reliability Health Care: Getting There from Here (1)
Mark R. Chassin and Jerod M. Loeb – The Joint Commission

**Summary of Selected Major Concepts**

Despite serious and widespread efforts to improve quality of health care:
- Improvement is difficult to sustain;
- Project fatigue occurs;
- Many problems need attention.

Many patient still suffer preventable harm...

**High-reliability Science**

studies organizations like commercial aviation and nuclear power showing how to operate under hazardous conditions and maintain safety levels far better than those of health care.

Adapting and applying the *lessons of this science* offers hospitals the promise of reaching levels of quality and safety comparable to high-reliability organizations.

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**Findings**

1. We cannot directly apply the ways of high-reliability organizations to hospitals.
2. A series of incremental changes have been defined that hospitals should take.
3. Leaders must commit to achieving:
   (1) zero patient harm,
   (2) fully functioning culture of safety throughout the organization,
   (3) widespread deployment of highly effective Robust Process Improvement tools.
     [Lean (Toyota Production System), Six Sigma and Change Management]

**Conclusions**

1. Hospitals can make substantial progress toward high reliability.
2. Hospitals must undertake several specific organizational changes.
3. Further research will be necessary to determine the validity and effectiveness of this framework for high-reliability health care.

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**High-Reliability Health Care: Getting There from Here** (1)
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**Summary of Selected Major Concepts**

**What Can High-Reliability Organizations Teach Health Care?**
The Five High-Reliability Principles from High Reliability Organizations (HROs)

<table>
<thead>
<tr>
<th>High Reliability Organizations</th>
<th>The Five High-Reliability Principles (2)</th>
</tr>
</thead>
</table>
| They rarely, if ever, have significant accidents. They prize identifying errors and close calls for lessons they can extract on what occurred before these events. The lessons point to specific weaknesses in safety protocols or procedures that can be remedied to reduce risk of future failures. | 1. Preoccupation with Failure  
(1) Detect small emerging failures.  
(2) Anticipate and specify significant mistakes.  

2. Reluctance to Simplify  
(1) Wage a relentless attack on simplifications.  
(2) Simplify reluctantly in putting things in generic categories.  

3. Sensitivity to Operations  
(1) Detect small discrepancies anywhere.  
(2) Use quantitative and qualitative knowledge.  
(3) Do not let routines become mindless.  
(4) Do not overestimate organizational soundness.  

4. Commitment to Resilience  
(1) Create ability to absorb strain and persevere.  
(2) Create ability to recover and bounce back from untoward events.  
(3) Create ability to learn and grow from previous episodes of resilient action.  

5. Deference to Expertise  
(1) Migrate decisions both up and down the organization.  
(2) Expertise is seldom in one individual.  
(3) Learn to know when to ask for help. |

(1) The Joint Commission  
(2) *Managing the Unexpected: Resilient Performance in the Age of Uncertainty*  
Website Paper Number 1
James Shirley Management Consultants, Inc.
November 15, 2014

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Mark R. Chassin and Jerod M. Loeb – The Joint Commission

Summary of Selected Major Concepts

Assessing Hospital’s Current Performance Against the Principles of High Reliability
How close or far away is the typical hospital today from this state of high reliability?
The answer is, quite far.

An estimated 99,000 Americans die in hospitals each year from health care-associated infections while hand-hygiene compliance routinely registers in the 40 percent range – among other examples...

Health Care Associated Infections

One of the most pervasive safety problems in hospitals is failure to be sensitive to operations:
observing unsafe conditions, behaviors and practices and failing to bring them to the attention of managers.

Sensitive to Operations

Intimidating behavior suppresses reporting of safety problems. Care givers of all kinds are involved in these unsafe situations:
Failure to return phone calls or pages... using condescending language...impatience with questions....and more....

Intimidating Behavior

Medical devices employed in routine hospital care come equipped with alarms...
various sounds from:
Infusion pumps, cardiac monitors, rhythm monitors...and more...
Care givers are bombarded hourly leading to alarm fatigue.

Excessive Alarms

Hospitals do not regularly permit the most expert individual to implement solutions....physician and nursing hierarchies are often rigid.

Deference to Expertise

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**Summary of Selected Major Concepts**  

**Adapting High-Reliability Science to Hospitals**  
Three major changes health care organizations must take to make substantial progress toward high reliability.

<table>
<thead>
<tr>
<th>Leaders commit to the ultimate goal of zero patient harm.</th>
<th>Principles of Safety Culture are implemented throughout the organization.</th>
<th>Adopt and deploy widely the most effective process improvement tools and methods.</th>
</tr>
</thead>
</table>
| 1. Aligned agreement of:  
  (1) Governing body  
  (2) Senior management  
  (3) Physician leaders  
  (4) Nurse leaders  
  2. Goal of zero harm to patients is an essential requirement because all other changes depend on it.  
  3. Aiming for zero harm is the first step toward achieving it.  
  4. Airlines found the majority of crashes were from failure of communication among pilots and crew. | 1. Joint Commission requires organizations to “create and maintain a culture of safety.”  
  2. Organizations must move beyond tabulating survey results to taking effective actions and create a safety culture that supports high reliability.  
  3. Tools and methods are proven to guide hospital leaders to achieve a fully functioning safety culture.  
  4. The organizational model recommended shows how to prevent accidents that cause harm. | 1. This major change relates to how hospitals improve performance of their care processes.  
  2. High Reliability Organizations do not have safety processes that fail 40 to 60 percent of the time.  
  3. The Joint Commission recommends three sets of process improvement tools:  
    (1) **Lean** (the Toyota Production System for health care)  
    (2) **Six Sigma** (applying statistics and improvement methods)  
    (3) **Change Management** (applying the concepts from John Kotter’s work on how to implement effective changes in organizations) |

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*Summary of Selected Major Concepts*

**Improvements seen in Four Projects Using Robust Process Improvement**

<table>
<thead>
<tr>
<th>Problem Addressed</th>
<th>Number and Type of Health Care Organization</th>
<th>Measures</th>
<th>Before (%)</th>
<th>After (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hand Hygiene</td>
<td>8 hospitals</td>
<td>Hand hygiene compliance</td>
<td>47.5</td>
<td>81.0</td>
</tr>
<tr>
<td>Handoff Communication</td>
<td>10 hospitals</td>
<td>Ineffective handoff at care transition</td>
<td>41.0</td>
<td>18.0</td>
</tr>
<tr>
<td>Wrong-site Surgery Risks</td>
<td>5 hospitals, 3 ambulatory surgery centers</td>
<td>Risk of wrong-site surgery</td>
<td>39.0</td>
<td>21.0</td>
</tr>
<tr>
<td>Scheduling</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Preoperative Area</td>
<td></td>
<td></td>
<td>52.0</td>
<td>19.0</td>
</tr>
<tr>
<td>Operating Room</td>
<td></td>
<td></td>
<td>59.0</td>
<td>29.0</td>
</tr>
<tr>
<td>Colorectal Surgery Site Infections (SSI)</td>
<td>7 hospitals</td>
<td>Cases with SSI</td>
<td>15.8</td>
<td>10.7</td>
</tr>
</tbody>
</table>

(1) The Joint Commission

James Shirley Management Consultants, Inc. (1/8/14)
## High-Reliability Health Care: Getting There from Here (1)

Mark R. Chassin and Jerod M. Loeb – The Joint Commission

### Summary of Selected Major Concepts

#### The High-Reliability Care Maturity Model: A Practical Framework

**Domain of Leadership and Six Components**

<table>
<thead>
<tr>
<th>Leadership</th>
<th>Beginning</th>
<th>Developing</th>
<th>Advancing</th>
<th>Approaching</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Board</strong></td>
<td>Board’s quality focus is nearly exclusively on regulatory compliance.</td>
<td>Full board’s involvement in quality is limited to hearing reports from its quality committee.</td>
<td>Full board is engaged in the development of quality goals and approval of a quality plan and regularly reviews adverse events and progress toward quality goals.</td>
<td>Board commits to the goal of high reliability (that is zero patient harm) for all clinical services.</td>
</tr>
<tr>
<td><strong>CEO/Management</strong></td>
<td>CEO/Management’s quality focus is nearly exclusively on regulatory compliance.</td>
<td>CEO acknowledges need for plan to improve quality and delegates the development and implementation of a plan to a subordinate.</td>
<td>CEO leads the development and implementation of a proactive quality agenda.</td>
<td>Management aims for zero patient harm for all vital clinical processes; some demonstrate zero or near-zero rates of harm.</td>
</tr>
<tr>
<td><strong>Physicians</strong></td>
<td>Physicians rarely lead quality improvement activities; overall participation by physicians in these activities is low.</td>
<td>Physicians champion some quality improvement activities; physicians participate in these activities in some areas, but not widely.</td>
<td>Physicians often lead quality improvement activities; physicians participate in these activities in most areas, but some important gaps remain.</td>
<td>Physicians routinely lead clinical quality improvement activities and accept the leadership of other appropriate clinicians; physicians’ participation in these activities is uniform throughout the organization.</td>
</tr>
<tr>
<td><strong>Quality Strategy</strong></td>
<td>Quality is not identified as a central strategic imperative.</td>
<td>Quality is one of many competing strategic priorities.</td>
<td>Quality is one of the organization’s top three or four strategic priorities.</td>
<td>Quality is the organization’s highest-priority strategic goal.</td>
</tr>
<tr>
<td><strong>Quality Measures</strong></td>
<td>Quality measures are not prominently displayed or reported internally or publicly; the only measures used are those required by outside entities and are not part of reward systems.</td>
<td>A few quality measures are reported internally; few or none are reported publicly and are not part of reward system.</td>
<td>Routine internal reporting of quality measures begins, with the first measures reported publicly and the first quality metrics introduced into staff reward systems.</td>
<td>Key quality measures are routinely displayed internally and reported publicly; reward systems for staff prominently reflect the accomplishment of quality goals.</td>
</tr>
<tr>
<td><strong>Information Technology</strong></td>
<td>IT provides little or no support for quality improvement.</td>
<td>IT supports some improvement activities, but principles of safe adoption are not often followed.</td>
<td>IT solutions support many quality initiatives; the organization commits to principles and the practice of safe adoption.</td>
<td>Safely adopted IT solutions are integral to sustaining improved quality.</td>
</tr>
</tbody>
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**Summary of Selected Major Concepts**

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<table>
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<tr>
<th>Safety Culture</th>
<th>Beginning</th>
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<th>Approaching</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Trust</strong></td>
<td>Trust or intimidating behavior is not assessed.</td>
<td>First codes of behavior are adopted in some clinical departments.</td>
<td>CEO and clinical leaders establish a trusting environment for all staff by modeling appropriate behaviors and championing efforts to eradicate intimidating behaviors.</td>
<td>High levels of (measured) trust exist in all clinical areas; self-policing of codes of behavior is in place.</td>
</tr>
<tr>
<td><strong>Accountability</strong></td>
<td>Emphasis is on blame; discipline is not applied equitably or with transparent standards; no process exists for distinguishing “blameless” from “blameworthy” acts.</td>
<td>The importance of equitable disciplinary procedures is recognized, and some clinical departments adopt these procedures.</td>
<td>Managers at all levels accord high priority to establishing all elements of safety culture; adoption of uniform equitable and transparent disciplinary procedures begins across the organization.</td>
<td>All staff recognize and act on their personal accountability for maintaining a culture of safety; equitable and transparent disciplinary procedures are fully adopted across the organization.</td>
</tr>
<tr>
<td><strong>Identifying unsafe conditions</strong></td>
<td>Root cause analysis is limited to adverse events; close calls (“early warnings”) are not recognized or evaluated.</td>
<td>Pilot “close call” reporting programs begin in a few areas; some examples of early intervention to prevent harm can be found.</td>
<td>Staff in many areas begin to recognize and report unsafe conditions and practices before they harm patients.</td>
<td>Close call and unsafe conditions are routinely reported, leading to early problem resolution before patients are harmed; results are routinely communicated.</td>
</tr>
<tr>
<td><strong>Strengthening Systems</strong></td>
<td>Limited or no efforts exist to assess system defenses against quality failures and to remedy weaknesses.</td>
<td>Root Cause Analysis (RCA) begins to identify the same weaknesses in systems defenses in many clinical areas, but systematic efforts to strengthen them are lacking.</td>
<td>System weaknesses are cataloged and prioritized for improvement.</td>
<td>System defenses are proactively assessed, and weaknesses are proactively repaired.</td>
</tr>
<tr>
<td><strong>Assessment</strong></td>
<td>No measures of safety culture exist.</td>
<td>Some measures of safety culture are undertaken but are not widespread; little if any attempt is made to strengthen safety culture.</td>
<td>Measures of safety culture are adopted and deployed across the organization; efforts to improve safety culture are beginning.</td>
<td>Safety culture measures are part of the strategic metrics reported to the board; systematic improvement initiatives are underway to achieve a fully functioning safety culture.</td>
</tr>
</tbody>
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Performance Improvement Domain of Change and Three Components

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### Robust Process Improvement and High Reliability: Stages of Organizational Maturity

<table>
<thead>
<tr>
<th>Performance Improvement</th>
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<th>Approaching</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Methods</strong></td>
<td>Organization has not adopted a formal approach to quality management.</td>
<td>Exploration of modern process improvement tools begins.</td>
<td>Organization commits to adopt the full suite of Robust Process Improvement (RPI) tools.</td>
<td>Adoption of Robust Process Improvement (RPI) tools is accepted fully through the organization.</td>
</tr>
<tr>
<td><strong>Training</strong></td>
<td>Training is limited to compliance personnel or to the quality department.</td>
<td>Training in performance improvement tools outside the quality department is recognized as critical to success.</td>
<td>Training of selected staff in RPI is underway, and a plan is in place to broaden training.</td>
<td>Training in RPI is mandatory for all staff, as appropriate to their jobs.</td>
</tr>
<tr>
<td><strong>Spread</strong></td>
<td>No commitment to widespread adoption of improvement methods exists.</td>
<td>Pilot projects using some new tools are conducted in a few areas.</td>
<td>RPI is used in many areas to improve business processes as well as clinical quality and safety; a positive ROI is achieved.</td>
<td>RPI tools are used throughout the organization for all improvement work; patients are engaged in redesigning care processes, and RPI proficiency is required for career advancement.</td>
</tr>
</tbody>
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The High-Reliability Care Maturity Model: A Practical Framework
Three Domains of Change and Fourteen Components

Creating an Improvement Plan for the High-Reliability Model

**Leadership**
- Six Components
  1. Board
  2. CEO/Management
  3. Physicians
  4. Quality Strategy
  5. Quality Measures
  6. Information Technology

**Safety Culture**
- Five Components
  1. Trust
  2. Accountability
  3. Identifying Unsafe Conditions
  4. Strengthening Systems
  5. Assessment

**Performance Improvement**
- Three Components:
  1. Methods
  2. Training
  3. Spread

High Reliability Care Improvement Plan
- 1. Goals
- 2. Objectives
- 3. Measures
- 4. Progress Reporting