A Systems Approach to Change Behavior: CRICO’s Surgical Risk Reduction Program

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CRICO/Risk Management Foundation

CRICO Case History

Surgery
- Communication breakdowns
- Attending / Resident

Outcome
- “Triggers” for communication
- Adoption and spread at individual hospital level
Engagement Process

“Trigger” Cards

Board
Committee
Task Force

Attending supervision of residents

CRICO/RMF Coding Analysis Synthesis

metrics

Legal Process
Risk Manager
Adjuster
Attorney

claim resolution

Who We Are

CRICO/RMF
- Controlled Risk Insurance Co. & Risk Management Foundation of the Harvard Medical Institutions
- Premium: $150M for $5M coverage
- Insured:
  - 11,200 physicians (including 3,250 residents and fellows)
  - 20 hospitals
  - 100,000 employees
  - 900 Mil assets (300E/600R)

RMF Strategies
- a division of CRICO/RMF
- clinical risk intelligence + community of learning
- Clients representing:
  - 400 hospitals
  - 40,000 physicians
  - 70,000 medmal claims

Rate of Paid Claims in 2007

<table>
<thead>
<tr>
<th>State</th>
<th>Rate of Paid Claims per 1,000 physicians</th>
</tr>
</thead>
<tbody>
<tr>
<td>Michigan</td>
<td>12.1</td>
</tr>
<tr>
<td>Florida</td>
<td>13.4</td>
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<tr>
<td>Massachusetts</td>
<td>8.2</td>
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<td>New York</td>
<td>17.3</td>
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<tr>
<td>CRICO</td>
<td>5.2</td>
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</tbody>
</table>

2007 Premium Rates: $1M/3M Coverage
(as reported by Medical Liability Monitor)

<table>
<thead>
<tr>
<th>Group</th>
<th>Los Angeles</th>
<th>Chicago</th>
<th>Phila</th>
<th>Miami</th>
<th>CRICO</th>
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<tbody>
<tr>
<td>IM</td>
<td>$14,237</td>
<td>$37,688</td>
<td>$24,430</td>
<td>$68,867</td>
<td>$10,586*</td>
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<tr>
<td>Gs</td>
<td>$54,505</td>
<td>$98,888</td>
<td>$116,609</td>
<td>$275,466</td>
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<tr>
<td>OB/GYN</td>
<td>63,272</td>
<td>$138,484</td>
<td>$145,131</td>
<td>$275,466</td>
<td>$55,017*</td>
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1 The Doctors Company
2 ISMIE Mutual Insurance Company
3 Pennsylvania Medical Society Liability Insurance Company
4 First Professional Insurance Company
5 CRICO provides $5mil/10mil coverage
6 Internal Medicine-minor surgery
7 CRICO OB/GYN without simulator
8 CRICO 5.2mil/10mil coverage

Data limited to those payments made during 2007 for medical malpractice claims by MDs and DOs.
Source: State data from www.statehealthfacts.org; CRICO data from CRICO/RMF.
CRICO / RMF Model Methodology

- capture
- measure
- frame
- act
- seek

High-severity Injury Cases
Top allegation categories

Together, these allegations represent:
92% of high-severity injury cases asserted
96% of total incurred losses

N(CRICO) = 511 high-severity cases asserted 1/1/04-8/1/09.
Total Incurred (aggregate of expenses, reserves, and payments on open and closed cases)=$484,654,093.
CRICO Overlapping Governance Structure

Leadership

Board

Standing

Committees

Add non board

Content Leaders

Task Forces

Add non committee

Implementation

Clinical Operations

CRICO/RMF Board
committee, task force structure

Board

Committees
Operations
Finance
Underwriting
Audit
Compensation
Governance

Subcommittee
Spread

Task Forces
Surgery

Clinical Leaders & Clinicians
Chief of Surgery: CHB
Chief of Surgery: BIDMC
Chief of Surgery: BWH
Chief of Surgery: MGH
Factors in Surgery Cases: CRICO Coding & EIS

Clinical Case Type
- General surgery procedures
- Neurosurgery procedures
- Orthopedic surgery procedures

Contributing Factors
- Technical skills—injuries from or during surgery (including laparoscopic procedures)
- Inadequate review—clearance for surgery
- Lack of reliable processes to ensure correct site identification
- Lack of teamwork in the OR (e.g., communication among providers re: emerging complications)
- Loss of information—OR to PACU
- Poor post-op management

- Attending supervision of residents

Surgery Working Group Structure

CRICO/RMF Surgeon consultant LP Specialist

Surgery Task Force
(4 Chiefs)

HSPH Facilitator
(Atul Gawande) Research Residents (3)

Surgery Working Group
(4 Surgeons)

CHB BIDMC BWH MGH

on-the-ground implementation support by CRICO/RMF: grand rounds, patient safety meetings, one-on-one meetings with chiefs
Trigger Card

Department of Surgery
Expected communication positions for patients admitted to surgical services

1. For all critical changes in a patient's condition, the attending will be notified promptly (generally within 1 hour following evaluation). These include:
   - Admission to the hospital
   - Transfer to the ICU
   - Unplanned intubation or ventilatory support
   - Cardiac arrest
   - Hemodynamic instability (including anaphylaxis)
   - Code
   - Development of significant neurological changes (e.g., CVA, ischemic event, paralysis)
   - Development of major wound complications (definitive, infection)
   - Medication or treatment errors requiring clinical intervention (i.e., dosing, concentration), increased monitoring, new medications except iv fluids
   - First blood transfusion without prior attending knowledge or indication before or after operation
   - Development of any clinic problem requiring an invasive procedure or operation for treatment

2. The following will be discussed with and approved by the attending before they occur:
   - Discharge from the hospital or from the Urology Department
   - Switch out of ICU

3. The attending should also be contacted if:
   - Any medical facts that a situation is more complicated than he or she can manage
   - Nursing or physician staff, or the patient requests that the attending surgeon be contacted

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capture  current risk  inventory  interventions  metrics

Data (knowledge)

claims  coding  analytics  institution  outcome

investigation  expert reviews
record review  new code development

Reports  educational content  cme  CRICO publications

specialty committees  implementation strategy  measurement  grand rounds

behavior change  peer review journals
Impact

Before the intervention

- Residents at all four hospitals failed to contact an attending surgeon within an hour of dangerous patient events nearly 70% of the time.

After the intervention

- Failure to contact an attending surgeon occurred less than 10% of the time.

Milestones of the Surgical Chiefs’ Safety Collaborative
Guiding Principles

- Compelled by data
- Low-hanging fruit
  - first tackle communication breakdowns vs. technical errors
- Policy implementation must be tailored to the needs of local institutions
- Outcomes published in peer review journals
- Offsite meetings away from clinical pressures
  - Compete during day, collaborate at night on risk reduction
  - Sense of accountability among each other
- CRICO staff to work with ALL stakeholders: assure systems/operationalization
- Takes a long time!

Evolution in Risk Management

CRICO/RMF

<table>
<thead>
<tr>
<th></th>
<th>80's</th>
<th>90's</th>
<th>1999</th>
<th>Present</th>
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<tbody>
<tr>
<td>Change Management</td>
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<td>Hospitals</td>
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Systems vs Individual Factors

- Review of our malpractice claims have revealed in addition to individual factors contributing to adverse events, systems and process failures account for a large portion of contributing factors to malpractice claims.

- However, traditional clinical training has not been effective in teaching nor providing awareness to clinicians about the importance of systems and the integrated organizational processes needed to be put in place to run healthcare organizations.

Systems vs Individual Factors (cont)

- We often see clinical leaders placed in management positions without necessarily having formal management training. Therefore, we continue to see healthcare being delivered in silos.

- Our approach is to address this issue by providing training to those upcoming clinical leaders within the CRICO/Harvard system with the help of expertise from Harvard Business School.
The cost of failures to CRICO for last 5 yrs

Leadership
- Decision and actions which are clearly known to influence all layers and processes beneath

Culture / Organizational Environment
- Behaviors which are clearly known to be supported or stifled by organizational culture and norms

Business Processes
- Business processes that are not related to clinical care tasks or decisions, hiring practices, contracting, etc.

Clinical Support Processes
- Processes that specifically support clinical tasks or decisions

Patient-Clinician Interaction
- Purely individual cognitive behaviors

148 Claims
$133M Total Incurred
Systems costs

220 Claims
$182M Total Incurred
Individual costs

Many vocabularies exist to describe issues related to risk management, safety and quality improvement. Some of which are clinical in tone and others managerial. This model is intended to create a single unified lexicon that describes and organizes the myriad approaches to patient safety and risk management.

Creating the Seeds and preparing the soil

Best practices
Trigger Card initiatives

Harvard Business School
Culture
Leadership
Environmental Prep
HR