Signal Detection: 
*How the study of malpractice claims can drive fundamental change*

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Claims are the tip of the iceberg...

- Public awareness
  - Claims
  - Adverse events
  - Near misses
  - Noise/Anecdotes

- Hospital operations
  - Public allegations
  - Visible vulnerabilities
  - Organizational intelligence
The Model Methodology: Data into Action

Capture vulnerabilities as they occur
- Contemporaneous analysis of asserted malpractice cases

Put them into context
- Integration of relevant denominator data and peer comparative data

Are you still vulnerable?
- Assessment of present-tense risk through risk assessments, focus groups, and through validation by other data sets

Determine potential solutions
- Continuous identification of relevant models, processes, education, and training programs that address key risk areas

Implement, educate, train: the “reinvestment”
- Championship by high-level leadership to effect real change and to sustain it; leverage by insurer to accelerate movement

Measure/Metrics
- Measure the impact in the near term (with a predictive eye for the long term)
CRICO Target Areas: Key Areas of Risk

N = 1,260 CRICO PL cases asserted 1/1/04-9/30/09 with total incurred losses of $614 M.
Trend in High-severity Cases
High-severity cases as a percent of all cases asserted

N=1,299 CRICO PL cases asserted 1/1/04-11/30/09, 534 cases with a high severity injury.
How Our Analysis Works….

Several cases alleging negligence in performing laparoscopic surgery

- Were they significant?
- What did they mean?
- How to respond?

Treated the small data set as an important signal

Was the problem validated? … YES

Dove Deeper:
- Were the complications avoidable?
- What training did the surgeons have?
- Was the training consistent?
- Was training required?

Acted:
- Designed an intervention
- Measure baseline
- Implemented intervention: Fundamentals of Lap. Surgery for all general surgeons (with modest premium incentive)
- Measure impact

Now: need to sustain the consistent training

Monitor:
- Develop credentialing/privileging criteria with Gen. Surgery departments to ensure durability
The Model Methodology: Building an Inventory of Solutions

1. Analysis
2. Context
3. Current Risk
4. Interventions
5. Metrics

Inventory
Prevention of Missed/Delayed Diagnoses

- Reliable office-based systems or processes that support—
  - Routine updating of family history
  - **Receipt of test results** by ordering providers (including critical test results)
  - Tracking/managing follow-up steps related to pt.’s subsequent care
  - “Close-the-loop” management/accountability of specialty referrals
  - **Communication of all test results to patients**, including routine chest x-rays (“incidental findings”)

- Ongoing, interval-based education of clinicians to **avoid fixation, narrow diagnostic focus**

- **Decision-support guidelines/algorithms embedded into I.T. system** so providers can access them in the flow of patient care
Prevention of Surgical Errors and Poor Patient Outcomes

- Robust **informed consent protocols** being used consistently in pre-op phase
  - Use of **web-based patient education materials** to supplement informed consent discussion

- Hard-wired processes for **checking accuracy of surgical sites** (with built-in safety nets)

- **Bar-coded sponge technology** or **radiofrequency technology** to eliminate retained foreign body events

- **Simulation-based skills training center and program** that requires residents, fellows, and attending surgeons to practice their skills and/or develop new surgical skills

- **Communication triggers**, residents to attendings

- Communication protocols for **handoffs** between shifts, transitions of pts from OR to recovery

- Implementation of the **Surgical Safety Checklist** (for the pre-op, intra-op, and post-op phases of surgical care)
Prevention of Obstetrical Injuries

- **Decision support guidelines** accessed by all obstetrical providers
  - Decision support embedded into electronic medical record

- OB unit staff has **undergone team training**; refresher courses are sustaining the team-based culture

- OB unit periodically receives **simulation training** to practice crisis response, technical, and cognitive skills

- OB unit conducts unit-based **shoulder dystocia drills**

- Coverage model that ensures that **OB attendings** and other necessary **clinical** are present in unit 24/7

- Required, consistent **Electronic Fetal Monitoring (EFM) training** for all clinicians in OB unit
Prevention of Medication Error

- I.T.-based safeguards in place for Pharmacy to detect and modify MD prescribing errors

- I.T.-based safeguards to ensure that Pharmacy identifies and remedies medication-mixing errors
  - Specific safeguards for neonatal and pediatric medications

- Safeguards in place to ensure that RNs are not making medication administration errors; possible use of bar Coding technology

- Active medication reconciliation program in place throughout organization (admission and discharge)

- Computerized Physician Order Entry (CPOE) and E-Prescribing solutions

- I.T.-based safeguards for ongoing monitoring of patients on long term medications
Prevention of Emergency Dept Risk

- Resources in place so that **discharged ED patients are routinely contacted re any test results pending at time of their discharge**

- I.T. system that allows all providers to **share same understanding of the status of ED patients and to act in concert with each other**

- Crisis-response and cognitive **simulation training** readily available to all ED residents, nurses, and attendings

- **Team-trained environment**

- An **ED patient-border policy** that clearly defines accountability of ED boarders and allows for the ED to move admitted patients out of the ED when specific volume thresholds are exceeded
Patient Safety Organization (PSO)

- Established by the Patient Safety and Quality Improvement Act of 2005
- Voluntary sharing of information related to safety and quality under a federal grant of confidentiality and privilege
The PSO Vision

A PSO structure can harness risk data and transform it into safer patient care.

• An evolution to the next stage of patient safety research, insight, and application:
  • carve a path through excess data “noise”
  • bridge disparate data sets to present a clearer view of health care delivery failures
  • move health care entities and providers to engage in the most important discussions—and implement the most needed interventions
**Analytical Tools:**
- Individual and Comparative Data

**Level 2: Ad Hoc**

**Desired State**
- Maximum reduction of medical error and financial loss

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**Risk Management Continuum**

<table>
<thead>
<tr>
<th>Current State</th>
<th>Desired State</th>
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<tbody>
<tr>
<td>Gap between present and desired state</td>
<td>Maximum reduction of medical error and financial loss</td>
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**Risk Management Continuum**

<table>
<thead>
<tr>
<th>Diagnose the problems</th>
<th>Explore of TX Options</th>
<th>Implement/Measure</th>
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</thead>
<tbody>
<tr>
<td><strong>Organizational</strong></td>
<td><strong>Clinical</strong></td>
<td></td>
</tr>
<tr>
<td>Risk Assessment</td>
<td>CRIT</td>
<td>CRIS</td>
</tr>
<tr>
<td>Assessment of Patient Safety Profile: ability to manage risk</td>
<td>Analytical Tools: Individual and Comparative Data</td>
<td>Analysis, consultation recommendations education</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PSO</td>
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<tr>
<td></td>
<td></td>
<td>Peer-protected community for discussion of real-time vulnerabilities, solution options, implementation strategies, and metrics</td>
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**Coding Sample**

<table>
<thead>
<tr>
<th>Weak signals</th>
<th>Moderate signals</th>
<th>Strong signals</th>
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