



Root Cause Analysis: A Creative Teaching Tool for a Culture of Safety

By

Tracey Hodges EdD, MSN, RN

Judith St. Onge MSN, PhD, RN

Troy University

Outcomes:

- Describe the development and implementation of the mini root-cause analysis.
- Identify opportunities within the clinical environment to utilize the mini root-cause analysis to promote quality and safety competency development.

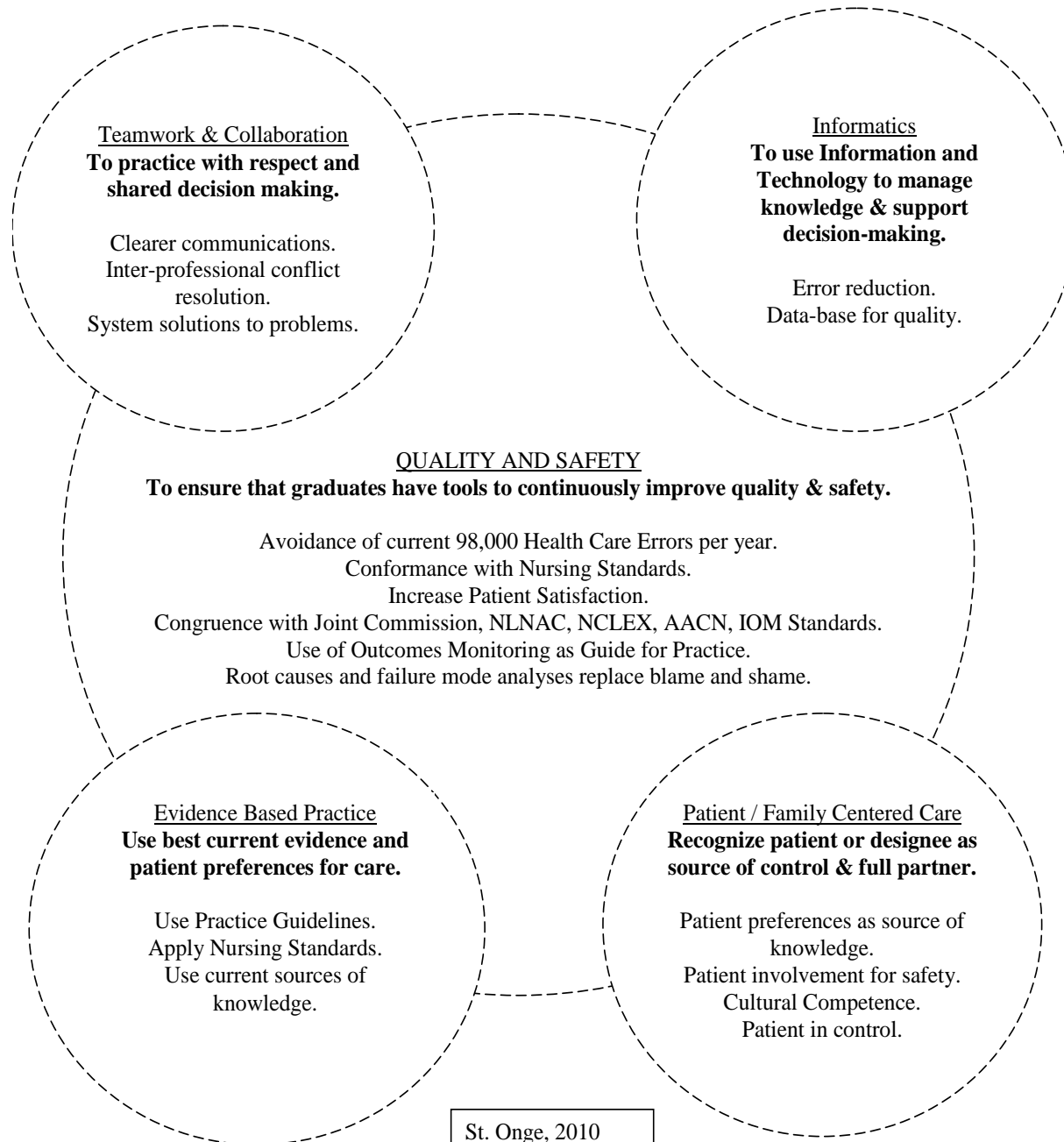
Getting Students' Attention

- More Americans die each month of preventable medical errors than died in the attacks on 9/11/2001.
- CDC estimates that 99,000 patients/year succumb to nosocomial infections.
- Growing body of evidence supports need for core competencies among all practitioners to address system issues.

Gaining Faculty Attention

- Quality and safety self-assessment
- QSEN overview at faculty meeting
- Obtaining approval for action plan
- Role modeling in Nursing 1140/1141
- Hip Pocket Experiences
- Championing incorporation of QSEN into curriculum revision

RELATIONSHIPS AMONG QSEN CORE COMPETENCIES



Our Challenge:

To move student and faculty thinking beyond “blame and shame” toward creation of a culture of safety.



Contributors to Healthcare Errors:

- Patient characteristics
- Policies / procedures
- Equipment
- Environment
- Team dynamics
- Regulatory, management pressures
- Staffing
- Human factors / communication

Swiss Cheese Model

Multiple errors and system flaws must intersect for a critical incident to reach the patient. Labeling one or even several of these factors as "causes" may place undue emphasis on specific "holes in the cheese" and obscure the overall relationships between different layers and other aspects of system design. (AHQR)

The Root Cause Analysis (RCA)

- A structured method used to analyze adverse events or near misses (i.e. “good catches”)
 - Identify active errors
 - Uncover latent errors
 - Avoid undue focus on individual mistakes
- Developed by engineers for manufacturing. Now widely used across industries, including healthcare.

RCA in Practice Settings

- The Joint Commission has mandated use of RCA to analyze sentinel events (such as wrong-site surgery) since 1997.
- More than half of the states have mandated reporting of serious adverse events. Many require that RCA be performed and reported after any serious event.

Root Cause Analysis Process

- Many templates available commercially.
- The Joint Commission has a very involved template for use in complex situations.
- Common elements include:
 - Structured approach
 - Team involvement
 - Often involve reconstructing event or establishing a timeline of preceding events
 - Includes conclusions & recommendations
 - Non-punitive environment important

The Mini-Root-Cause-Analysis

- Initially a “Hip Pocket” opportunity
- Basic approach to teaching RCA:
 - Provide students with definition/rationale
 - Identify categories of possible root causes
 - Discuss a real-life example
 - Apply when actual situation arises; alternatively, use a simulation experience
 - Develop findings and recommendations
- Can be formal, informal or a term project.

Examples

- **What happened?**
- **Possible root causes**
 - Environmental
 - Human factors
 - Policies / procedures
 - Assumptions
- **Recommendations**
 - Short term mitigation
 - Specific terminology
- **Relevant literature?**
 - Supplies/equipment
 - Staffing / team issues
 - Organizational
 - Keep looking back
 - Hard vs. Soft recommendations

Outcomes

- Research is needed industry wide to evaluate various approaches to RCA
- At Troy, students demonstrate ability to generate creative, meaningful solutions
- Awareness of safety concerns has persisted beyond the RCA experience
- Faculty have incorporated content on Patient Safety, using RCA as one tool

What are your questions?



Readings

Using root cause analysis to reduce falls with injury in the psychiatric unit.

Lee A, Mills PD, Watts BV. Gen Hosp Psychiatry. 2012 Jan 26;

Root causes of errors in a simulated prehospital pediatric emergency.

Lammers R, Byrwa M, Fales W. Acad Emerg Med. 2012;19:37-47.

Adverse events: root causes and latent factors.

Karl R, Karl MC. Surg Clin North Am. 2012;92:89-100.

What's past is prologue: organizational learning from a serious patient injury.

Tamuz M, Franchois KE, Thomas EJ. Safety Sci. 2011;49:75-82.

Online Resources

- US Agency on Healthcare and Quality, Pt. Safety Network: <http://psnet.ahrq.gov>
- The Joint Commission information on Root Cause Analysis: www.jointcommission.org
- Research based information on quality and safety from Institute for Healthcare Improvement: www.ihl.org