Error Reduction in the New World

How we can improve the level of safety for everyone in our operating rooms

By Muriel Shewchuk, RN, BScN, CPNC

Introduction

The world changed in many ways on September 11th. While many horrific events have occurred in the past we in North America had not really experienced the deep, far reaching, impact of such events until this past September. Terror, fear and anger are only some of the emotions we felt. Perhaps we can now better relate to some of the feelings experienced by our patients, and their families, after a serious injury or death due to errors in our facilities. We already know the devastation that results from a serious surgical error. But how can we reduce both the errors and the near misses?

A devastated father stands by his unconscious, 25-year-old son for 10 days in the ICU and then he kneels by his grave still crying — *WHY? WHY?* The nurses and doctors who were involved in the fatal endotracheal/bronchial laser fire are also devastated. The emotional trauma will have a life-long impact on their emotions, career, confidence, and perhaps financial stability.

Who Was That Father? The horrible situation just described is a true story. *Dennis R. Parker*, Vice President — Safety, Health, & Environment — for *Conoco Inc.* described this stirring experience at the *World Conference on Surgical Patient Care-XII*, in Christchurch, New Zealand. His goal was not only to clearly show the impact on the family of the deceased, but also to describe concepts and practices in use by our industry to reduce errors — a "*Root Cause Systems*" approach.

The Current Process

When a serious event occurs, a critical incident review will take place. The focus of this review will be on gathering information. The attention will likely be focused on the event and the individuals who were directly involved. Legal counsel will provide advice, the media will spread the word, and money might be paid out. But will the process have a long lasting, wide-spread impact on error reduction for all health team members? Likely not.

We need to take lessons from engineering, aviation and regulatory bodies that use a Systems Approach — *Root Cause Analysis* — to achieve long-term error reduction.

Accreditation teams, physician groups, occupational health groups, and educational literature are all promoting a greater focus on reducing errors system-wide. Using a Systems Approach means not focusing solely on the actual event and an individual's actions or performance. It involves in-depth analysis of the total environment including leadership, training, education, attitude, commitment, behavior, practices, beliefs, standards and tools. While this process may be a destructive analysis, the ultimate result must be positive, constructive rebuilding and re-implementation. The questions to ask include: "*What and how many systems are in place? What system(s) failed? Why did the system(s) fail? Do personnel adhere to all systems, policies and procedure standards? If not, why not?*"

Sentinel Event and Root Cause Analysis

The term "sentinel event" has now become a key term in serious investigative processes. It is derived from the original intent of the word – one who keeps guard to prevent surprises. A sentinel event is an unexpected event involving death, serious physical injury or the risk of a near miss.

These events provide a warning of the need for extensive investigation, analysis, reporting and a change in the system.

The cause of the event may be human error, flawed material, mechanical malfunction, poor leadership, inadequate training, or a complex mixture of many elements.

Root Cause Analysis is the detailed, investigative method of determining the real factors that contributed to a sentinel event instead of just focusing on the elements or people that were directly involved at the time of the event.

How do we Change?

Our goal must be to always build public confidence in our system; improve patient care; provide safe environments for our patients, the health team and the visitors; and to reduce preventable injuries and fatalities.

We need to utilize quality engineering and quality improvement models in our investigation of serious incidents, accidents and near misses. These concepts and models have been around since the 1930s and they call for:

- A clearly evident leadership and support for safe work practices, incident investigations, audits, hazard analysis and corrective action
- Strong, credible, visible leadership providing an expectation of accountability and compliance with standards, policies and procedures that are designed to promote safety and a goal of a ZERO rate for sentinel events
- Performance reporting with a focus on improvement
- Standards, procedures, and policies that are current, user-friendly, accurate, accessible, and used by all personnel
- Clearly defined roles, responsibilities and accountability links for each individual that will contribute to a safe environment for all
- Clearly defined processes to follow when errors occur so as to reduce their impact. A defined system for activating an appropriate investigative process so as to reduce recurrence
- Orientation, training and education that are effective, emphasized, practiced, and implemented with compliance audits
- Equipment and materials that are provided and maintained with regulatory and performance integrity
- A risk-hazard, near-miss, and sentinel event investigative process that is clearly defined, followed, and expedited
- A regular, organized, coordinated review of policies and procedures by staff and leaders in order to eliminate outdating, lack of clarity, redundancy, or unusable directives

Did you know?

An accident ratio and safety pyramid of analysis identifies the following approximations:

- For every serious or major injury there are 600 close calls or near misses
- For every fatality there are 3,000 near misses
- For every fatality there are 30,000 unsafe events
- For every fatality there are 30 major injuries and 300 recordable injuries
- In large studies of hospitalized patients as many as 1 million or more are injured and at least 98,000 patients die each year in the USA as a result of errors in care

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Reference: *To Err is Human: Building a Safer Health System 2000. Authors: Linda T. Kohn, Janet M. Corrigan, and Molla S. Donaldson. Editor: Committee on Quality of Health Care in America, Institute of Medicine.*

Summary

In order to do no harm, ask yourself and your colleagues the following questions: Is our environment safe? Does staff follow all safety measures? Do physicians and visitors follow

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Error (*cont.*)

safety rules? Is every staff member aware of their role in safety for all? Is there an effective staff/leader safety inspection team in place and functioning effectively? Are all reasonable recommendations implemented? Have the errors been reviewed in detail? If so, what were the results and what changes were made? Is self-reporting encouraged without repercussions? Do you know what your error rates are, what the root causes were, which systems were lacking, and how they have been modified?

Needless to say we have a great deal of work to do and many challenges to overcome if we are to decrease our risk of error.

But where to start? Do a critical analysis of the current system and, on a daily basis, focus on improving some small piece of the safety network that will have a lasting impact. The commitment and participation of staff, strong visible leadership, and accountable, well-trained individuals and teams will all be major contributors to a safe environment.

References:

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Institute Publishing, Loganville, Georgia

***Web sites*: www.iom.edu** (search medical errors)

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