



## Take Flight With Patient Safety

*An error-reduction concept borrowed from aviation is ripe for application in long term and post-acute care.*

**M**EDICAL ERRORS HAVE RECEIVED increased scrutiny in recent years. In 1999, the Institute of Medicine (IOM) report, “To Err is Human,” found that medical errors were calculated to be the fifth-leading cause of death in the United States. Such errors are the cause of at least 98,000 deaths per year, according to IOM. But keep in mind that these numbers are estimates; no one knows how many errors go unrecognized or are simply not reported.

John Nance, MD, author of “Why Hospitals Should Fly: The Ultimate Flight Plan To Patient Safety and Quality Care,” believes that the culture of health care is unsafe and incredibly dysfunctional.

“Though the culture of each health care organization is unique, they all suffer many of the same disabilities that have so far effectively stymied progress, including an authoritarian structure that devalues many workers, a lack of a sense of personal accountability, autonomous functioning, and major barriers to effective communication,” Nance says in his book.

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### Communication Emphasized

The Joint Commission has deemed communication as the biggest root cause issue in patient safety. Health care operates in fragmented, silo-type facilities, which makes communication among a large team of caregivers complicated and bound to result in errors.

Medical errors are driven by issues

similar to those that used to plague aviation. When properly applied, an aviation error reduction concept known as Crew Resource Management (CRM) provides an excellent approach that has a direct impact on patient safety in long term and post-acute care settings.

Much like aviation, medical care depends on a process being carried out by individuals with highly specialized expertise, each with distinct decision-making responsibility. Many accidents in these environments are not driven so much by errors made within any specific area of expertise, but rather breakdowns in communication or hand-offs that lead to a series of events resulting in extended hospital stays—or, worse yet, fatalities.

### ELEMENTS OF SITUATIONAL AWARENESS

**F**ollowing are descriptions of situational awareness and debriefing—two key focus areas of Crew Resource Management (CRM):

■ SA is a common aviation term that refers to the ability to make an accurate assessment of the “big picture” view of what is happening. A low SA can result in errors. Following is a list of SA red flags that could indicate or cause low SA:

1. Reduced or poor communication
2. Confusion
3. Lack of focus by team
4. Being rushed/behind schedule
5. Trying something new under pressure
6. Deviating from established norms

7. Task saturation
8. Personal issues—lack of sleep
9. Fear of perceived “superiors”

■ Debriefing is a process used to learn from an error that has occurred.

The questions listed below are designed to induce conversation and produce ideas so that similar errors can be prevented in the future. This process should be conducted as a team, with every member participating in discussion:

1. What did we do well?
2. What did we miss?
3. What did we learn?
4. What would we do differently next time?

CRM was originally developed to enhance the safety of air transport and has been adopted by air carriers worldwide.

CRM began in 1979 during a National Aeronautics and Space Administration (NASA) workshop and is now a mandated requirement for most commercial pilots. NASA research found that the primary cause of most aviation accidents was human error and that many of the major problems were failures of interpersonal communication, leadership, and decision making in the cockpit.

The track record of aviation safety, especially since the rigorous introduction of CRM, speaks for itself with regard to the success of this innovative methodology.

**Research Mounts**

Further evidence of CRM's efficacy can be found in research results that show clinical error rates in hospitals were reduced from 30 percent to 4.4 percent (Marion, G., 2004) adverse outcomes were cut by 53 percent (Morey, J., 2002) and observed errors dropped 55 percent ("Beyond Blame: Solutions to America's Other Drug Problem: [DVD], Solana Beach, Calif.: Bridge Medical; 1997).

The Healthcare Excellence Institute puts it this way: "Imagine if the deaths due to medical errors were translated into aviation scenarios. The reported number of deaths due to medical errors in this country alone is at least 98,000 per year. In aviation terms, this rate would be equal to the fatal crashes of two fully loaded Boeing 737 airliners every day of the year. Certainly, that kind of safety record would trigger action on part of the traveling community, the aviation community, and lawmakers."

Aviation refuses to allow for such errors as this, yet health care error rates remain high. It is no wonder that regulatory bodies have incorporated the patient safety aspect as their No. 1 priority.

CRM is part of a broader strategy

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of building stronger teams, clarifying roles, and empowering both leaders and team members to raise safety concerns. The goal is to prevent work overload situations that compromise awareness that could lead to errors. CRM includes clear guidelines for how to delegate, how to build strong and cohesive teams, and how to conduct a formal debriefing.

The following strategies are utilized during the CRM process: standardized communications, team briefings, team debriefings, situational awareness, decision making, leadership strategies, effective teamwork, and critical language vocabulary and usage.

CRM improves patient safety on three distinct levels: Error avoidance,

error trapping, and error mitigation (see box, below).

**Training Pinpoints Problems**

Training for CRM teaches participants to identify potentially dangerous patterns and then teaches behavior and communication patterns that address these situations in a nonconfrontational way.

For example, participants are taught a required communication pattern that can be used in the case of "outranking," which can sometimes jeopardize patient safety.

An example of outranking in health care is the all-knowing surgeon who barks orders and nurses follow without question. Historically, outranking has been an issue in aviation, and currently it is a reality in many health care organizations.

CRM is concerned not so much with the technical knowledge and skills required to operate equipment, but rather with the cognitive and interpersonal skills needed to effectively manage a team-based, high-risk activity.

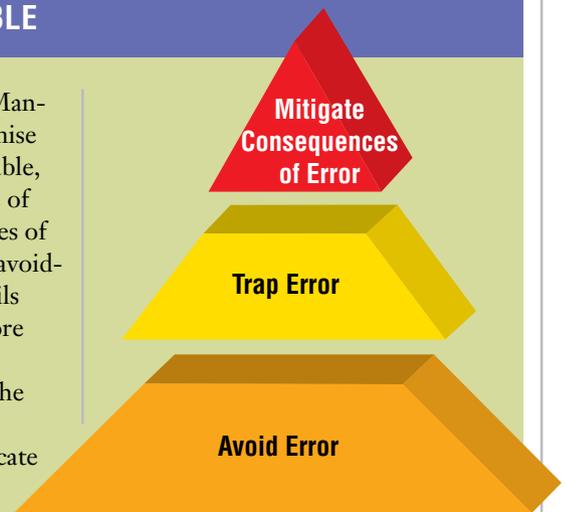
In this context, cognitive skills are

**HUMAN ERROR INEVITABLE**

Underlying Crew Resource Management (CRM) is the premise that while human error is inevitable, it also serves as a valuable source of information. There are three lines of defense to counter errors: error avoidance; error trapping, which entails capturing an incipient error before it happens; and error mitigating, explaining the consequences of the errors that are not trapped.

Organizations must communicate their understanding that errors will occur and adopt a non-punitive approach to reporting and resolving errors. In addition, organizations need to take steps to identify the nature and sources of error in their operations. CRM is not and will

never be the mechanism to eliminate error in high-risk situations. Errors are an inevitable result of the natural limitations of human performance in complex systems.



defined as the mental processes used for gaining and maintaining situational awareness, solving problems, and making decisions.

CRM fosters a climate or culture where the freedom to respectfully question authority is encouraged. It recognizes that a discrepancy between

what is happening and what should be happening is often the first indicator that an error is occurring.

### Systemized Approach

Questioning authority is a delicate subject for many organizations, especially ones with traditional hierarchies, so

appropriate communication techniques must be taught to supervisors and their subordinates so that supervisors understand that the questioning of authority need not be threatening and subordinates understand the correct way to question orders.

Such skills, while seeming like common sense, are difficult to master as they require a change in interpersonal dynamics and organizational culture of a company.

Through a blended and systematized approach, including education, practical skill development, and interdisciplinary simulation, research has shown that CRM skills can be successfully embed-

■ **The approach encourages concise, factual communication among clinicians.**

ded within a high-risk department or organization.

### A Practical Approach

One key component of CRM is SBAR, or Situation Background Assessment Recommendation, an approach that provides health care facilities with a practical and easy-to-implement solution providers can use to streamline communication.

Through a standardized approach to patient reporting during shift changes or patient transfers, such as when a resident is transferred from the nursing facility to the hospital, SBAR encourages concise, factual communication among clinicians, including nurse-to-nurse, doctor-to-doctor, or between nurse and doctor communications.

As Nance says, health care organizations will truly fly when “this is the way we have always done it” is finally recognized as the way it should never be done again. ■



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