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Highly Reliable Health Care in the Context of Oncology Nursing: Part II

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The principles of reliability science are used in various high-risk and high-tech industries to improve quality and safety. In part one of this two-part series, three of the five principles (the principles of anticipation) were discussed as they pertain to delivering oncology care in challenging and variable circumstances. This article will address the final two principles (the principles of containment) and examine how a healthcare organization responds when an error in treatment has occurred.

The principles of reliability science help compensate for the natural limits of human performance and attention, as a means to improving operational performance and safety while reducing errors (Niedner, Muething, & Sutcliffe, 2013). The principles of containment differ from the principles of anticipation (discussed in part one of this article [Sheridan-Leos, 2014]) in that containment aims to prevent additional adverse outcomes after the unexpected event has occurred (Weick & Sutcliffe, 2007).

Resilience

Because humans are not perfect, errors will occur. This means that leaders have to mitigate those errors, allowing the organization to maintain its function in spite of the unexpected. In addition to the ability to bounce back after an adverse event, resilience also refers to the ability to maintain safe operations under constant stress (Niedner et al., 2013). An example of this occurs when organizations recognize that situations will arise when no policy is in place. As organizations become more reliable, they have the ability to predict potential error and, in turn, make staff more aware of the potential for error and harm to patients. Another example of resilience is when oncology staff members are trained in ways that make them better able to adapt to unexpected situations that may occur. This type of training should be done in teams. In addition, staff should be allowed to learn from adverse events after they occur, through participation in root cause analyses, unit-based discussions, or other venues.

Deference to Expertise

The term *expertise* is the experience, learning, and knowledge found not only in an individual person, but also in a team of people working together (Weick & Sutcliffe, 2007). Expertise in mitigating an adverse event may not be matched with the hierarchical position of the person who has been charged to mitigate the event. Sometimes, the person with a higher position of authority may not be the best person to react to an adverse event. For example, instead of defaulting to management to make all decisions, the oncology nurse at the bedside may be the best person to make some decisions based on what the decision entails. Decisions about how to handle an event are given to those who have the most expertise regarding the event, regardless of their title or rank. A case study provided in this article describes a response scenario to an action taken in an oncologic emergency situation by an experienced staff nurse who made an independent decision which was contrary to the orders of the nurse manager. Because the experienced oncology nurse had more knowledge about the oncologic emergency of spinal cord compression than the preceptee, the experienced nurse altered the educational plans set by management. In an organization that values the expertise of every team member, staff members are not only encouraged to identify problems like this, but also are expected to identify and solve problems when they arise (Luria, Muething, Schoettker, & Kotagal, 2006). Leadership's role should be for the infrequent and more complex problems.

Mindfulness

Use of the five principles of reliability science are collectively called *mindfulness* (Weick & Sutcliffe, 2007). When staff at an oncology organization use these principles, they are in a position to swiftly anticipate, respond, detect, and correct unexpected events (Niedner et al., 2013). Figure 1 illustrates examples of the five principles and applies them to oncology nursing. Becoming mindful

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