



# Working With New or Unfamiliar Technology

**Q** Should a critical care nurse who has no basic knowledge of and has not been trained to use a specific piece of technology accept responsibility for taking care of a patient who is dependent on the technological piece of equipment to survive a critical illness?

**A** Denise Thornby, RN, MS, NEA-BC, replies:

No, not without the resources to allow the nurse to care for the patient competently. Both the individual nurse and the organization in which the nurse practices are accountable for ensuring that all patients are cared for by nurses who are well educated and competent. This obligation is especially important given the pace of newly introduced technology and

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interventions in highly vulnerable patients. These standards speak not only to knowledge but to competency. Competency is defined as having the knowledge, skills, abilities, and behaviors to perform the required role function and is essential to providing safe care and desired quality outcomes.<sup>1</sup> As pro-

professionals interested in the safe care of patients and with a desire for patients to experience no events of preventable harm, nurses must acquire and maintain required knowledge of new technologies and interventions. Evidence reported in publications on patient safety indicates that lack of education and knowledge contributes to human error. One type of human error, “knowledge-based errors,” occurs when people do not have the needed knowledge to make the right decisions or to select correct actions. Knowledge-based errors are more complex than just having the needed knowledge but also involve selecting and acting on the right information to make decisions about care.<sup>2</sup> Fundamentally though, having the knowledge along with the required skills and abilities will help avoid knowledge-based errors and enables a safer level of care.

As professional nurses, we are obligated by our professional standards of practice and the American Nurses Association (ANA) Code of Ethics to acquire and maintain knowledge and competency in the care of patients. The fifth provision of the ANA Code of Ethics<sup>3</sup> states,

The nurse owes the same duties to self as to others, including the responsibility to preserve integrity and safety, to maintain competence, and to continue personal and professional growth.

In today’s rapidly changing environment, this commitment to ongoing gathering of knowledge and demonstration of competency is of paramount importance in creating safe passage for patients through the health care system. In addition, the American Association for Critical-Care Nurses (AACN) Standards of Professional Practice for Acute and Critical Care Nursing<sup>4</sup> includes the following:

#### *Standard of Professional Practice III: Education*

The nurse acquires and maintains current knowledge and competency in the care of acute or critically ill patients.

#### *Measurement Criteria*

1. The nurse participates in ongoing educational

activities to acquire knowledge and skills needed to care for acute and critically ill patients.

2. The nurse seeks experiences that reflect current clinical practice in order to maintain current clinical skills and competencies needed to care for acutely and critically ill patients.
3. The nurse participates in ongoing educational activities related to professional issues.

Furthermore, the ANA Position Statement on Professional Role Competence<sup>5</sup> is very clear on our accountability:

The public has a right to expect registered nurses to demonstrate professional competence throughout their careers. ANA believes the registered nurse is individually responsible and accountable for maintaining professional competence.

The ANA Code of Ethics, the ANA Position on Professional Role Competence, and our own specialty professional practice standards set a clear mandate that we all acquire and maintain knowledge and competence in our roles. We share this accountability with the organizations in which we practice.

Numerous regulatory standards define hospitals' accountability for staff education. The Joint Commission standards<sup>6</sup> clearly identify the

responsibility of hospitals to ensure that all staff have been educated and have demonstrated competency in the population of patients they are assigned to provide care of. The Human Resources Standards for Hospitals<sup>7</sup> include the following:

- Staff participate in ongoing education and training to maintain or increase their competency.
- Staff participate in ongoing education and training whenever staff responsibilities change.
- Staff participate in education and training that is specific to the needs of the patient population served by the hospital.
- Initial and ongoing competency assessment must be thorough and focused on the particular competency needs for the clinical staff's assignment.

The Joint Commission's mission is to "continuously improve health care for the public, in collaboration with other stakeholders, by evaluating health care organizations and inspiring them to excel in providing safe and effective care of the highest quality and value."<sup>8</sup> Essential to meeting this mission is ensuring the ongoing competence of all staff members who are caring for patients.

One of the challenges to meeting these standards is the ever increasing rate of new knowledge and technology being introduced in the care of acute and critically ill patients. Although most organizations and nursing leaders work to ensure that staff are well educated and have demonstrated competency in the care of all patients assigned to them,

doing so becomes challenging in some situations. Throughout the history of critical care nursing, situations have occurred where new technology, drugs, or other interventions are introduced in heroic attempts to save patients' lives. This situation often comes up without much notice and presents a challenge to ensure safety despite the high-risk situation. In those moments, the nurse and the organization are expected to do everything possible to ensure that those at the sharp end of care have the resources to provide that care safely. Although formal orientation and education may not be feasible in the moment, the provision of resources for educating, coaching, and supporting nurses providing care is essential. Examples of resources include having representatives from the company that manufactures a new technology or drug present to quickly brief staff, clinical nurse specialists from another unit or organization providing consultation, and so on about the product. Given the need to provide care in an ever-changing environment, the one competency that all nurses need to hold is one that Donna Wright, author of *The Ultimate Guide to Competency Assessment in Healthcare*,<sup>1</sup> identifies as "learning on the fly." If you have this competency, you can find needed resources and quickly learn what you need to know when faced with something unfamiliar. Wright also identifies behaviors associated with learning on the fly: having excellent critical thinking skills, being open to change, and being able to identify what resources are needed.

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No matter what, each nurse and the organization the nurse works for is accountable for ensuring that the nurse has the needed knowledge and demonstrated competency to care for the patients assigned to him or her. Education can be gained and competency can be verified in a number of ways, but failure to do so places patients at great risk. The more nurses, teams, and organizations can plan proactively, the easier it is to meet this professional standard. **CCN**

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Financial Disclosures  
None reported.

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