GLOBAL EDITION

High-Acuity Nursing

SIXTH EDITION

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ALWAYS LEARNING

PEARSON

Contents

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High-Acuity Nursing

LEARNING OUTCOMES

Following completion of this chapter, the learner will be able to

1. Discuss the various healthcare environments in which high-acuity patients receive care.
2. Identify the need for resource allocation and staffing strategies for high-acuity patients.
3. Examine the use of technology in high-acuity environments.
4. Identify the components of a healthy work environment.
5. Discuss the importance of patient safety in the high-acuity environment.

This chapter provides an introduction to the environments in which adult high-acuity nursing care is provided. High-acuity-care environments include any acute-care areas in which complex patients with unpredictable outcomes are managed regardless of the exact environment. The patient may be in a critical care unit or in an intermediate-care or general medical-surgical setting. This chapter also provides an overview of issues that nurses must deal with when working in high-acuity-care environments, particularly critical care, and emphasis is placed on the importance of developing a healthy work environment in which patient safety is paramount.

Author's note: The American College of Critical Care Medicine (ACCM) and American Association of Critical Care Nursing (AACN) guidelines presented in this chapter remain current although many of them were developed in the late 1990s to mid-2000s.

SECTION ONE: High-Acuity Environment

While care has always been provided for high-acuity patients, the creation of specialized units in which to care for them with specially trained personnel is a relatively recent development. This section provides an overview of how and why critical care units were initially developed, how patients are triaged into the correct level of care to best meet their needs, and the different levels of intensive care. The section ends with a profile of the high-acuity nurse.

Historical Perspective

Intensive care units (ICUs) were first developed in the early 1960s. There were multiple reasons for their development, including (1) the implementation of cardiopulmonary resuscitation (CPR) so that people might survive sudden-death events; (2) better understanding of the treatment of hypovolemic shock related to recent war experiences; (3) the implementation of emergency medical services, resulting in improved transport systems; (4) the development of technologic inventions that required close observation for effective use (electrocardiographic monitoring); and (5) the initiation of renal transplant surgery. The first ICUs were recovery rooms. Patients admitted were still anesthetized. Problems resulted, however, when the volume of surgical procedures increased, and recovery rooms quickly became full. The patient who required extra equipment and prolonged observation was placed in the newly created ICU.

Determining the Level of Care Needed

Although high-acuity patients are viewed historically as being in an acute care unit, because of the shortage of acute care beds this is no longer true. This shortage of beds combined with skyrocketing costs for healthcare requires practitioners to make decisions about where in the hospital high-acuity patients are placed so that they receive the most efficient and cost-effective care. This may mean the patient is placed in an ICU, an **intermediate-care unit (IMC),** or a medical–surgical acute care unit. These triage decisions require a systematic approach so that optimal outcomes and controlled costs are achieved.

TABLE 1–1 Prioritization of Admission, Discharge, and Triage of Acutely Ill Patients in an ICU

Priority for ICU Placement	Description of Patient Characteristics
Priority 1	The patient is acutely ill, unstable, and requires intensive treatment and monitoring that cannot be provided outside of the ICU (mechanical ventilation, continuous vasoactive drug infusions). There are no limits on the extent of intended interventions. Examples may include postoperative or acute respiratory failure patients requiring mechanical ventilator support, and shock or hemodynamically unstable patients receiving invasive monitoring and/or vasoactive drugs.
Priority 2	The patient requires intensive monitoring and may potentially need immediate intervention. There are no limits on the extent of intended interventions. Examples include patients with chronic comorbid conditions who develop acute severe medical or surgical illness.
Priority 3	The patient is critically ill and unstable, with a reduced likelihood of recovery because of underlying disease or the nature of the acute illness. The patient may receive intensive treatment to relieve acute illness; however, limits on therapeutic efforts may be set, such as no intubation or cardiopulmonary resuscitation. Examples include patients with metastatic malignancy complicated by infection, cardiac tamponade, or airway obstruction.
Priority 4	This patient is generally not appropriate for ICU admission. Determination of admission should be made on an individual basis, under unusual circumstances, and at the discretion of the ICU director. Examples include patients with peripheral vascular surgery, stable diabetic ketoacidosis, or conscious drug overdose, as well as patients with terminal and irreversible illness facing immediate death.

Data from ACCM (1999).

The use of intermediate-care or step-down units may provide an efficient distribution of resources for the patient whose acute illness requires less monitoring equipment and staffing than is provided in an ICU. The intermediate-care unit serves as a place for the monitoring and care of patients with moderate or potentially severe physiologic instability who require technical support but not necessarily artificial life support; it is reserved for those patients requiring less-than-standard intensive care but more-than-standard ward care. Guidelines for admission and discharge for adult intermediate-care units were originally established by the American College of Critical Care Medicine (ACCM) (ACCM, 1998).

The Society of Critical Care Medicine (SCCM) recommends using a prioritization model to help make decisions about appropriate admission, discharge, and triage of acutely ill patients in an ICU (ACCM, 1999). The model defines which patients may benefit most from receiving care in an ICU. This prioritization model is summarized in Table 1–1. Priority 1 includes the most critically ill, and Priority 4 includes those who are generally not appropriate candidates for ICU admission.

Levels of Intensive Care Units

ICUs vary from hospital to hospital in terms of the services provided, the personnel, and their level of expertise. Large medical centers frequently have multiple ICUs defined by specialty area (neurosurgical ICU, trauma ICU). Small hospitals may have only one ICU designed to care for a variety of patients with medical or surgical disease processes. Although the types and varieties of ICUs may differ from one hospital to the next, all ICUs have the responsibility of providing services and personnel to ensure optimal care. The American College of Critical Care Medicine has identified three levels of ICUs as determined by resources available to the hospital (Haupt et al., 2003). These levels are summarized in Table 1–2.

When an acutely ill patient requires more comprehensive or specialized care, a decision must be made to transfer the

TABLE 1–2 ACCM Definitions of ICU Levels of Care

ICU Level	Description of Services, Personnel
Level I	Hospitals with ICUs that provide comprehensive care for patients with a wide range of disorders. Sophisticated equipment is available. Units are staffed with specialized nurses and HCPs with critical care training. Comprehensive support services are available and include pharmacy, respiratory therapy, nutritional support, social services, and pastoral care. These units may be located within an academic teaching hospital or may be community based.
Level II	Hospitals with ICUs that have the capability of providing comprehensive care to most critically ill patients but not to specific patient populations (neurosurgical, cardiothoracic, trauma).
Level III	Hospitals with ICUs that have the ability to provide initial stabilization of critically ill patients but are limited in their ability to provide comprehensive care for all patients. These hospitals are able to care for ICU patients requiring routine care and monitoring.

Data from ACCM (2003).

patient to a higher level of ICU care where additional personnel and resources are available. Transporting a patient from one area of the hospital to another or from one hospital to another involves risk. The decision to transport a patient must include an assessment of the risk-to-benefit ratio. Guidelines for the transfer of critically ill patients are available to help make these important decisions (Warren, 2004). According to these guidelines, hospitals should have policies and procedures that address pretransport coordination and communication, personnel who must accompany the patient, equipment to accompany the patient, and the monitoring that will be required during the transport. It is recommended that clinicians use an algorithm (■ Fig. 1–1) in the decision-making process of transferring acutely ill patients to a higher level of care.

Profile of the High-Acuity Nurse

The nurse caring for the high-acuity patient must be able to analyze clinical situations, make decisions based on this analysis, and rapidly intervene to ensure optimal patient outcomes. It is required that the nurse be comfortable with uncertainty and patient instability. The nurse is instrumental in treating patients' health problems as well as their reactions to the healthcare environment. The nurse is the only member of the healthcare team who remains at the bedside and, as a result, is frequently the one who coordinates patient care. The practice of nursing is dynamic, and the role of the nurse continues to evolve. Nurses must be able to adapt to the changing healthcare environment.

The nurse is often the first member of the healthcare team to detect early signs of an impending complication. Constant surveillance by the nurse involves assessing and monitoring the patient for signs of subtle changes over time. Often such changes in a patient's condition are clues of a possible impending complication. The prevention of complications is one of the primary goals of the acute-care nurse. Evidence suggests that constant surveillance by nurses reduces mortality and life-threatening complications in the hospitalized patient (Shever, 2011).

Section One Review

1. Which statement about intermediate-care units is correct?
   - **A.** They are outdated and should not be used.
   - **B.** They are labor intensive and are not cost effective.
   - **C.** They provide an efficient distribution of resources.
   - **D.** They are reserved for patients with life-threatening illnesses.
2. Which priority level indicates that the patient is acutely ill and unstable and requires intensive treatment and monitoring that cannot be provided outside the ICU?
   - **A.** Priority 1
   - **B.** Priority 2
   - **C.** Priority 3
   - **D.** Priority 4
3. Which factor has been shown to reduce mortality and life-threatening complications in the hospitalized patient?
   - **A.** A nurse–patient ratio of 1:2
   - **B.** Constant surveillance of patients by nurses
   - **C.** High-technology ICUs
   - **D.** IMCs
4. A hospital with an ICU that has the capability of providing comprehensive care to most critically ill patients but not to trauma patients meets the criteria for which level ICU?
   - **A.** I
   - **B.** II
   - **C.** III
   - **D.** IV

Answers: 1. C, 2. A, 3. B, 4. B.

SECTION TWO: Resource Allocation

Providing safe, high-quality care to high-acuity patients requires lower nurse–patient ratios, which increases expenses. Furthermore, acute care facilities have limited numbers of beds for patients who require high levels of care. Thus resource allocation is an important consideration.

Nurse Staffing

Nurses willing to work with high-acuity patients are a precious commodity. Decreased third-party reimbursement and managed care encourage shorter hospital lengths of stay. As a cost-reducing measure, hospitals have reduced professional nursing staff positions. In the late 1990s, hospital restructuring and reengineering forced bedside nurses to embrace new concepts such as role redesign, work transformation, and patient-centered care (Boston-Fleischhauer, 2008). Hospital employees, including nurses, were required to cross-train and "float" to care for patients outside their specialty areas. Unlicensed assistive personnel (UAP) were trained and supervised by nurses to complete patient care tasks. All these changes led to decreased job satisfaction and nurses leaving practice in high-acuity areas.

Other factors have contributed to the shortage of nurses. The registered nurse (RN) workforce is rapidly aging and fewer young people are choosing nursing as a career. In addition, as the population continues to age, more patients will require high-acuity care. Nursing-shortage issues are multifaceted and will continue to require comprehensive solutions. These may include federal funding for nursing education, changes in state regulations related to staffing standards, and increased public awareness (Duvall & Andrews, 2010).

Nurse-Patient Ratios A decrease in the number of professional nurses has forced hospitals to increase nurse–patient ratios. The result: One nurse cares for more patients. What is the appropriate nurse–patient ratio in high-acuity settings? The Academy of Medical Surgical Nurses (AMSN) is not in favor of establishing predetermined ratios. Rather, the needs of the patient and the skill mix of the nursing staff must be considered when making decisions about staffing patterns. Adequate resources must be available to evaluate the patient/family response to treatment, education, and pharmacological interventions (AMSN, 2009). The position of the American Association of Critical Care Nurses (AACN) is consistent with that of AMSN.

FIELD TRIAGE DECISION SCHEME: THE NATIONAL TRAUMA TRIAGE PROTOCOL

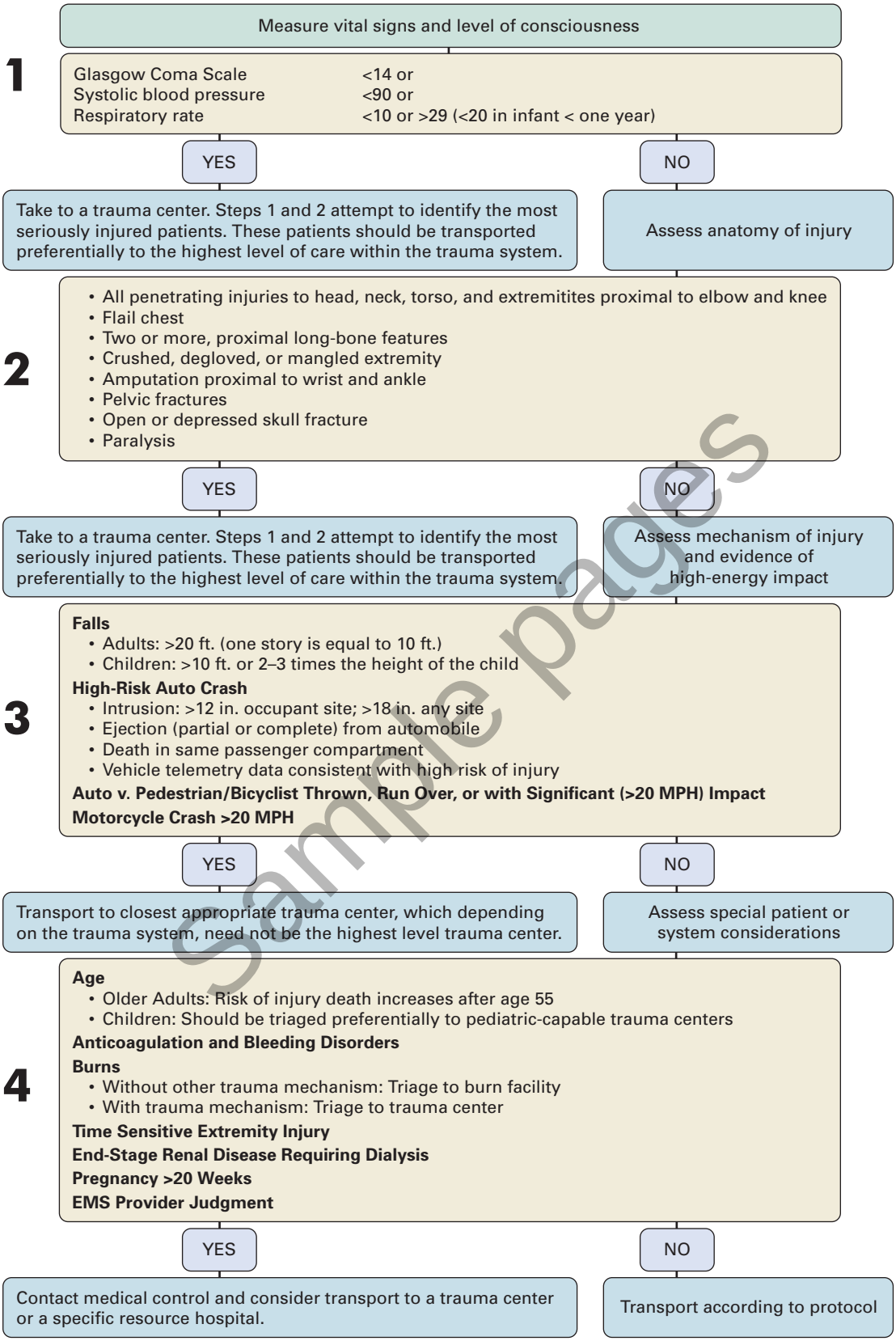

FIGURE 1–1 Field Triage Decision Scheme: The National Trauma Triage Protocol

Guidelines for the transfer of critically ill patients, Critical Care Medicine, American College of Critical Care Medicine (ACCM). Lippincott Williams and Wilkins, 1993, 21, 931–937.

Staffing is both a process and an outcome. Optimal care is provided when the patient's needs are matched with the caregiver's competencies. The first principle of staffing should be to provide safe and effective patient care. The patient's acuity level and the intensity of their nursing care requirements should determine the nurse–patient ratio (AACN, 2003; AACN, 2005).

The reduction in professional nursing staff has encouraged an upgrade of nursing assistant skills. The AMSN supports the use of UAP to enable the professional nurse to provide nursing care (AMSN, 2009). When UAP provide direct patient care, they are accountable to, and work under, the direct supervision of the professional nurse. The registered nurse must use leadership skills to safely and legally delegate tasks to the UAP.

Magnet Status: Recruiting and Retaining Nurses

One potential solution to the nursing shortage has been the Magnet Recognition Program®. This concept, originally developed in the 1980s by the American Nurses Credentialing Center, awards hospitals a **Magnet designation** if they are able to create working environments that are successful in recruiting and retaining professional nurses. In effect, these environments act like magnets to attract nurses. Hospitals that achieve "Magnet status" have practice models that promote professional nursing. Nurses who work at Magnet hospitals are more involved in decision making, report better relations with physicians, and have higher nurse–patient ratios. Hospitals with Magnet status report their patients have shorter ICU stays and shorter hospital stays. The Magnet hospital program has been successful over time, but it can be improved. Further studies are needed to evaluate the effects of Magnet hospital status on patient outcomes and to update and identify the essential components of Magnetism (Kramer & Schmalenberg, 2005; Ulrich, 2009).

Decreasing Resources, Increasing Care Needs

Decisions about allocation of resources must be made when there is a need to place patients in acute care areas (specifically in ICU or step-down), but there are no beds available. Who is in need of the greatest healthcare resources when they are acutely ill?

Who Belongs in an ICU? The priority levels depicted in Table 1–1 were developed to assist clinicians in making these tough decisions about admission, discharge, and triage in high–acuity care areas. Some could argue that ICU resources should be used for patients who have the greatest probability of benefiting or have a higher quality of life. If resource allocation were based on these principles, the actual precipitating event that created the need for resources would be irrelevant. Therefore, oncology patients, trauma patients, the young, and the old would be considered equally. Futility of treatment and informed refusal by the patient may be acceptable reasons for healthcare providers (HCPs) to limit treatment. Although these issues occur daily in the care of high-acuity patients, they also occur in a larger context of society that includes ethical, economic, and legal considerations (Adhikari, Fowler, Bhagwanjee, & Rubenfeld, 2010).

Oncology patients are often stereotyped as not being candidates for aggressive treatment. However, they frequently become acutely ill from therapeutic interventions. Should these patients be denied access to resources when their conditions are induced? During a patient's final hours, high-acuity care may be deemed appropriate because intensive efforts may be required to ensure suffering is minimized during and after removal from life support. The improvement of the quality of the dying and death experience is recognized as an important goal in modern medicine (Hales, Zimmerman, & Rodin, 2010).

Age has been used to justify the withholding of resources from the elderly. Extended care in the ICU has been questioned because of the high mortality rate among older adult patients. However, some studies of healthy elderly patients have shown that they often fare as well as younger patients. Elderly patients with minimal comorbidities appear to have similar health benefits following coronary artery bypass surgery when compared with younger patients. The severity of illness episode, admitting diagnosis, and the patient's previous health status contribute to patient outcomes. A high-acuity patient admitted to the hospital with a preexisting chronic medical condition may pose a greater risk of dying when compared to a patient who is not chronically ill.

It is difficult to predict who will benefit from care in high-acuity areas. Severity-of-illness scales and probability models were developed for this purpose. The Injury Severity Scale, New Injury Severity Scale, Acute Physiologic and Chronic HealthCare Evaluation, and Trauma Registry Abbreviated Injury Scale are examples of severity of illness scales used in hospitals (Moore, 2008). However, the exclusive use of such indices has not been a completely accurate predictor of outcomes. Other factors must be taken into account. For example, functional capacity prior to illness, as well as age and physiologic status, have been associated with patient outcomes (Moore, 2008). Mortality is usually the outcome studied in high-acuity care. Outcomes may also include patient comfort, quality of life, functional status, and other variables in addition to living and dying. While the use of severity of illness scales is important to compare patient populations for research and resource allocation (Moore, 2008), patients and their families consider multiple outcomes when deciding whether to withdraw life support.

Making decisions about allocation of resources is a real, but unspecified, aspect of the nursing role with high-acuity patients. These decisions force healthcare providers to make comparisons based on personal beliefs. Technology alone cannot provide information about who may live and die. Families play an important role in resource utilization. Family involvement in these decisions may ultimately decrease the use of technological resources and increase comfort measures during the last hours before death. Goals for care must be discussed with the patient and family, allowing ample time for meaningful discussion; and facilitating these decisions requires adequate training, excellent communication skills, and a collaborative effort by the interdisciplinary team (Randall & Vincent, 2010). Patients who die in high-acuity areas consume significant resources. The value of end-of-life care is subjective and cost alone cannot be used to justify the use of healthcare resources. Each patient situation is different (Schneiderman, 2011).

Section Two Review

1. Which statement is accurate concerning unlicensed assistive personnel (UAP)?
   - **A.** UAP may not work in high-acuity environments.
   - **B.** UAP may work independently as long as they notify the RN at the end of their shifts.
   - **C.** UAP perform only those tasks delegated to them by a professional nurse.
   - **D.** UAP may obtain a patient health history.
2. What does the designation of Magnet status indicate?
   - **A.** The hospital uses UAP to deliver most nursing care.
   - **B.** The hospital uses practice models that promote professional nursing.
   - **C.** The hospital has low nurse–patient ratios.
   - **D.** The hospital is not a desirable place for professional nurses to work.
3. According to some, ICU resources should be used for which patients?
   - **A.** Those with cancer
   - **B.** Those of advanced age
   - **C.** Those with DNR orders
   - **D.** Those who have the greatest possibility of benefiting
4. Which statement is correct regarding the improvement of the death and dying experience?
   - **A.** It is a goal of modern medicine.
   - **B.** It is the sole responsibility of the high-acuity nurse.
   - **C.** It is not a standard of care in high-acuity units.
   - **D.** It is the sole responsibility of the palliative care team.

Answers: 1. C, 2. B, 3. D, 4. A

Emerging Evidence

- In a study involving 12,233 experienced nurses from 717 clinical units in 34 Magnet hospitals, investigators found that 82% of the nurses on 540 of the clinical units rated their work environment as very healthy or healthy. The nurses' rating of the quality of care directly correlated with the quality of the work environment. Visionary leadership, empowerment, and collaboration had an impact on the development and maintenance of a healthy work environment *(Kramer, Maguire, & Brewer, 2011).*
- Investigators surveyed 744 ICU nurses to explore whether psychological resilience (ability to thrive in the presence of adversity) was a characteristic of ICU nurses with a healthier psychological profile. They concluded that the prevalence of posttraumatic stress disorder (PTSD) was lower in nurses with high psychological resilience *(Mealer et al., 2012).*
- In a study of the effects of nurse staffing, nurse education, and work environments on patient outcomes, investigators concluded that outcomes were improved in hospitals in which a higher percentage of BSN nurses were employed. Furthermore, patient outcomes improved the most in hospitals with lower nurse–patient ratios—the most improved outcomes being associated with good work environments, moderately improved outcomes with average work environments, and no correlation with poor work environments *(Aiken et al., 2011).*
- A study of nursing students using PDAs throughout their educational process was conducted at three campus sites. From an initial sample of 105 participants, 75 had completed the study at the end of 2 years. The students were asked structured and open-ended questions to assess their perspectives on PDA usage. The researchers concluded that PDAs are useful clinical tools that provide quick and important information for safer care *(Hudson & Buell, 2011).*

SECTION THREE: Use of Technology in High-Acuity Environments

In medical, business, academic, and many other work environments, technology influences how we communicate, document, evaluate, and conduct business—whether that business is making a product or taking care of patients. A major advantage of having technology available in the high-acuity environment is that the patient's status can be monitored continuously, using sensitive physiologic indicators of changing status. In the unstable patient, the ability to assess a possible problem before it becomes a full-blown complication may make the difference between life and death for that patient.

Technology is also a useful tool that can assist high-acuity nurses and other healthcare professionals in making critical decisions. Although decision making is viewed as somewhat artful and intuitive, computers use a scientific, programmed approach based on a massive database and algorithmic decision-making trees. Computer software programs are available to help diagnose patient conditions. Furthermore, handheld computer devices, such as the personal digital assistant (PDA) can provide quick bedside access to drug and diagnostic information (Hudson & Buell, 2011). Cellular smartphones and tablet technology also provide rapid access to a wide variety of medical-related applications that can assist with conversions and calculations, drug and disease information, and diagnostics.

While technology has provided the nurse with many advantages and improved patient outcomes, it has also given rise to some important issues. Nurses who care for acutely ill patients must be able to use technology in the caring process and still recognize its limits.

Patient Depersonalization

A major criticism of nurses who work with high-acuity patients is that they are too technologically oriented. The focus of nursing care in high-acuity patient care units is on monitoring patients for subtle physiologic changes. This monitoring requires the nurse to use multiple technologies. The patient interfaces with members of the healthcare team and medical equipment in the diagnosis and management of the patient's

disease process. Difficulties arise when machines, rather than individual patient needs, become the focus of care of the high-acuity patient. Technology must be used to enhance care, not take the place of a nurse's personal knowledge, observation skills, and senses.

Technical devices present mechanical impediments to touching the patient. Little surface area may be available for physical contact, and this may lead to a feeling of depersonalization. Technology may evoke fear in patients and contribute to their anxiety about their recovery process.

Overload and Overreliance Issues

Having responsibility for multiple pieces of equipment can increase the nurse's stress level. Because of the massive amount of patient data available, nurses may be reaching a saturation point in data processing. "Alarm fatigue" occurs when the number and frequency of alarms becomes overwhelming, resulting in delayed alarm responses and deliberate alarm deactivations, both of which adversely affect patient safety (Solet & Barach, 2012).

Technology can be so intriguing that its primary purpose—to support the well-being of the patient—is lost. Technology may create demands where no demands existed before, such as that which occurs with the fragmentation of patients into subpopulations (e.g., bone marrow transplant unit, cardiac surgery unit). Each subpopulation has its own special staff competing for hospital resources. Machines compete with the patient for nursing surveillance. It is possible that nurses become so dependent on monitoring devices that they completely trust the equipment, even when the data conflict with their own clinical assessments.

Finding a Balance

The skilled nurse who practices in a high-acuity setting must be able to bridge the gap between complex technology and the art of caring. When new technologies are introduced at the bedside, it is commonplace for the nurse to focus initially on the technology because of the need to gain proficiency in the use of this technology to support patient care. To foster proficiency, it is important that the nurse be given the opportunity to become familiar with a technology before its actual use in patient care; thus, appropriate training in the use of high-tech equipment is crucial. A high degree of comfort with technology prevents it from becoming the focus of care. Nurses are at risk for becoming overly dependent on technology for clinical decision making, making it essential that the nurse validate the technologic data with nursing assessment data. The healthcare practitioner, not the technology, is ultimately responsible for clinical decisions. The element of human touch must never be removed from the bedside (Holmstrom, 2010).

Section Three Review

1. What are the hazards inherent in the use of technology? (Select all that apply.)
   - **A.** Fragmenting patients into subpopulations
   - **B.** Increasing the nurse's stress level
   - **C.** Allowing more time for patient contact
   - **D.** Making the patient overdependent on monitoring equipment
2. Which statements are correct regarding the use of technical devices in high-acuity care? (Select all that apply.)
   - **A.** They present mechanical impediments to touching.
   - **B.** They are usually well accepted by patients.
   - **C.** They may evoke fear in patients.
   - **D.** They lead to a feeling of depersonalization.
3. What should be the focus of care of the high-acuity patient?
   - **A.** Bedside machines
   - **B.** Individual patient needs
   - **C.** The alarms on the machines
   - **D.** The nurse's needs
4. What should the nurse use to validate the technologic data?
   - **A.** Nursing assessment data
   - **B.** The healthcare provider
   - **C.** Other technologic data
   - **D.** Another nurse

Answers: 1. (A, B), 2. (A, C, D), 3. B, 4. A

SECTION FOUR: Healthy Work Environment

Nurses work in demanding situations over long periods of time. The quest to provide high-quality patient care in a work environment that has decreasing resources and increasing responsibilities creates conflict. This conflict creates feelings of personal and professional frustration and results in burnout (Davies, 2008). Working in a healthy environment increases job satisfaction and provides a buffer against stress and burnout. This section presents a discussion of what constitutes a healthy high-acuity work environment, the issue of nurse burnout, and how nurses can learn to cope with work stress.

Healthy Work Environment

In 2001, the American Association of Critical Care Nurses (AACN) made a commitment to promote healthy work environments that support quality patient care and high levels of nurse satisfaction. Six standards were identified that are critical to create and sustain a **healthy work environment** (AACN, 2005). These standards are listed in Table 1–3. AACN believes that the implementation of these standards will be an important step in meeting the commitment for a healthy work environment. This will, in turn, lead to improved patient safety, enhanced recruitment and retention, and positive patient outcomes (AACN, 2005).

Organizations can implement strategies to improve the working environment, but it is the nurse who must validate their effectiveness. High-acuity nurses are the gatekeepers of patient safety. Structures, processes, and outcomes are required for quality care—that is, having the "right things in place" to do the "right things" so that the "right outcomes" will happen. A healthy and productive work environment allows the nurse to give excellent care to patients while achieving job satisfaction (Kramer, Schmalenberg, & Maguire, 2010).

TABLE 1–3 AACN Standards for Healthy Work Environments

Standard	Definition
Skilled communication	Nurses must be as proficient in communication skills as they are in clinical skills.
True collaboration	Nurses must be relentless in pursuing and fostering true collaboration.
Effective decision making	Nurses must be valued and committed partners in making policy, directing and evaluating clinical care, and leading organizational operations.
Appropriate staffing	Staffing must ensure the effective match between patient needs and nurse competencies.
Meaningful recognition	Nurses must be recognized and recognize others for the value each brings to the work of the organization.
Authentic leadership	Nurse leaders must fully embrace the imperative of a healthy work environment, authentically live it, and engage others in its achievement.

Data from AACN (2005).

Stress and Burnout

The term **burnout** has been used to describe feelings of personal and professional frustration, job dissatisfaction, job insecurity, and emotional and physical exertion. It is a syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishments that occurs among individuals who work with people on a daily basis. When asked to describe burnout, healthcare professionals invariably talk about being overworked, feeling a lack of control, insufficient rewards, and conflicting values (Gabel, 2011). Symptoms indicative of burnout are summarized in Box 1–1.

Patients' conditions change rapidly in high-acuity units, and this may be a source of burnout for nurses who work in these areas because it requires philosophical flexibility. A patient with a poor prognosis may have a prolonged stay that involves the use of multiple technologies. Then, in the middle of a shift, a decision is made to cease these efforts. The patient may improve, requiring reevaluation and escalation of care. Conversely, a patient is declared dead by brain death criteria and immediately thereafter may become an organ donor. This requires the nurse to shift from caring for a patient to caring for organs for another patient. It is also quite common that within minutes after a patient's death, the nurse is told that a new patient is waiting to come into that very same bed. The nurse must mourn one patient's death and then minutes later invest energy in a new patient. A significant degree of uncertainty is confronted on a daily basis. A broad-based end-of-life-care curriculum may be instrumental in assisting the high-acuity nurse to cope with the daily stress of changing patient conditions.

Stress is a major component of burnout. A current reason for stress and subsequent burnout in nurses is the nursing shortage, long working hours, and loss of concentration (Davies, 2008). Other sources of stress include giving emotional support during patient suffering and dealing on a daily basis with pain and traumatic loss. Often this can lead to poor self-care, which can influence their ability to appropriately care for patients (Shiparski, Richards, & Nelson, 2011).

BOX 1–1 Symptoms of Burnout

Behavioral
- Withdrawal
- Risk taking and impulsiveness
- Ambivalence
- Decreased productivity
- Contemplating career change
- Increased use of caffeine, alcohol, and nicotine

Physiologic
- Chronic fatigue
- Frequent minor ailments
- Sleep changes
- Appetite change
- Sexual difficulty

Psychologic
- Attempts to blame others
- Stereotyping patients
- Nightmares
- Depression
- Hostility and negativism
- Loss of tolerance

Cognitive
- Decreased ability to make decisions
- Poor judgment
- Lack of initiative
- Forgetfulness

Coping with Stress and Burnout

The social environment of the nursing unit plays a role in nurses' perceived levels of stress. Stress can be labeled as either "good" or "bad" (Davies, 2008). A positive social climate, characterized by strong managerial support and cohesiveness among the staff, serves as a buffer against the negative effects of stress. Environmental uncertainty, as measured by the number of admissions, discharges, and transfers in the high-acuity area, can result in emotional exhaustion. Nurses must enhance self-awareness of personal sources of tension. Once these sources are identified, strategies for alleviating stressors can be developed.

Professional collegial relationships with healthcare providers as well as delegation can decrease stress and burnout. The nurse assumes the central role at the bedside. While the physician or pharmacist may have a snapshot of the patient's condition, it is the high-acuity nurse who holds the video camera. Coordinating effective communication among multiple healthcare providers provides positive patient outcomes (Kramer, Maguire, & Brewer, 2011).

Establishing critical incident stress debriefings (CISDs) may facilitate coping with specific situations. These are structured

group discussions, usually occurring within several days following a crisis, designed to address symptoms of stress, assess the need for follow-up, and provide a sense of closure. These sessions are a formal way of managing stress before it becomes debilitating or fosters burnout. The research is limited on the long-term benefits of CISD; however, participants perceive this debriefing as important (Magyar & Theophilos, 2010). Another strategy for preventing burnout is to assist nurses during orientation in formulating clear ideas of their professional roles and responsibilities within the high-acuity environment. Offering new nurses the opportunity to meet in small groups provides a safe, confidential environment to share experiences. Promoting a sense of community can also enhance the ability to share stresses and joys, seek feedback for continuing performance improvement, and develop critical thinking skills (Park & Jones, 2010).

Section Four Review

1. What are the components of a healthy work environment? (Select all that apply.)
   - **A.** True collaboration
   - **B.** Appropriate staffing
   - **C.** Authentic leadership
   - **D.** Individual priorities
2. Which factors can help buffer the negative effects of stress? (Select all that apply.)
   - **A.** Environmental uncertainty
   - **B.** Positive social climate
   - **C.** Managerial support
   - **D.** Cohesiveness among staff
3. CISDs can be used for which purposes? (Select all that apply.)
   - **A.** Assess high-acuity patients
   - **B.** Help families cope with stress
   - **C.** Address staff symptoms of stress
   - **D.** Provide staff with a sense of closure
4. The term *burnout* refers to which feelings? (Select all that apply.)
   - **A.** Personal and professional frustration
   - **B.** Loss of self-esteem
   - **C.** Physical and emotional exertion
   - **D.** Job dissatisfaction

Answers: 1. (A, B, C), 2. (B, C, D), 3. (C, D) 4. (A, C, D)

SECTION FIVE: Ensuring Patient Safety in High-Acuity Environments

Other than the operating room, there is no hospital environment in which the patient is more vulnerable than in high-acuity units, particularly critical care. For this reason, attendance to patient safety is of the upmost importance, as many patients cannot protect themselves and must rely fully on the competency of the nurse.

The Culture

Patient safety and healthy work environments are closely linked. For many years industry has examined work culture and its effect on job performance and outcomes; however, only recently has this been examined in healthcare. Reports from the Institute of Medicine highlighted unsafe patient conditions and were instrumental in launching patient safety initiatives. Research has shown a correlation between working conditions, teamwork, and patient outcomes. High levels of teamwork result in decreased length of stay and decreased mortality (Sammer, Lykens, Singh, Mains, & Lackan, 2010).

Healthcare errors have become recognized as a public health problem. Failure to disclose errors was part of the socialization process for many years. Now, errors are publicly reported in the media and on the Internet. While some argue that healthcare professionals are human and apt to make mistakes, others feel that any medical mistake is unacceptable. For many years the fear of making mistakes was linked to a culture of blame. A nurse experienced reprimands from nonsupportive administrators and loss of respect from colleagues when reporting an error. The gradual shift to a culture of caring and support has been shown to increase error reporting and lead to systems improvement (Sammer et al., 2010).

Patient Safety

The Joint Commission (TJC) is an accrediting organization committed to improving patient safety. TJC was originally named The Joint Commission for Accreditation of HealthCare Organizations (JCAHO) until 2007, when it formally shortened its name. TJC's mission is to continuously improve the safety and quality of care provided to the public through the provision of healthcare accreditation that supports process improvement in healthcare organizations. The TJC established "National Patient Safety Goals" for acute-care hospitals (TJC, 2009). The original goals are summarized in Box 1–2. Each year these goals are reviewed and revised.

To improve the accuracy of patient identification, the nurse should use at least two patient identifiers when providing care, treatment, and services. For example, a nurse should check the patient's name band and ask the patient to state his or her name before drawing blood or giving a medication.

BOX 1–2 National Patient Safety Goals for Acute-Care Hospitals

- Improve the accuracy of patient identification.
- Improve the effectiveness of communication among caregivers.
- Improve the safety of using medications.
- Reduce the risk of healthcare–associated infections.
- Accurately and completely reconcile medications across the continuum of care.
- Reduce the risk of patient harm resulting from falls.
- Encourage patients' active involvement in their own care as a patient safety strategy.
- Improve recognition and response to changes in patient condition.

Data from TJC (2009).

Effectiveness of communication among caregivers should be improved. One way to accomplish this safety goal is to use a "read-back" process. For example, when reporting critical laboratory test results, the person giving the test result should verify the test result by having the person receiving the information record and read back the test results. The Situation, Background, Assessment, and Recommendation (SBAR) technique has been shown to be an effective tool for all hand-off communications (Becket & Kipnis, 2009). To improve the safety of using medications, The Joint Commission recommends that all medication labels are verified both verbally and visually by two people when the person preparing the medication may not be the person who will be administering it. To reduce the risk of healthcare–associated infections, hospitals must implement evidence-based guidelines to prevent central-line–associated bloodstream infections. This includes annual education for healthcare workers who are involved with caring for patients with central lines. Education should include information about infections and the importance of prevention. Medication reconciliation across the continuum of care should be done accurately and completely. For example, when a patient is transferred from the ICU to a high-acuity unit, the ICU nurse informs the receiving nurse about the up-to-date reconciled medication list and documents the communication. To reduce the risk of patient harm resulting from falls, hospitals must implement a fall reduction program. Staff should receive education and training for this program.

As another safety strategy, patients should be encouraged to actively participate in their own care. The patient and family should be educated on available reporting methods for concerns related to care, treatment, services, and patient safety issues. The Joint Commission requires hospitals to improve recognition and response to changes in patient condition. This means that hospitals must have a method that enables healthcare staff members to directly request additional assistance from a specially trained individual when the patient's condition appears to be worsening. Many hospitals have implemented Rapid Response Teams (RRTs) to address this goal. While initial research is promising, further studies to determine effectiveness are warranted (Massey, 2010). The Joint Commission requires adherence to a Universal Protocol. For example, a time-out process must be performed prior to starting a procedure, such as the bedside insertion of a percutaneous tracheostomy. The purpose of this time-out is to conduct a formal assessment that the correct patient, site, positioning, and procedure are identified; all relevant documents (such as a consent form) have been signed; and necessary equipment is available. The completed components must be clearly documented.

To receive The Joint Commission accreditation, the hospital must demonstrate and provide evidence that it is meeting these safety goals. High-acuity nurses must actively participate in ensuring these goals are met.

Technology and Patient Safety

Technology has been introduced to prevent errors. One example is the implementation of computerized provider order entry (CPOE) systems. These systems block incorrect medication orders; warn against drug interactions, allergies, and overdoses; provide current, accurate drug information; and alert to sound-alike drug names. While the initial cost is high, many hospitals have implemented CPOE and benefited from cost savings and error reduction (Colpaert, 2009).

Manufactured devices may be a source of potential errors. Devices are carefully engineered to be fail-safe; however, adverse incidents do happen. The nurse must be competent in using the equipment. It is the responsibility of the nurse to report medical device failure when it occurs to the appropriate hospital department and remove the item from service.

Barcode point of care (BPOC) is another technology recently introduced to prevent errors. This system allows nurses to scan their badges as well as patient wristbands to access medication profiles. The nurse is then able to obtain the right medication, for the right patient, in the right dose, at the right time, and via the correct route (Poon, Keohane, Yoon, Ditmore, & Bane, 2010).

The use of personal digital assistants (PDAs) may help to improve practice and decrease errors. Nurses have found these devices essential for checking medications, calculating doses, and accessing reference material. Handheld devices date back to the Palm Pilot (Palm Inc., Sunnyvale, California) in 1997 and pharmaceutical look-up applications such as Epocrates (Epocrates Inc., San Mateo, California). Newer innovations include smartphones which allow for text messaging, email retrieval, and application stores. The tablet PC has a wealth of clinical applications yet untapped (Savel & Munro, 2011). While these systems have been effective in reducing errors, they are not infallible. The human component cannot be discounted.

Other Factors Contributing to Patient Safety

Patients trust their care to nurses who must deal with workforce shortages and ever-changing therapies and technologies. Since 2005, AACN's position is that the nursing shortage, overtime hours, and excessive documentation jeopardize patient safety. A strong educational foundation and solid orientation will allow for the high-acuity nurse to provide more efficient, safer care (AACN, 2005). Research has also shown that the educational level of the nurse is related to patient outcomes. Institutions with a higher percentage of nurses educated at the baccalaureate level or higher demonstrated lower mortality rates (Aiken, Clarke, Cheung, Sloane, & Silber, 2003; Aiken et al., 2011).

The Institute of Medicine has suggested performance standards for healthcare professionals that focus on patient safety. AACN (2005) believes that specialty certification addresses this need. Hospitals that create a culture of respect and professionalism are more likely to have experienced, certified nurses in an environment where safety is valued. Research continues to indicate that adequate staffing, well-educated nurses, positive physician–nurse relationships, and responsible management are the keys to decreasing errors. Collegial relationships among all healthcare providers will also contribute to patient safety (Sammer et al., 2010).

Section Five Review

1. What do the current patient safety and healthy work environment cultures in the high-acuity environment promote?
   - **A.** An increase in error reporting and systems improvement
   - **B.** A decrease in error reporting
   - **C.** A culture of blame
   - **D.** The failure to publicly disclose medical errors
2. Which factors contribute to medical errors? (Select all that apply.)
   - **A.** Staffing ratios
   - **B.** Overtime
   - **C.** Excessive documentation
   - **D.** Specialty certification
3. What must be done to ensure patient safety before a percutaneous tracheostomy is placed at the bedside?
   - **A.** One person should confirm the order.
   - **B.** The correct patient, site, and procedure should be identified during a time-out.
   - **C.** Two people should confirm the order.
   - **D.** Visitors should be asked to leave the room.
4. What is the proper procedure to ensure patient safety when the nurse is preparing a medication that will be administered to the patient by another person? (Select all that apply.)
   - **A.** This should never be done.
   - **B.** Confirm the order with the HCP.
   - **C.** Labels should be verbally verified by the two healthcare providers.
   - **D.** Labels should be visually verified by the two healthcare providers.

Answers: 1. A, 2. (A, B, C), 3. B, 4. (C, D)

Clinical Reasoning Checkpoint

Case 1: RM is a 64-year-old with stage 4 metastatic colon cancer. She presents to the emergency department with shortness of breath. A chest x-ray reveals right lower lobe pneumonia. She is admitted to the hospital. She has advance directives that include no intubation or CPR.

1. Is RM a candidate for admission to the ICU? Why or why not?
2. Using the SCCM prioritization model, identify the patient's priority level for ICU placement.

Case 2: A patient with a history of new-onset seizures is admitted to a Level III ICU. A diagnosis of brain tumor is made and surgery will be required. The healthcare provider (HCP) informs the patient that he needs to be transferred to another hospital that has a Level I ICU.

3. After the HCP leaves the room, the patient says he doesn't understand why he needs to be transferred. As his nurse, explain the reason for the need for transfer.

Case 3: You would like to work in a high-acuity unit that has a healthy work environment that supports quality patient care and high levels of nurse satisfaction. You are aware of the six standards identified by AACN that are critical to creating and sustaining a healthy work environment.

4. Provide at least one example of how you might see each of the six standards operationalized in the high-acuity unit.

Answers to the Clinical Reasoning Checkpoint questions can be found in the Wagner Student Resources at www.pearsonglobaleditions.com/wagner.

Pearson Nursing Student Resources Find additional review materials at: **www.pearsonglobaleditions.com/wagner**

Posttest

1) A nurse is interviewing for a position in a community hospital. Hospital brochures describe a Level III ICU. Which statement describes the resources the nurse would expect in this hospital?
   1. Those working in the ICU have specialty training and use specialized equipment to care for a wide variety of patient illnesses and injuries.
   2. Staff and equipment in the unit are capable of providing comprehensive care for patients with a variety of illnesses and injuries.
   3. Staff in the unit can provide initial stabilization of patients for transfer to more advanced care.
   4. The hospital is a teaching facility with sophisticated equipment and provider expertise.

2) The ICU nurse receives a call from the medical–surgical unit requesting transfer of a patient to the ICU. The patient is in acute respiratory failure and requires mechanical ventilation. He will require vasoactive drugs to help manage his profound hypotension. Based on the SCCM prioritization model, what is this patient's priority for ICU placement?
   1. Priority 1
   2. Priority 2
   3. Priority 3
   4. Priority 4

continued

3) A hospital has been working to achieve Magnet status. Which statements by an ICU nurse reflect the benefits of Magnet status? (Select all that apply.)
   1. "I feel more ownership in the decisions being made to run the unit."
   2. "I don't have to supervise UAPs anymore."
   3. "It would be so much easier to work here if the physicians were friendlier."
   4. "Taking care of one less patient each shift makes such a difference."
   5. "Our pay raise makes working here worth all the stress."

4) In the middle of a shift a nurse comes to the manager to discuss the acuity level and number of patients he has been assigned. Which statement would the manager interpret as indicating the nurse needs further education about nurse–patient ratios?
   1. "I cannot provide the amount of care that all these patients need."
   2. "Our professional organizations would not approve of exceeding their recommended ratios."
   3. "Is there someone who can be called in to help me with this patient load?"
   4. "I am worried I'm going to miss something with one of these patients."

5) New, fairly complex monitoring devices have been purchased to replace current monitors in the ICU. How should the nurse manager plan to introduce this equipment to the unit?
   1. Have one device placed in one room and rotate nurses through caring for patients on the monitor.
   2. Require that all nurses caring for patients on this monitor have extensive training on its use.
   3. Have all the old monitors replaced with the new devices so that nurses can learn by using the equipment.
   4. Tell the nurses to focus on how to use the monitor when caring for patients for the first few days.

6) What is the best advice an experienced ICU nurse can offer to new nurses on how to remain focused on the patient?
   1. "Learn about the equipment before caring for the patient."
   2. "Don't come to work in ICU until you are proficient on all the equipment we use."
   3. "Try to arrange equipment so you have ample opportunity to use the power of your touch with the patient."
   4. "Until you are comfortable with equipment, ask to be assigned with another nurse."

7) A coworker has become increasingly withdrawn from social activities on the unit. She is often late for work and is ambivalent about warnings from the nurse manager. She has become hostile and negative about proposed changes in the unit. The nurse should recognize that the coworker is exhibiting symptoms of which condition?
   1. Burnout
   2. Stress
   3. Job dissatisfaction
   4. Conflict

8) The nurse manager has made a commitment to improve the health of the ICU work environment. Which activities will help meet that goal? (Select all that apply.)
   1. Make every effort to assign patients so that their needs match the nurse's strengths.
   2. Set up a program in which a "nurse of the day" is chosen and honored each day.
   3. Engage the hospital nurse executive in efforts to improve the health of the entire environment.
   4. Role-model successful collaboration with healthcare providers.
   5. Communicate in a clear and effective manner.

9) The hospital is planning to implement a CPOE system. One of the nurses says, "I don't see how that is going to help." Which statement by another nurse is a good response to this concern?
   1. "You are right; these systems often contribute to medication errors."
   2. "I heard that these systems can cause drug–drug interactions."
   3. "Actually, hospitals that have used these systems generally see error reduction."
   4. "The systems may help prevent errors, but they are way too expensive for use in most hospitals."

10) The high-acuity unit's Operations Council is seeking suggestions concerning the use of technology to prevent errors on the unit. What statements by nurses are good responses to this request? (Select all that apply.)
   1. "Barcode point-of-care has been shown to reduce medication errors."
   2. "Using PDAs is so complicated that it increases errors."
   3. "We need more of the newest infusion pumps. They are always accurate."
   4. "Don't purchase anything that isn't fail-safe."
   5. "If we had smartphones, we could look up so much information."

Answers to the Posttest questions can be found in the Wagner Student Resources at www.pearsonglobaleditions.com/wagner.

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