FAST FACTS FOR THE CRITICAL CARE NURSE

Critical Care Nursing in a Nutshell
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This book is dedicated to my husband Ted for his continued love, support, and encouragement, and also to my sons Carter and Cody, for it is their love, joy, patience, and understanding that makes every day a blessing.

—M.A.L.
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Critical care nursing is one of the most challenging nursing options available. It requires astute assessment skills, extremely specialized training, the ability to multitask, adaptability, top-notch communication skills, attention to detail while seeing the big picture, positive coping techniques, and numerous other traits. This guide is intended to help make practicing as a critical care nurse a little easier.

The guide is designed to work as an assistant. It includes guidelines for documentation, advance directives, organ donation, withdrawal of treatment, and palliative care. Basic assessment and procedural skills are detailed, along with more in-depth acute care practices, such as managing an intra-aortic balloon pump. Aseptic technique, isolation precautions, IV therapy, central venous line and pulmonary artery catheter care, and continuous renal replacement therapy are explained in an easy-to-read manner. Applications pertaining to individual ICUs are also included.

Several of the topics in this guide apply to current nursing concerns nationwide. Joint Commission topics such as proper patient identification are discussed. Isolation precautions and personal protective equipment applications recommended by the Centers for Disease Control and Prevention are detailed, and information about performing palliative care in the ICU is provided.
This guide can work as both a training manual and a reference tool. Keep it at the bedside for a quick refresher on ICU nursing implementations and to help troubleshoot mechanical devices used in the critical care unit.

Please keep in mind that while this book was compiled using numerous resources, it does not contain every possible ICU intervention or procedural guideline. Refer to facility protocol and manufacturer recommendations, along with physicians’ orders, as needed. Personal and patient safety is always of primary concern.

*Michele Angell Landrum, ADN, RN, CCRN*
Acknowledgments

Thank you to all the wonderful nurses whom I have had the pleasure to work among. It is through education, preceptorship, training, and teamwork that I was able to experience amazing medical treatments and nursing practice. I happily share the knowledge gained as a travel nurse, working with some of the best nurses, physicians, and support staff in the country.

Much appreciation goes to Stephanie and Ben Kunz, Diane Pike, Anjanetta Davis, MSN, RN, CNL, Scott Wilson, RN, and Beth Beck, MT (ASCP), CIC for their support and encouragement during the writing of this guide, and to Bimbola F. Akintade PhD©, ACNP, CCRN, for a careful review of the content.

Finally, special thanks to my family. Ted, Carter, Cody, and Vera (Mom), you have been incredibly patient, supportive, and understanding during this busy time. Each of you mean more to me than you will ever know. Thank you.
PART

Foundations of Critical Care
INTRODUCTION

The American Association of Critical Care Nurses (AACN) defines critical care nursing as “a specialty within nursing that deals specifically with human responses to life-threatening problems” (April 2010). Critical care units range from open-heart recovery units, burn units, and neurologic intensive care units (ICUs) to surgical ICUs, medical ICUs, and cardiac care units. All have distinct qualities while sharing several similar attributes.

Nurses who thrive in these areas are highly specialized and well trained, assess patients efficiently, and provide appropriate, proficient, culturally relevant, and emotionally sensitive care for both the patient and his or her family. These are the core values of critical care nursing.

Critical care nurses maintain the highest quality of care for patients, interact diplomatically within the medical system, and take care of themselves and their families.
In this chapter, you will learn:

1. The qualifications for critical care nurses and available certifications.
2. The different types of critical care units and their patient care sets and equipment.

QUALIFICATIONS

Most nurses who are interested in a critical care position already possess the appropriate requirements. These include

1. An active registered nursing license in the state of employment.
2. An unencumbered nursing license in the state of employment.
   a. A license not currently subject to discipline by any board of nursing.
   b. A license without provisions and/or conditions for nursing practice.

While the actual requirements for critical care nursing are few, the qualities desired by hospitals are numerous. Interviews with several directors and managers of various critical care units regarding the type of nurses they hire revealed several key characteristics. Being organized and able to keep up in a fast-paced environment were frequently mentioned, with quite a few managers adding that “being able to think on one’s feet” is a valuable trait. A great resume and a history of providing ethical and competent patient care were stressed. One director mentioned that strong clinical skills and references are important for all applicants, and that for new graduates without much work history, a productive practicum or clinical experience, with references, is a must.

Critical care nurses share many traits with others practicing throughout the nursing spectrum. They are organized, ethical, proficient, caring, humane, respectful, eager to learn,
cool under pressure, and confident. **Nurses always keep what is best for the patient foremost, thereby ensuring that proper care is given.** Once hired, a critical care nurse has hospital and unit orientations. During the unit orientation, a nurse is assigned a preceptor, who begins teaching critical care techniques. **Education and training must be ongoing** throughout critical care nursing to ensure up-to-date skills and competency.

**CERTIFICATIONS**

Nurses working in the critical care field can obtain several **certifications**. Most of these are offered by the AACN. Certified Critical Care Registered Nurse (CCRN) accreditation is the most common; however, only about 50,000 nurses hold this title nationwide (AACN, March 2010). This certification is further specialized into adult, pediatric, and neonatal care, or any combination of the three.

**Applicants for the CCRN exam must meet eligibility requirements prior to testing.** The test is based on practice analysis in critical care, and achieving certification is a prestigious accomplishment. Once a nurse has passed the exam, CCRN is maintained via a renewal policy every 3 years, if all requirements are met.

Additional subspecialty certifications exist for nurses who have CCRN certification. **Cardiac medicine certification (CMC) and cardiac surgery certification (CSC) are available to nurses who meet the requirements corresponding to the subspecialty.** Both require the passing of a certification exam.

**TYPES OF CRITICAL CARE UNITS**

All critical care units, commonly referred to as ICUs, have similarities; however, several items and situations vary according to the particular type of critical care area. The number of patient beds or rooms is generally the biggest
variant. A unit may have 2 beds or 25 to 30 beds, depending on the hospital size, location, and specialty demand.

**FAST FACTS in a NUTSHELL**

Common Characteristics of Critical Care Units

1. A nurse-to-patient ratio of 1:1 or 1:2.
2. Critically ill patients.
3. Patients with multiple diagnoses.
4. Specialized equipment: Continuous EKG, blood pressure, and oxygen saturation monitors; multiple IV pumps, arterial lines, pulmonary artery catheter, endotracheal tubes, ventilators, chest tubes, urinary catheters, central venous lines, and nasogastric tubes and/or g-tubes.
5. Isolation precautions.
6. Restricted visiting hours.

The type of patients in intensive care varies according to the facility, unit type, and staff and bed availability. Usually, a facility has a general ICU that is a catch-all for most types of patients and a surgical ICU for post-surgical patients. Both utilize most of the equipment mentioned, as well as other items, such as an intra-aortic balloon pump (IABP) and a continuous venovenous hemodialysis (CVVHD) machine. Various other types of critical care units also exist.

- The **surgical intensive care unit (SICU)** is where patients recover after extremely invasive surgery, such as a Whipple procedure, orthopedic reconstruction, or complex abdominal repair. They often have additional medical conditions that require close monitoring and special treatment.
- The **neurologic intensive care unit (NICU)**, is another area with highly specialized care and equipment.
Patients in the NICU require detailed care that pertains to their neurological status. They might have experienced a stroke, exhibit increased intracranial pressure (ICP), have suffered acute head trauma, or be comatose. An ICP monitor and/or drain is often inserted and maintained in this patient care setting.

- The cardiac care unit (CCU) is common in most hospitals and is for patients experiencing some type of cardiac issue. They might be pre- or post-heart catheterization, suffering from chest pain, have experienced an acute myocardial infarction, or even be pre- or post-open-heart surgery. An IABP often is used in the CCU. CCRNs with a CMC subspecialty certification might work in the CCU.

- The cardiovascular intensive care unit (CVICU) is generally for post-cardiac bypass patients. However, other patients may be admitted to this unit, including those with post-op thoracic aneurysm repair, abdominal aneurysm repair, and thoracotomies. IABPs, left ventricular assist devices (LVADs), biventricular assist devices (BIVADs), and CVVHD devices are often used in this unit. CVICU nurses may have CCRN certification with a CSC subspecialty certification.

- The transplant unit, where post-organ-transplant patients recover, trains its nurses specifically for this patient population. There are extremely rigid parameters that must be maintained for such patients, as well as infection control protocols. Multiple types of equipment and monitoring systems are in this unit.

- The burn unit is for multiple types of burn victims. Patients suffering from thermal, scalding, chemical, or electrical burns need specific treatment.

- The trauma ICU is for patients with various types of injuries and several diagnoses. The equipment in this unit can range from a simple arterial line to CVVHD to orthopedic traction. Nurses in the trauma ICU must be prepared for any and all types of wounds and patient care.
The critical care units mentioned above are explored in the following chapters, which explain the specific guidelines, equipment, and skills utilized.

While each specialty unit tries to use open beds for patients meeting its specialty, ICU nurses must be prepared to care for any type of critically ill or injured patient who may require an ICU bed. A facility may engage any available room when the critical care areas are close to capacity.

SELF-CARE FOR THE CRITICAL CARE NURSE

Working in the field of nursing is difficult and demanding, but nevertheless very rewarding. Critical care nursing has adrenaline highs and corresponding lows often surpassing those of other nursing practice areas. Critical care nurses must learn how to handle and relieve stress to perform their job effectively.

**FAST FACTS in a NUTSHELL**

**Strategies to Relieve Stress**

1. Stay hydrated and eat well-balanced meals.
2. Exercise and maintain flexibility.
3. Get 7–8 hours of sleep daily.
4. Separate work and home life; spend off-duty time with family and friends.
5. Maintain a positive outlook.
6. Participate in hobbies outside of work.
7. Maintain a sense of humor.
8. Take 3 seconds to just breathe.
9. Discuss concerns about patients, coworkers, and/or doctors with the nurse manager.
10. Seek counseling, if needed, to handle grief, emotions, and stress.
In addition to following a healthful diet and managing stress while remaining physically and emotionally fit, ICU nurses should see their own physicians at least once a year, stay up-to-date on immunizations, and receive annual flu shots.

By actively providing self-care, nurses improve the quality of care that they provide to their patients and loved ones. All the strategies mentioned will help keep stress at a minimum; however, there is one key to performing well and making the best decisions while on the job: Do what is best for the patient. By honoring this mantra, nurses will ask questions when needed, seek appropriate consultation, and provide the right type of care, all while exhibiting great nursing skills and protecting their licenses.