BOARD OF CERTIFICATION FOR EMERGENCY NURSING
Excellence. Achievement. Impact.

"The limits of the possible can only be defined by going beyond them into the impossible." – Arthur C. Clarke

Excellence in the Air: The Certified Flight Registered Nurse (CFRN®)

When every second counts, and when access or distance mandates, expert air medical teams transport seriously and critically ill or injured patients so they can get to the definitive or specialized care they need. Across the U.S. and around the globe, over 5,800 flight nurses holding BCEN®'s Certified Flight Registered Nurse (CFRN) credential play a leading role in delivering essential advanced care with unparalleled clinical excellence while thousands of feet in the air.

Speed, Access Facilitate Better Outcomes

In the U.S. alone, approximately 400,000 patients are transported every year by air medical helicopters and another 150,000 patients are transported over longer distances by fixed-wing aircraft, according to data from the Association of Air Medical Services (AAMS).[1] Rapid transport with a highly specialized air medical team has demonstrated better outcomes. Air medical transport of trauma patients, for example, reduces length of hospital/ICU stay and results in better patient outcomes."[1]

Consider these additional facts and statistics:

- Every 90 seconds, considering just the U.S., an air medical helicopter responds to a call.[1]
- Nationwide, 54% of air medical patient transports are inter-facility transfers, 33% are scene responses, and 13% are for organ procurement and transport and other time-sensitive scenarios.[1]
- Nearly 50 million Americans live over an hour away from a Level I or II trauma center.[1]
- Only 57% of the nation's 73.7 million children live within 30 miles of a pediatric trauma center.[2]
- Thanks to air medical helicopters, 38% more Americans have access to a trauma center within the timeframe for the best clinical outcome.[1]

Helicopters generally fly at speeds twice that of ground ambulances and do not have to contend with traffic. Also, they are often the only means to reach patients located on mountains, in canyons or forests, or in other remote or hard to access areas. Jet or propellor airplanes are used to carry stable and unstable patients over long distances domestically and internationally. Rotor- and fixed-wing air ambulances are used to transport patients to higher levels of care and regional specialty facilities.

Sophisticated Care in the Air

Flight nurses—and in particular, CFRN-certified flight nurses—are among the most sophisticated and highly trained individuals in the nursing profession. They care for the sickest and most vulnerable patients in highly dynamic, often unpredictable environments, and at altitude. Their patients span all ages, and when their pager goes off, they need to be prepared for anything. If necessary, they are authorized to initiate advanced medical procedures typically performed by physicians. Flight nurses work in austere environments, tolerating weather and temperature extremes, enduring high noise levels and confined spaces, and facing risks — yet they must remain calm and focused.

Due to space constraints, most flight teams consist of three members: a pilot, whose sole responsibility is a safe and efficient flight, and two clinicians, typically a nurse and a paramedic (and for certain pediatric transports, a physician and a nurse). While today's air medical aircraft are well-outfitted with compact and portable versions of essential equipment and supplies found in emergency rooms, trauma centers and critical care units, plus a substantial pharmacy, space and weight constraints limit what is available on board, necessitating resourcefulness and wise decision-making.

Air medical transport teams operate in a variety of civilian and military settings—including hospitals and trauma centers, independent medical transport agencies, fire departments, search and rescue organizations, and in most branches of the military and reserves—where they are most often deployed overseas to rescue and transport ill or injured soldiers from non-combat and battlefield locations. Scene transports often include motor vehicle and transportation accidents, workplace and industrial accidents, search and rescue endeavors, and natural disasters, as well as mass casualty incidents, and in recent years, pandemics.

Preparation That Goes Above and Beyond

Flight nurses, along with their flight team partners, have many responsibilities, with safety being the top priority. Throughout the profile of a patient transport, the flight nurse and their clinical partner must assess, triage and determine the appropriate treatment for the patient's illness or injury. Along with this treatment plan, the

flight nurse must also possess a mastery of advanced procedures they may be required to perform including endotracheal intubation, chest tube insertion, central line placement, and ventilator management, as well as the administration and titration of vasoactive medications, to name just a few.

Because they must be able to confidently, expertly, quickly and often independently initiate care, the best flight nurses maintain mastery of the flight nursing body of knowledge, possess exceptional clinical judgment and advanced assessment and intervention skills, and are effective communicators, collaborators and leaders.

In the lead up to being hired as a flight nurse, and as they prepare to earn their CFRN, nurses typically are required to have at least three to five years of bedside critical care or emergency experience, while taking a panoply of courses on advanced life support for all age groups, plus trauma and neonatal training. Some states require that flight nurses also be emergency medical technicians (EMTs) or paramedics. Nurses who work for transport programs accredited by the Commission for Accreditation of Medical Transport Systems (CAMTS) are required within two years of hire to hold a *transport-specific* board certification,[3] with the CFRN being preferred for flight nurses treating patients of all ages.

Multi-tasking at a Whole New Level

As highly committed professionals, flight nurses dedicate their non-flight hours to maintaining the currency of their expansive and complex clinical and technical knowledge, which includes emergency, critical care and trauma topics as well as flight physiology, flight safety and survival skills. They regularly practice advanced procedure skills. They also perform daily aircraft and equipment checks. And they are integrally involved in planning, preparing for, and managing each transport, from the moment the pager goes off through the handoff at the receiving facility.

Before, during and after each flight, flight nurses play a crucial and multi-faceted communications role. While tracking conversations on multiple aviation radios piped into their helmet, they comfort and communicate with their patient, coordinate every activity with their clinical partner, interact with the pilot, and update the receiving facility. It is not unusual for flight nurses to also play a supporting role with navigation, particularly during inclement weather and during critical phases of flight such as takeoff and landing.

Aeromedical Transport & Flight Nurse History

Following the advent of flight in 1903, the French engineered the first successful aeromedical evacuation in 1915 during World War I. The U.S. completed its first successful air medical evacuations in 1926 in Nicaragua, and the first civilian air medical plane service was established in 1928 in Australia. Helicopters were first used to evacuate a patient in 1944 during World War II and came into wide use during the Korean War. A special helicopter unit "with the express purpose of patient evac from the front lines to the Mobile Army Surgical Hospitals" was soon formed. The first hospital-based helicopter medical program was established in 1972 at the Loma Linda Medical Center in California. Later that year, St. Anthony's Hospital in Denver started the Flight for Life program, which is now the longest-running hospital-based flight program in the U.S.[4]

Because the early civilian air medical programs were hospital-based, nurses were among the original flight care providers. Today, flight nurses have a central role. As these air medical programs expanded throughout the country during the 70s and 80s, the unique scope and practice requirements of flight nurses was increasingly recognized, and the specialty role and discipline of flight nursing took shape.[4]

Melding Flight and Emergency Expertise

In July 1991, BCEN and the National Flight Nurses Association (NFNA), the precursor to today's Air & Surface Transport Nurses Association (ASTNA), entered into a partnership to jointly develop the first transport-specific nursing specialty certification. The collaboration, described by BCEN as demonstrating "a visionary commitment to enhancing patient care,"[5] was encouraged and supported by the Emergency Nurses Association and AAMS.

Flight nurses, as ASTNA confirms, needed "a mechanism by which competence in the knowledge base essential for safe, high quality critical care transport nursing practice can be identified by employers, patients, regulatory agencies, third-party payors, and the public at large."[6]

Also in 1991, with the dual mission to improve patient care and transport safety, CAMTS's precursor, the Commission on Accreditation of Air Medical Services, led by a flight nurse, began to audit and accredit air medical transport service providers. CAMTS was the first in the world to publish comprehensive standards for medical and aviation components of air medical service and also the first to develop accreditation for air medical transport. Today, there are 164 accredited services that in total operate many hundreds of helicopters, airplanes and ambulances.[7]

In July 1993, the CFRN certification program was jointly introduced by BCEN and NFNA, with BCEN operating the certification program going forward. Heralded by the industry as "a dream come true,"[8] 570 nurses sat for the first CFRN exam. Over the next decade, the number of certified flight nurses grew well into the thousands, and in 2007, the CFRN program earned initial accreditation by the American Board for Specialty Nursing Certification (ABSNC). Then in February 2009, the CFRN also became a Magnet®-accepted certification program.

CAMTS, which has recognized the CFRN since its 1993 introduction, moved from strongly encouraging nursing specialty certification in 2008 to requiring it within two years of hire in 2010. As of 2023, CAMTS requires RNs to hold a *transport-specific* board certification.[3]

CAMTS' farsighted and keen commitment to national specialty board certification is grounded in valuing all that goes into earning a professional credential. CAMTS describes the significance of national specialty board certifications such as the CFRN as helping to "ensure the health, safety, and welfare of the patients we transport."[9]

CFRNs Today: Recognized, Respected & Valued

Today's 5,800 and counting CFRNs practice in the U.S., Puerto Rico, Australia, and Canada, and also worldwide through U.S. military branches. BCEN's steadfast commitment to supporting transport nurses and the specialty grows ever stronger. Each year, BCEN brings focus and national recognition to the flight nursing specialty by honoring a top flight nurse with the Distinguished CFRN Award. BCEN also offers ASTNA members a substantial discount on initial certification and recertification fees, and annually funds more than a dozen nursing and paramedic-to-nurse academic scholarships for ASTNA members.

Likewise, ASTNA's support for BCEN's flight nursing certification conveys why transport professionals and the transport industry at large so highly regard and value transport nursing specialty credentials. Specifically, ASTNA endorses the CFRN as "a validation of mastery of the knowledge base required for out-of-hospital practice, as well as a means for promoting quality patient care."[10] In addition, ASTNA recommends that "… specialty certification in critical care transport nursing should be a part of individual professional development models and program accreditation standards."[10]

In 2023, the first CFRN value of certification study published in *Air Medical Journal*.[11] Flight physiology and flight nursing clinical knowledge, confidence and a sense of pride and accomplishment topped the list of perceived benefits of CFRN certification. Journal co-editor Eric Swanson, MD, FACEP, said, "As the air medical transport community prepares to mark a milestone in our commitment to excellence, safety and advancing patient care … *Air Medical Journal* is pleased to present this important research."

Recognition of the CFRN certification program, and respect for the extraordinary nurses who earn the CFRN, is rooted in 30 years of excellence, compassionate care, innovation, and accomplishment. When it comes to ensuring patients get high quality air medical care when they need it the most, CFRNs will lead the way in delivering—and advancing—nursing excellence in the air for many more decades to come.

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Published February 2021. Updated July 2023.

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To learn about critical care ground transport specialty certification, read *Grounded in Excellence: the Certified Transport Registered Nurse (CTRN)*.