



Notes from the Chair: Do We Need a Second Credential?

by Steven E. Sittig, RRT

Should RTs on transport be dual credentialed as EMTs or paramedics? This subject recently came up at the pediatric transport program here in Rochester, MN.

Despite being a non-dedicated team, several important changes at the Mayo Clinic's Children's Hospital allowed us to reduce a 20-minute response time to 5 minutes. Because of this significant improvement, hospital leadership asked us to undertake the interfacility pediatric trauma transports, which were previously done by the adult flight team.

Realizing that trauma requires a different mind set, we set out to obtain added knowledge in assessment and stabilization of trauma patients. Even though the backboards and c-collars are in place by the time the transport team arrives at the referral hospital, we needed to be more familiar with applying these precautions and assessment of the trauma patient.

One of the first things we did was take the Trauma Nurse Core Curriculum course. Then, in order to meet state regulations it was felt we should also achieve a minimum of the EMT-basic. The normal EMT basic course takes 120 hours. But some medical professionals, such as physicians, physician assistants, and registered nurses, may challenge the course by taking a 24-hour condensed course, followed by the national registry exam. As RRTs, we were able to take the 24-hour class, but were unable to take the national certification examination. Since we spend 90% of our clinical time with all sorts of critical patients, from surgical to medical to trauma, my colleagues and I thought this was an outdated regulation. Why should we be treated the same as any average

Continued on page 3

A View From the Other Side Part 2: Our CAMTS Survey

by Thomas J. Cahill, RCP, RRT, EMT-P

EDITOR'S NOTE: In the last issue of the Bulletin, Tom shared his recent accreditation experience. In this article, he tells us more about the folks who make the decisions.

So, who is involved in the accreditation decision? Everyone from the executive director, board reviewers, and site surveyors to the entire board of directors helps to determine whether a team meets the qualifications. The process takes about 210 hours per program.

Board members are appointed by their member organizations for a minimum of two years and serve on a voluntary, unpaid basis. They receive an orientation manual and guidance from the person they are replacing as well as from a resource person with many years experience in the flight team community. That person is Eileen Fraiser, executive director of CAMTS. The board consists of members from 16 organizations, including the Air Medical Physicians Association, Association of Air Medical Services, Air & Transport Nurses Association, and, of course, the AARC. Site surveyors include pilots, administrators, medical crew members, and mechanics. The thing they all have in common is a minimum of four years of experience in the air medical field. They must also complete the site surveyor training program, which provides them with scenarios, situations, and ideas on how to properly conduct a survey, review a PIF, and interview personnel. To maintain their status as reviewers, surveyors must perform a minimum of two surveys per year and pass an audit by the lead surveyor.

So now you know about the team and the process. For further information you can always go to www.camts.org. ♦

Intravenous Therapy Assessment in Transport

by Steven E. Sittig, RRT

The transport of critically ill patients hardly ever occurs without the establishment of intravenous access (IV) for fluid and/or medication administration. Placing the IV was once considered a skill only a physician, nurse, or medic could accomplish. But many transport RTs are now learning this skill as well. Placing IVs is within our scope of practice in many states, and I have yet to find a pediatric or neonatal transport nurse who would argue against another set of skilled hands in the placement of this valuable access.

Placement of IVs requires a steady hand and practice. Maintaining IV access in children is especially fraught with problems because IV catheters only remain in place on average 2-3 days.¹ Insertion of an IV is a painful procedure, and children who have experienced a failed attempt are especially wary. In the hospital it may be possible to use a local anesthetic such as EMLA or lidocaine to reduce the pain of cannulation. Unfortunately, in the transport environment, we rarely have the time to wait for these agents to work.

Once IV access has been obtained, the team must continually assess the site for problems. IV fluids can be categorized as either nonvesicant (nonirritating to tissue) or vesicant (irritating). The infusion of nonvesicant fluid into the surrounding tissue is termed an infiltration, while infusion of a vesicant is called an extravasation.^{2,3} Vesicant fluids have chemicals that cause tissue damage and possible necrosis.⁴ Therefore it is imperative for the team to understand the classification of the IV fluid and what occurs if the IV becomes dislodged.

Fortunately, infusion pumps used in transport will alarm if the IV is not functioning correctly. Still, frequent visual inspection is the best prevention for complications. Look for a

Continued on page 3

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Congratulations!

Congratulations to the RRT/RN transport team from Shriners Hospital for Children-Cincinnati for winning the Association of Air Medical Services' Fixed Wing Award of Excellence 2003. The team, which was founded in 1988 and previously won the AAMS Fixed Wing Safety Award for expert management of airways in pediatric burn patients, consists of ten RRTs and ten RNs. The 2003 award marks the first time AAMS has honored a fixed wing team with its Award of Excellence. The team competed with 150 other teams across the country to capture the top honors. ♦



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David Grant USAF Medical Center Critical Care Air Transport Teams: A New Breed of Global Ready Medical Professionals



by Austin E. Delacruz, Jr., RRT-NPS, RPFT, RCP

The U.S. Air Force maintains an elite group of military medical professionals to respond to emergency critical care air transport needs. Members of the USAF's Critical Care Air Transport Teams (CCATT) are highly educated, skilled, and trained to transport critically ill and injured patients anytime, anywhere around the globe. Equipped with the most advanced and sophisticated medical technology, the CCATTs support the existing USAF Aeromedical Evacuation System.

CCATTs are composed of a physician, a nurse, and a cardiopulmonary technician/respiratory therapist. Potential team members must meet the CCATT Course eligibility requirement to be selected to attend the formal training at Brooks Air Force Base School of Aerospace Medicine -

Physicians must:

1. Be current in Advanced Cardiac Life Support (ACLS).
2. Have completed Advanced Trauma Life Support (ATLS), although current certification is not required.
3. If intensivist, meet one of the following criteria:
 - a. Emergency Medicine Physician
 - b. Anesthesiologist
 - c. Fellowship trained critical care medicine (CCM) physician (such as Pulmonary CCM and Surgery CCM)
4. If non-intensivist, meets one of the following criteria:
 - a. Credentialed in a special care unit.
 - b. Worked in Level II or higher emergency department.
 - c. Worked in post anesthesia care unit or operating environment.

Nurses must:

1. Complete ACLS and Trauma Nurse Critical Care Course (TNCC) or equivalent.
2. Have worked in critical care or special care unit, emergency department, or post-anesthesia care unit within 2 years of course start date.
3. Have worked for a minimum of 1 year in one of the above areas.

Cardiopulmonary/Respiratory

Therapists must:

1. Attend and pass ACLS.
2. Have 1 year critical care experience.
3. Receive annual training in an intensive care unit.
4. Have worked with ventilator patients within 1 year of course start date.

The Training: The CCATT Course is divided into 4 categories -

1. Doctrine (CCATT and Aeromedical Concepts, Expeditionary Medical Support, etc.)
2. Altitude Physiology (Stresses of Flight and Altitude/Hyperbaric Chamber Rides, etc.)
3. Clinical (covers topics on patient flight physiology, acute respiratory failure, mechanical ventilation at altitude, hemodynamic monitoring, burn management, clinical issues on transport of medical and trauma patients)
4. Operational (covers topics on transport pharmacology, air crew resource management, flight line safety, aircraft familiarization, oxygen therapy systems, transport bags supply and resupply, infection control, litter/gurney loading, and equipment configuration, etc.) ♦

TIME IS SHORT!!!!

With the arrival of this Bulletin, we have precious little time to reach our goal of 350 members - the level required by the AARC Board of Directors for us to remain a stand-alone specialty section. THE DEADLINE IS DECEMBER 31. If every current member could recruit just one new member we could meet this challenge. So look around at your coworkers, and if they are not members, please encourage them to join. Current AARC members can add the section to their membership package by going to: <https://secure.aarc.org/sections/>. Nonmembers can join both the AARC and the section by clicking on the "Join or Renew" button on the top right hand corner of the front page on www.aarc.org. ♦

A Respiratory Care Perspective from the Transport Team at Kapi'olani Medical Center for Women and Children

by James (Kimo) Calhoun, RRT, NPS, Honolulu, HI

The RN/RT transport team at Kapi'olani Medical Center started from humble beginnings in the mid-1970s, with an Air-Shields isolette, warm blankets, and hand-ventilation the initial tools at the team's disposal. By the mid-1980s, we progressed to a core team of NICU/PICU nurses, respiratory therapists, and residents who were on call to cover any potential transport calls that came in. The training of nurses and respiratory therapists for a formal RN/RT transport team to service the island state of Hawaii began in earnest in November 1989.

Thanks to many advances since then, the team is now comprised of RN/RT team members who are in-house for immediate transport coverage, with a back up team on call. In 2002, the team performed 403 neonatal and pediatric transports. Our initial orders for transport come from the attending NICU or PICU physician. An initial care plan outlined by the physician is carried out by the team, with assessment and evaluation completed by team members while on transport. The team maintains close contact with a neonatologist



or PICU intensivist, and a continuing plan of care for transport is based upon the team's assessment and evaluation of the patient.

Training for all RT transport team members mirrors the training nursing receives. An in-depth classroom program covers treatment of the critical newborn, with topics ranging from RDS of prematurity to PPHN and diaphragmatic hernia.

A rotation through the NICU and PICU with a unit RN follows the classroom program. In this rotation, the therapist assumes a clinical role of care to the newborn and pediatric patient under the guidance of the unit RN. The training culminates with a one-month rotation in the NICU. Under the direct guidance of the neonatologist, the RT assumes care for the critically ill newborn, much like a physician resident in training. This experience provides the RT transport team member with the opportunity to obtain the skills and critical thinking ability necessary to perform autonomously in the outlying facilities. The rotation also includes opportunities to obtain skills in endotracheal intubation and umbilical artery/vein catheterization, which are required for transport certification. Proper fluid management, pharmacology, and radiographic interpretation are covered extensively as well.

Not surprisingly, RTs are responsible for medicated aerosol delivery, mechanical ventilation, obtaining ABG/CBG for blood gas analysis done by i-STAT, and surfactant administration and nitric oxide delivery as indicated for our transport patients. However, the training also consists of competency in the operation of the transport syringe pumps, arterial line set up, and IV access and assessment. These skills allow the team to function more efficiently and decrease transport time. Assessment of the newborn is emphasized throughout the rotation and provides the therapist with a more concise global picture of the critically ill infant.

After several observation transports, a certification process begins. The "new" transport therapist is observed as he manages a critically ill newborn on transport. RTs become certified for transport after they have completed three certifying transports. An acuity tool is used to measure qualifying acuity of the transport patient on these three transports (two of which must be of moderately high acuity and one severely high acuity). Annual training includes an animal lab exercise and a two week internship in the NICU, both of which are

Continued on page 4

Continued from page 1
NOTES FROM THE CHAIR

person walking down the street with no medical background?

Here in Minnesota, we are planning to go to the state EMS board, and, if necessary, to the national EMS board, to get this regulation changed. We could then take the 24-hour course and become credentialed as EMT-basic providers. Showing our educational background, clinical experience, and national registry will be the key to challenging this regulation.

So, do we need a second credential? Maybe. It would surely help increase our presence on more transport teams, especially in pediatrics, not to mention our overall marketability. ♦

Continued from page 1
INTRAVENOUS THERAPY ASSESSMENT IN TRANSPORT

swelling around the IV site or the leaking of fluid from the tissues around the catheter insertion site. The skin surface will feel cool to the touch because the infiltrated fluid is generally cooler than the skin's surface. As the skin cools it appears blanched. If an infiltrate is suspected, palpate around the site for swelling or tenderness, and compare the site with the opposite extremity. I have often seen staff try to aspirate blood from a suspected infiltrated IV as a sign it is still patent. There are several confounding factors that may lead to false positives using this technique. You might aspirate blood from a hematoma that formed after the vessel ruptured or only be partially cannulating the vein. In young children the catheter may be very close to the size of the vein, possibly decreasing the chance of blood being aspirated.⁴

Due to the frequent moving of the patient from bed to stretcher to transport vehicle, repeated assessment is imperative. Limited access to the patient in the transport vehicle must be considered, and every effort should be made to continue assessment of the site until you reach your destination. It is far better to protect and save a site than to risk having to start another one while bouncing down the road at 70 miles per hour, or in the limited space of the helicopter cabin.

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Continued from page 3

A RESPIRATORY CARE PERSPECTIVE FROM THE TRANSPORT TEAM AT KAPI'OLANI MEDICAL CENTER FOR WOMEN AND CHILDREN

overseen by our neonatologist/medical director. Currently, all of the respiratory transport team members have successfully completed the NBRC Neonatal/Pediatric Specialty Exam and keep NRP and PALS current. The team is actively involved in the medical community, with most team members teaching NRP and PALS within the facility and at outlying hospitals. This training has provided our therapists with a rewarding educational experience and has added a valuable perspective they can carry with them while on transport and beyond. It has also increased our visibility as an integral team member in the care of critically ill newborn and pediatric patients.

Since Hawaii is an island state, a large portion of our transports are completed via fixed wing aircraft. This is done with the help of Hawaii Air Ambulance, which currently uses medically equipped Cessna 414s. For patients who need transport to the mainland for treatment not currently available in Hawaii, we utilize two methods. For critically ill patients, we use medically configured jets from the mainland. Time permitting, stable patients are transported via commercial carriers (with an RN/RT) to reduce costs. A physician usually accompanies the team on mainland transports for critically ill patients.

We have a dedicated and committed respiratory care team at Kapi'olani Medical Center for Women and Children. Besides being a partner in the transport team, we attend all high risk deliveries and are an integral part of the code blue team. We have a constant presence in our NICU and PICU and manage all blood gas analysis. We are also closely involved in the management of all patients who require conventional mechanical and/or high frequency ventilation. Thanks to the team's willingness to step up and assume greater responsibility in the increasingly complex management of the critically ill patient, our role continues to grow.

As I look back on the many transports I have been on, one transport to the Big Island sticks in my mind. I happened to be sitting in the copilot seat, probably because of a weight distribution issue. The clouds in the distance didn't seem particularly inviting, and as we headed into the storm, rain began to beat on the windshield, becoming so heavy and loud that the noise was deafening. The cockpit was a dark gray and the pilot was staring intently ahead with his hands on the wheel. Just then, as if my prayers had been answered, there was a patch of blue ahead of us. Almost as quickly as we had entered the gray abyss, we left it behind, and to our right was Waipio Valley, which is located on the northern windward coast of the Big Island. The view could only be described as heaven on earth. The walls of the steep valley were a velvety green and the blue Pacific mirrored the coastline. The clouds appeared as big cotton balls suspended motionless above the island. The memory of this beautiful sight and the wonderful experiences I have had on many transports remind me why I do what I do. ♦