Resource Panel Update: We Need You!

We will be mailing an updated version of our Resource Panel Directory with our January-February issue and would like to include as many new names as possible. If you are interested in volunteering to serve as a resource for your peers in the section — or if you need to update your contact information from a previous listing — please fill out the following form and send it to: Kelli Hagen, AARC, 11030 Ables Lane, Dallas, TX 75229. All information received by December 20 will be included in the new directory.

Name __________________________________________ Title ______________________________________
Hospital / Program _______________________________________________________________________________________
Address _______________________________________________________________________________________________
City / State / Zip ___________________________________________________________________________________________
Phone ___________________________ Fax ___________________________ e-mail ______________________________

Area of transport knowledge:
_____ Transport Ventilators _____ Flight Physiology _____ Rotor Wing issues
_____ Transport equipment _____ Team Development _____ Fixed Wing issues
_____ On board oxygen systems _____ IABP transports _____ Neonatal Transport
_____ Scene responses _____ HFV / HFO transports _____ Pediatric Transport
_____ Expanded Roles _____ Ground transport _____ Adult Transport

Other __________________________________________________________________________________
________________________________________________________________________________

CAMTS Representative Needed

Jerry Focht, our long-time representative to the CAMTS Board of Directors, will soon be vacating that position. We are currently looking for a replacement. If anyone is interested in representing the AARC three times a year at the CAMTS board meetings, please contact Jerry at (800) 572-3210 ext. 2, or focht@arias.net. The AARC and CAMTS provide funding for this position.

CAMTS Accredited Transport Services

The following list contains programs accredited by CAMTS.
* = Reaccredited/RW= Rotorwing/FW= Fixed Wing/G= Ground Critical Care

AeroCare — Lubbock, TX  RW/FW  AIR TREK — Punta Gorda, FL  FW  Angel Flight — Little Rock, AR  RW
*Air 1 — Tyler, TX  RW  *AirEvac for Tulsa — Tulsa, OK  RW/G  * + Butterworth AeroMed — Grand Rapids, MI  RW
*Air Evac Services, Inc. — Phoenix, AZ  RW/FW  AirLife of Greeley — Greeley, CO  RW  * CareFlight — Dayton, OH  RW
Air Med Team — Modesto, CA  RW  Airlift Northwest — Seattle, WA  RW/FW  CAREFLIGHT — Lexington, KY  RW
AirMed — Salt Lake City, UT  A Allegheny Life Flight — Pittsburgh, PA  RW/FW  *CareFlite Dallas — Dallas, TX  RW/FW
The following position is now available:

Internet Coordinator: Responsible for monitoring section and AARC web site and bulletin boards, alerting section chair of postings that require an answer, and posting answers as appropriate. Would monitor other web sites that may be of interest to the section membership or benefit from an AARC link. Develop new ideas for the section web site. For information or to apply contact Kathleen Adams, chair, Transport Section, AARC at (909) 824-0800 ext. 43809 or e-mail: kadams@ccmail.llumc.edu
Notes from the Chair
by Kathleen Adams RCP, RRT

As I sit down to prepare these “Notes,” I realize that this is the last time I will write this column. When it comes time to work on the next issue of the Bulletin, I will have passed the gavel on to your new section leader, Jerry Focht.

As I look back over my last two years as section chair and the year and a half prior to that that I spent as chair-elect, I see some positives that have occurred for our section that may be easily overlooked but really should not be. While they are simple things, they are the types of efforts that this section must continue. Efforts such as working towards the safe use of iNO on transport and increasing awareness of RTs in the industry through our active participation in programs such as the Critical Care Transport Medicine Conference, the Air Medical Transport Conference, government task forces on the future of critical care transport, and the Critical Care Medical Crew Curriculum revisions. While we try not to dwell on the subject, we must also remember that this again, has not been a really good year for the medical flight industry. We have lost many colleagues due to crashes. This section should also become more involved in working towards increasing the safety of the industry.

Clearly, many challenges await RTs working in the transport industry. Managed care, health care reforms, and the Balanced Budget Act will all continue to force programs to review their operating costs in order to remain not only competitive but solvent. Each one of us, as well as the AARC leadership, must be vigilant and work to show the value — and thus the cost effectiveness — of staffing an RT as part of the team. The groundwork for an outcome study is being laid as you read this issue of the Bulletin. But the bottom line is that proving what RTs can bring to a program depends on the actions of the individual RTs themselves. This means you, the reader and section member.

With that in mind, I’d like to quote a song verse that, paraphrased, states “no man is an island.” This goes for transport RTs as well. We must continue to build working relationships with the other organizations involved in transports. This is best done through AARC alliances with these other organizations. As a section we must continue to enlighten and inform the AARC leadership of the struggles we face so that we can use the backing and strength of the AARC as we face the challenges of the future.

The first thing this section can do to work towards that end is to increase our membership numbers. I cannot emphasize this point enough. There truly is strength in numbers. We have to let not just the AARC leadership, but also the transport industry, know that we are out here and in significant numbers. We must show everyone that we care enough about our profession, our chosen industry, and our patients to be active in our professional organization. Just being an AARC member is not enough. This section must grow!

While it must seem that I am preaching to the faithful, only you who are current members can get those numbers up. At the beginning of the year I challenged each one of you to recruit three new members for the section. We did get a fair amount of new members, but not nearly enough at last count. Remember, in order for our section to gain a seat on the AARC Board of Directors, where our voice can be heard most clearly, we must be able to maintain
a membership of 1,000 or greater.

I must say that it has been an honor to work for and represent all of you for the last two years. As I have said before, the best part of this job is the chance to communicate with so many of you, whether it be by phone, e-mail, or in person. I think RTs in general are a great bunch of people, but transport RTs are truly special in their dedication and commitment. There are not many who would make the sacrifices and take the risks we do to care for critical patients. I hope many

of you will choose to take up the challenges I have presented and take an interest in serving the section. On that note, I leave us all in the very capable hands of Jerry Focht.

As always, I wish you all smooth roads and soft landings.

In the fall of 1980, respiratory therapy was invited to help form a formalized neonatal transport team here at Mayo. Six respiratory therapists and nine neonatal nurses began taking classes to prepare for outreach transport of sick newborns. Nearly two decades later, the involvement of respiratory therapists in the care of critically ill newborns and children here at the Mayo Clinic continues to grow. In 1992 a specialized pediatric transport team was formed. Currently, there are ten trained pediatric respiratory therapists who staff the pediatric and neonatal transport teams along with providing coverage to both the PICU and NICU. Eighty percent of our transport staff are perinatal/pediatric specialists, as is our immediate supervisor. It is a very rewarding area in which to work, and it provides many challenges.

The team configuration here at Mayo consists of a pediatric or neonatal transport nurse and one of the pediatric respiratory therapists. All transports are conducted under specific physician-approved protocols. At any time during transport, we can contact consultant staff by phone, radio, or in the case of long distance transports, by satellite communications in the dedicated fixed wing. In cases of very critically ill children, we can be accompanied by consultant physicians.

Initially, the only means of transport available to us was ground ambulance. We now have fixed and rotor wing aircraft at our disposal, along with ground ambulance. Our fleet includes a Beech King Air 200 turboprop airplane and two BK 117 helicopters. For longer distance transports, we utilize a medically-configured Citation jet. In case of an international transport, a Lear 35RX or 36RX, or a British Aerospace Hawker jet can be dispatched. We can also do commercial medical flights.

Training

Training of the transport therapist starts with formalized lectures on subjects such as congenital cardiac malformations, surgical emergencies, seizures, and pharmacology. Patient assessment and appropriate interventions are covered as well. Consultant staff physicians teach these classes.

The role of the pediatric therapists in the PICU and NICU is very involved, allowing a lot of opportunity to fine tune clinical skills such as intubation, peripheral IVs, arterial line placement, and hemodynamic...
monitoring. Assessment skills are stressed, as they are one of the cornerstones utilized during patient transport. Every effort is made to give new transport staff adequate experience with procedures, including intubation utilizing sedatives and paralytics. Transport therapists do not themselves administer these drugs but must be capable of and comfortable with calculating appropriate dosages.

Along with clinical time in the two ICUs, the new transport therapists are given formalized safety training on all aircraft. They also spend a couple of days flying with the adult flight nurses on the helicopter to become familiar with the aircraft and its operation. New transport therapists also “ride along” on multiple transports during their training to experience the transport environment and patient care in this situation. Once it is felt that the new staff person is ready to be dispatched on his own, the medical directors of each respective transport team review the documented skills and training. They then give their approval, and the new staff person is put into the transport rotation. This rotation includes a week of transport call. This additional call is in place so that we may provide trained staff for two simultaneous transports and still provide specialty ICU coverage.

This call backup system also allows us to provide pediatric code coverage within the medical center here at Mayo. The transport therapists are the primary airway management specialists for pediatric/neonatal codes.

Ongoing training

All transport staff must keep current certification in Pediatric Advanced Life Support (PALS), Advanced Cardiac Life Support (ACLS), and the Neonatal Resuscitation Program (NRP). We are required to provide quarterly documentation of intubation skills. These intubations may occur on transport, in the ICUs, or with an intubation mannequin. If needed, an animal lab (either a cat or small pig) is provided quarterly to help assure competency.

Each transport team meets either monthly or every other month with the team’s medical director. In these meetings the transport staff and medical director review the records of the transports and discuss any concerns. Typically, the medical directors then give a short lecture on a disease pathology or review of transport protocols.

The pediatric transport team also has an annual skills lab with small pigs which approximate the size of a toddler. In this lab we are afforded experience with laryngeal mask airways (LMAs), femoral central line placement, chest tube insertion, interosseous needles, and needle cricothyroid ventilation.

In addition to staffing the PICU/NICU and transport services, some transport therapists teach Pediatric Advanced Life Support or do outreach education to surrounding hospitals. Among the subjects we cover is pediatric respiratory diseases and treatment, which is a two-hour presentation. We also give a talk on newborn airway management and mechanical ventilation. Teaching these classes is a great way for us to keep in touch with outlying facilities and project a positive image of our children’s hospital and respiratory therapists. I, myself, have had several instances when outlying staff recognized me as having given them a lecture in the past when I was at their facility on a transport.

Types and numbers of transports

Our numbers seem to increase every year, especially with pediatric transports. Here at Mayo, we do a lot of complex pediatric/neonatal congenital cardiac repair cases, along with cardiac transplant. Our flights range from as close as the Minneapolis/St. Paul area (about 80 miles away) to as far away as Hong Kong.

We often attend the deliveries of high-risk and multiple premature births. It is not uncommon for us to do the intubation and assist with umbilical line placement. We have found this very beneficial in keeping our assessment and clinical skills sharp. Every effort is made to “cross cover” a lot of the duties that occur in transport. For example, transport nurses are familiar with such skills as intubation and giving medicated aerosols, while the therapists can assemble IV tubing, draw up standard IV fluid, and program the IV pumps. This sort of “cross coverage” is very helpful, especially on long flights with critically ill children.

True team effort

Here at Mayo, respiratory therapists fill a very advanced role in the transport and treatment of critically ill children and newborns. We feel we have a very unique practice encompassing many advanced patient interventions. All this was earned over time by a small group of highly motivated and dedicated respiratory therapists. Our direct interaction with physicians and nursing staff has led to a very rewarding job. In the tradition of the Mayo group practice philosophy, all of us are part of a special team where everyone’s clinical skill and knowledge are put together in a true team effort for the critically ill child.
First Responders May Benefit from Virtual Training

In the emergencies of tomorrow — when rescue personnel may need to triage and treat mass casualties following release of a nerve agent in a shopping mall, theme park, or subway, for instance — there will be no second chances. Rescuers who become victims of a terrorist attack can’t save lives.

Soon EMTs and firefighters may be able to practice responding to such attacks using a virtual reality (VR) training tool under development at the Department of Energy’s Sandia National Laboratories. Sandia computer scientists have combined seven years of virtual reality research into BioSimMER, a VR application that immerses first responders in a 3-D world that is a representation of a real place with representations of real people moving in real time. Everything in that world must move and respond as if it was real and bound by the laws of physics.”

Creating a virtual world with such physical realism does require some tradeoffs, she says, but the ultimate goal is to create a suspension of disbelief. “You’ve got to make the player believe, at least temporarily, that they are in the situation you are presenting to them,” she says.

The airport used in BioSimMER is a fictitious one-story, three-gate airport based loosely on a real airport in central New York. The research team modeled how the airborne biological agent would spread through the airport following an explosion that dispersed the agent.

More than 20 first responders got their first chance to test drive BioSimMER at the National Emergency Response and Rescue Training Center at Texas A&M University in July.

“This is the world we’re training to work in and respond in, Stansfield says, “in highly contaminated or highly stressful situations.”

Development of BioSimMER was funded by the Defense Advanced Research Projects Agency (DARPA). BioSimMER also builds on previous Sandia virtual reality work, including applications for training battlefield medics and for law enforcement small-teams tactical training.

Although BioSimMER is a research prototype, not a finished product, the researchers hope to continue development and refinement of the system and scenarios, with the goal of making a version of BioSimMER available to the user community in the not-too-distant future.

Currently, they are working on making the user’s interaction with the BioSimMER virtual world easier and more realistic with funding from DOE’s Office of Science and Technology Pilot Projects in Biomedical Engineering Program.