



# EMS NEWS

DECEMBER 2004

VOLUME 19

ISSUE 6

## INSIDE THE CRITICAL CARE TRANSPORT PROGRAM

### Alameda County CCT-P Program: A Model for the State

By Bill Sugiyama, EMT-P

It is a dark and stormy night and a local hospital has requested a critical interfacility transport from their ICU to a neighboring facility. The patient is a 64-year-old male post myocardial infarction, being transported for coronary artery bypass grafting. The patient currently has a heparin drip, a nitroglycerine drip and has received tPA and lidocaine therapy prior to your arrival. A repeat 12 lead ECG is being performed and blood gases and ventilator settings will be given to you upon arrival.

In Alameda County before 2001 a paramedic response to this request would not have been possible. The additional skill level and medical knowledge necessary to effectively transport this patient was beyond the scope of our ALS field paramedics.

To meet the ever growing need for qualified specialists in the area of critical care inter-facility transfers, Alameda County in cooperation with American Medical Response, adopted and began to utilize the University of Maryland Baltimore County Critical Care Emergency Medical Transport Program.

Essentially, the course is "post graduate education" for the ALS paramedic. The training program consists of 10 modules totaling 80 hours with specialty concentrations ranging from portable ventilator utilization to expanded pharmacologic management to advanced anatomy

and physiology.

Alameda County requirements for the CCT-Paramedic (CCT-P) are:

- ✓ Current and valid California Paramedic License.
- ✓ Current accreditation in Alameda County.
- ✓ At least two years full-time experience as a paramedic in an ALS system.
- ✓ Current and continuously renewed provider status in BCLS, ALCS, PALS, PEPP, and PHTLS or BTLS.
- ✓ Successful completion of EMS Agency approved training and orientation programs specific to skills used on interfacility transfers.

Competency Standards are:

- ✓ Minimum of six shifts per quarter on a CCT-Paramedic Unit
- ✓ Completion of annual CCT-P competency skills testing
- ✓ Compliance with competency standards to maintain standing as an active CCT-P in Alameda County. Any variance requires approval of the EMS Medical Director.

The call volume has increased from 30–40 interfacility transports a month in 2001 to approximately 130–140 per month today.

Due to the success of this program, the State of California Emergency Medical Services Authority has modeled its recommendations for the paramedic advanced scope of practice for California after Alameda County's CCT-P medical guidelines. The CCT-P program has enhanced

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### CCT-P Program From the Field

by Michele Ross, CCT-P

In 2001, paramedics from Alameda County embarked on an uncharted interfacility transport program. The initial training was overwhelming but extremely exciting. Alameda County piloted a Critical Care Paramedic transport program, which up to 2001 had always been a Registered Nurse role. None of the paramedics could completely understand or realize how their new role would affect their overall patient care, and the interfacility transport needs.

Initially the call volume and the physical requirements were significantly less than for 9-1-1 medics. However, the mental requirements had significantly changed. Now paramedics were given complete history and physicals on patients, including lab values, medications, and procedure results. The need for knowledge of overall medical conditions increased significantly. The paramedics were no longer prehos-

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pital care providers, but part of the definitive care team. With that came a greater expectation of overall ability. They were expected to know how the hospital treatment plan was carried out, and to meld right in. The transition period was very sudden, and at times overwhelming and mentally exhausting.

The program was met with some resistance from the paramedics' colleagues. Some paramedic coworkers thought it was taboo to do "transfers." Some registered nurses felt their jobs were being taken away. Hospital staff also had to overcome the resistance to change. The crews heard many times, "You are just a paramedic, this patient has to have a nurse." The negative perception and hierarchical thinking between a nurse and a paramedic was alive and well.

The paramedics understood and accepted the misperception and did not take a defensive stance. As with all change, they knew acceptance would take time. Today, at some of the primary facilities paramedics have become common and accepted transport providers. So much so, that they are frequently requested and used as a first line choice.

The program has expanded allowing for individual counties to adopt reciprocity agreements. These agreements allow for out of county transports. This ability allows for a more efficient transport opportunity. It also prevents participants from having to obtain multiple county accreditations.

The Alameda County CCT program

the Bay Area in other ways. It is successfully strengthening relationships with other counties by further opening lines of communication, enhancing the sharing of ideas, and has help to begin the process of Bay Area regionalization of CCT-P services.

"The CCT-P program provides an important and essential service for our patients, hospitals, and paramedics," says Dr. James Pointer, Medical Director, Alameda County Emergency Medical Services.

For more information contact Bill Sugiyama at (510) 618-2033 ([william.sugiyama@acgov.org](mailto:william.sugiyama@acgov.org)) or go to the EMS website at [www.acgov.org](http://www.acgov.org), click on *Departments* then *EMS*. CCT-P policies can be found in the EMS Field Manual.

*"Working on a Paramedic/RN unit has been both a pleasurable and educational experience. The paramedic and the nurse compliment each other very well. The paramedics have enhanced my nursing practice and together we are able to provide an advanced level of service that is very beneficial to the patients we serve."*

Scott Lemmon, RN

has also begun to integrate paramedics and registered nurses. This integration has created a "P-RN" unit that is staffed with one paramedic and one RN. This configuration allows for both the paramedic and nurse to be primary caregivers depending on the level of service necessary for the patient. It also allows for both crewmembers to attend to the most critically ill patients simultaneously.

Overall, the Critical Care Transport Paramedic program has proven to be a viable option for both non-emergent and emergent interfacility transports. To date no adverse outcomes can be attributed to CCT-P transports.

## New faces at EMS

**Francell K. Haskins** joins EMS as the supervisor of Injury Prevention. Francell comes to EMS from the Office of the Director where she successfully coordinated a grant designed to enhance the working relationship between the health department and community organizations. Francell previously served as the director of two public health department programs, the Healthy Infant Program and Healthy Start. She has an undergraduate degree in physical therapy and a master's degree in hospital and health care administration. Francell ([francell.haskins@acgov.org](mailto:francell.haskins@acgov.org)) can be reached at (510) 618-2027.

**John Noe** is our new Information Systems Specialist. His responsibilities will include support of office computer systems and users. John brings a wide variety of knowledge and experience to the group. When not working, John enjoys spending time outdoors with his wife and dogs. Says John, "I'm excited to be working here. This is a small office but with huge responsibilities. I've met experts in fields ranging from bio-terrorism to child safety seats!" John is returning to county service after a three-year absence. He had previously worked for the Information Technology Department. John ([john.noe@acgov.org](mailto:john.noe@acgov.org)) can be contacted at (510) 618-2003.

**Leo Derevin** started at EMS after working as a mechanical engineer and then with databases and Electronic Data Interchange. As a Program Specialist at EMS, Leo will work with databases. His first project will be to determine how to unify data that EMS collects and to begin exporting PCR data into EMS databases. Statistical analysis will then be performed on the data and it will be fine-tuned to comply with federal and state requirements. You can reach Leo ([leo.derevin@acgov.org](mailto:leo.derevin@acgov.org)) at (510) 618-2046.



## The Golden Hour of Trauma

By Gregory P Victorino, MD  
Chief, Division of Trauma  
Alameda County Medical Center

Modern pre-hospital care probably started in the time of Napoleon who appointed Dominique Jean Larrey as the physician in charge of health care for his troops. Prior to this period, injured soldiers were often left in the field for days before they could be safely transported back to camp. Many of these soldiers died or were near death by the time they received medical attention. Baron Larrey believed that treatment of these soldiers in a more timely fashion would improve their outcomes. He was instrumental in developing a rapid-response carriage that he referred to as the "flying ambulance." These carriages went into the battlefield to pick up injured soldiers and bring them back to the field hospital. Trained medical personnel would ride with the ambulance to provide care both in the field and enroute back to the hospital. Baron Larrey established a pre-hospital care system that included many of the same philosophies we use today: 1) rapid access to the injured by well-equipped vehicles, 2) medical care in the field provided by trained personnel, 3) rapid transport to the medical center with continued provision of care enroute, and 4) open communication between pre-hospital and hospital personnel.

Today we now know that death from traumatic injuries occurs in a trimodal distribution. The first peak occurs within minutes after injury. Deaths during this period are due to severe injuries of the heart, aorta, great vessels or significant head or brain stem injury. Very few of these injuries are salvageable. The second peak occurs within an hour or two after

## Guest Columnist

injury. The deaths that occur during this period are usually due to ongoing hemorrhage. These injuries can include a ruptured spleen or liver, a severe pelvic fracture or massive hemothorax. The third peak occurs days to weeks after injury and is usually due to sepsis and multi-organ failure. Because the second peak of trauma deaths occurs within one hour after injury it has been referred to as the "Golden Hour of Trauma." The injuries resulting in death during the time are specifically the type of injuries that Regional Trauma Centers are designed to handle. It is our premise that trauma center treatment results in a significant decrease in deaths due to these injuries.

It is true today, just as it was clear to Baron Larrey during the time of Napoleon that the initial period after injury is critical to the outcome of injured patients. In Alameda County our standard field time is ten minutes and our transport time to the trauma center at APMC is also ten minutes. These are excellent results. These time periods reveal that more than one third of the "Golden Hour" is in the hands of our pre-hospital personnel. We rely heavily on the care you deliver in the field and enroute to the trauma center. The essential duties you perform are critical to care of injured patients. And our excellent patient outcomes at the Trauma Center are a testament to the excellent service the pre-hospital personnel in Alameda County provide. Finally, as Baron Larrey established many years ago, let's keep the lines of communication open. When you bring in a trauma patient, do not hesitate to pull me or the other trauma attendings aside and let's address any of your questions or concerns. Our collaborative efforts can only further improve our care of the injured patient.

## A Save in Castro Valley

On September 15, 2004 Alameda County Fire Engine 3444 and AMR Unit 552 responded to a private residence for a "non breathing infant."



Captain/Paramedic John McClintic and AMR paramedic Will Selling immediately went into action.

The infant was still attached to the mother by the umbilical cord but he was not breathing nor did he have a heartbeat. Paramedic Selling bagged the newborn infant while Captain/Paramedic McClintic clamped and cut the cord. With vigorous stimulation and 100% oxygen, the paramedic team assisted by AMR EMT Rivers Cullen, Engineer Pep Bauman, and Firefighter Stephanie Hinderer restored spontaneous circulation. After about 2 minutes of bagging, the child had agonal respirations at about 4 per minute. Upon arrival at Eden Hospital Medical Center, the infant was breathing about 10 times per minute and had a strong rapid heartbeat. The mother and child were taken immediately to labor and delivery.

Not only is this an example of exemplary care by our providers but also of excellent teamwork. Together, Alameda County Fire and AMR made the difference in the life of this young patient and his family.

## New Law Requires Kids to Ride in the Back Seat

Starting January 2005 new legislation requires children up to 6 years of age or weighing up to 60 lbs to be secured in the rear seat of a vehicle. AB 1697 recognizes the need for flexibility and includes a list of appropriate exceptions to the rear seat requirement. Data shows that one

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**What's New on the Web**

- Medical Health Status Form, and other disaster related forms and reference material.



January is . . .

Injury  
Prevention  
Corner

**Bath Safety Month**

Did you know... More than half of drownings among infants happen in the bathtub, toilets and buckets. Drowning is a quick and silent killer. A child can drown in a matter of seconds. Drownings usually occur when a child is left alone. .

In the time it takes to. . .

- Cross the room for a towel
- Leave to answer the phone
- Sign for a package at the front door

. . . a child can become submerged in the bathtub or pool and can sustain permanent brain damage if not rescued within 4-6 minutes.

For more information, visit [www.investinkids.com](http://www.investinkids.com) or [www.safekids.com](http://www.safekids.com).

**New Law** (Continued from page 3)

out of every seven children exposed to a passenger air bag sustains a significant injury and most deaths from inflating airbags have been children. According to the Insurance Institute for Highway Safety sitting in a rear seat instead of the front seat reduces fatal injury risk by 36% among children. Most crashes are frontal and the back seat is farthest from the point of impact. A survey conducted by the National Highway Traffic Safety Administration showed that an estimated 15% of infants under age one, 10% of toddlers ages one to three, and 29% of youngsters ages four to seven ride in the front seat.

For more information, check the CHP website ([www.chp.ca.gov](http://www.chp.ca.gov)) or contact Rebecca Michalkiewicz ([bmichalkiewicz@chp.ca.gov](mailto:bmichalkiewicz@chp.ca.gov)) Statewide Child Passenger Safety Coordinator 916.657.7237, X4109.



**News & Announcements . . .**

**2005 Policies go into effect December 1st.**

If you have not received your copy of the field manual check with your provider agency. You can also purchase a copy from the EMS Agency - the cost is \$7.25 (cash only).

**Attention all EMTs! Regulation changes affect recertification and lapsed certificates.**

New Title 22 regulations and Alameda County policy changes now require all **recertifying EMTs** to complete a skill competency verification exam every two-years. This replaces the once every four years written and skills testing. Usually there is at least one skills

testing class offered every month by local training programs. The testing may be completed in conjunction with a 24-hour refresher class, at the end of a full EMT program, or as a stand-alone skills test. Check the EMS website for information on local skill testing sites. The written exam will only need to be taken if you let your EMT certification lapse for more than one year. Remember you can apply for recertification anytime within six months of your expiration date. Waiting to find a skills test until the month your certification expires may jeopardize your active certification status.

Another change affects **lapsed certificates**. For a lapse of six

months to one year 36 hours of CE are required, while lapses between one and two years require 48 hours of CE and completion of a written exam. For lapses of more than two years, the complete EMT program must be retaken.

Questions may be directed to John Vohnhof ([john.vohnhof@acgov.org](mailto:john.vohnhof@acgov.org)) at (510) 618-2038.

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