12-LEAD TRANSMISSION SYSTEM FULLY IMPLEMENTED
—By Brian Henricksen, Pre-Hospital Care Coordinator

As of May 2013, the 12-Lead Transmission System in Contra Costa County is fully deployed. All ALS transport providers and fire first response units now carry this critical technology linking pre-hospital providers with designated STEMI Receiving Centers throughout the County.

The 12-Lead Transmission System allows pre-hospital providers to wirelessly transmit cardiac monitor information directly to hospitals before and during transport. This transmission provides the hospital with critical information in advance of the patients arrival, allowing hospital staff to be better prepared to care for patients.

Contra Costa County began a pilot program testing the use of 12-Lead Transmission in February 2010. After the pilot programs initial success, planning for expansion of the project began in June 2011. Over the last two years the program has expanded to include all ALS pre-hospital provider agencies and hospitals caring for STEMI patients. This system is one of the first fully coordinated transmission systems in the United States, allowing important patient data to be transmitted directly to hospitals and care providers.

CURRENT SYSTEM:
- Total Provider Agencies: 8
- STEMI Receiving Hospitals: 8 (including two out-of-county facilities)
- Total Devices Equipped with Transmission Technology: 125

SPINAL IMMOBILIZATION PRACTICES TO CHANGE
—By Joe Barger, MD, Medical Director Emergency Medical Services

Change is on the horizon for spinal immobilization practices in Contra Costa County. It has been increasingly recognized that spinal immobilization using a long backboard, has the potential for harmful side effects. Positioning patients on long boards can cause discomfort, can compromise breathing and airway management, and the pressure from unpadded boards can lead to skin breakdown (decubiti).

In March, two key organizations, the National Association of EMS Physicians and the American College of Surgeons Committee on Trauma, jointly issued a position statement encouraging a change in practice to reduce use of long boards. Patients at significant risk for spinal injury may still need full immobilization, but many patients do not and could benefit from alternative methods of care.

Given mounting research evidence, EMS systems across the nation are moving to modify their practices, and Contra Costa EMS is moving in that direction as well. A task force is meeting in Contra Costa to discuss immobilization procedures, equipment needs, and educational approach to change our practices in a safe and effective manner. We anticipate that the product of this task force will help lead to changes in practice as we roll out next year’s prehospital care manual.

Alameda County has been an early leader of change and they report significant reductions in long board use—nearly one-third less—in the first few months after the change. We face a somewhat uphill battle to change practices because national educational standards for prehospital trauma care have not yet changed. It’s our hope these will be rapidly modified as well, but we feel the need to modify our practices before these national courses are modified. We believe this will be a major enhancement for patient care in our system, but the challenge will be shedding old habits and learning new ones. We look forward to the challenge!
ASK EMS

Do you have questions for EMS? Not quite sure who to ask? This column will help address those questions. As space permits, we will answer questions you submit. As always, for immediate response please contact EMS.

WHAT IS THE INDUCTION OF HYPOTHERMIA THERAPY SO IMPORTANT AFTER CARDIAC ARREST?

A: The use of hypothermia therapy after return of spontaneous circulation (ROSC) has been associated with reduced cerebral deficits after cardiac arrest. This treatment was first used successfully in the 1950’s and affirmed by two randomized trials published in 2002.

Hypothermia reduces the cerebral metabolic rate of O2 by 6% for every 1 degree Celsius as well suppressing chemical reactions associated with brain reperfusion injury due to inflammation during reperfusion. The chemical reactions include, the influx of harmful ions and disruption of cell function.

Studies have shown, the earlier cooling is initiated after ROSC, the better the outcome. The goal is to reduce the patient body temperature to 32-34 degrees Celsius (34C = 93F) and maintain that for 24 hours. The patient is then slowly rewarmed.

Rapid hypothermia in the field is accomplished by exposing the patient and placing ice bags on top of the head, neck at the carotids one on each axillae, one over each femoral artery. Very important is to remove ice if patient begins to shiver. Shivering is the body attempting to warm itself by increasing muscle contraction. Also important is to notify the hospital you are using hypothermia so they can be prepared to continue in ED.

INDICATIONS: Minimum Age 18, ROSC for 5 min., unresponsive without purposeful movement. BP 90/P or greater. PO2 85% or greater, blood glucose 50mg/dl or greater.

CONTRAINDICATIONS: Traumatic arrest, responsive with GCS above 8, pregnancy, DNR, dialysis, hemorrhage.

KIDS CORNER

IMPORTANT CHANGES CAR SAFETY SEAT LAWS

BY Judy Smith, R.N., B.A., EMSC Coordinator

New CA Booster Seat Law went into effect in 2012 which changed the prior law dramatically. The old law stated that any child that was under 6 years old or weighed less than 60 pounds had to be restrained in a booster seat in the back seat. The new law requires any child under 8 years old to be restrained in a booster seat in the back seat. Children that are 8 years old and greater than 4 feet 9 inches may be restrained by the vehicle safety belt if it fits properly with the lap belt low on the hips, touching the upper thighs, and shoulder belt crossing the center of the chest. Drivers can be fined $490 and get one point on their driving records for each child under 16 not properly secured.

How long should babies be rear-facing in the car? The American Academy of Pediatrics strongly advises keeping the baby rear-facing until 2 years and 20 pounds to protect the child’s proportionately large head and therefore spine injury during a crash. A Journal of Injury Prevention study shows that keeping babies rear-facing until 2 years reduces death or severe injury by 75%.

Some local Fire Stations, First Five, John Muir Health Walnut Creek, CA Highway Patrol, Police Departments provide safety inspections and instructions on correct seat installation.

Education to Care Providers of Children: California state law requires every public, private hospital, clinic or birthing center provide information on the current child passenger restraint law and where they can go to get their child safety seat inspected on every visit.

Gu ues What? Some hospitals can provide child seats on discharge after delivery.

We can be instrumental in educating our community, families and friends. It’s so important. We know that injuries and deaths decrease when using these seats. You can make a difference. Share this information.

Printable Handouts Available: cdph.ca.gov/vosp

Please send questions for future
ASK EMS columns to:
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