



# EMS NEWS

October 2008

Volume: 24 Issue: 5

## BLS Hospital-to-Home Program

By Colleen Campbell, Senior Injury Prevention Program Coordinator

In 2006 Alameda County had 2,806 people over the age of 60 hospitalized due to falls and 215 due to accidental poisoning (medication mismanagement). Ten of the 215 medication mismanagement hospitalizations proved fatal. That's 10 preventable deaths.

A little less than a year ago, after a Senior Injury Prevention Program (SIPP) Steering Committee meeting, Lauri McFadden from AMR and I discussed the heightened risk for falls and medication problems older adults experience when they have just been released from the hospital. They are still recovering from an illness or injury, which raises their risk of falling (due to weakness, medications, altered gait, etc.). They are often sent going home with new medications - and they also very likely have other medications at home that they were taking before their hospitalization.



When Lauri told me about the large numbers of older adults who are transported home by EMT's in BLS units, the BLS Hospital-to-Home Program was born.

A packet was developed that includes information on senior services through the Area Agency on Aging, adult day services, transportation options, fall prevention education, and a medication management tool along with an informational brochure written for older adults on understanding medications and what questions to ask. The packet emphasizes giving seniors the highest levels of care and helps ensure they are treated with the utmost respect and dignity. Lauri and I created a script for EMT's to follow that helps them to converse with the patient and/or caregiver about the contents of the packet, and stresses the importance of understanding their medications and how to properly take them.

EMT's are in a unique position to provide information that could help reduce falls and medication problems in this extremely high-risk population. They have an opportunity for a one-on-one conversation with the patient and/or caregiver. They are health care providers to whom older adults will listen to, and the seniors value the information they provide.

The program was piloted at AMR where EMTs and their field training officers immediately saw the benefit it provided for their patients. Over the past few months I have conducted trainings for WestMed, Royal Ambulance, Norcal Ambulance and Pro-Transport. Some of these BLS providers have decided to try and duplicate the program in other counties as well. Additionally, the packets have been shared with other EMS agencies that are interested in starting similar programs. Our goal in Alameda County is to make sure

that every older adult who is transported home via a BLS unit receives the packet, and more importantly, participates in this potentially life-saving discussion with the EMTs.

The BLS Hospital-to-Home program is a partnership between the SIPP program and five of our BLS providers. This program is an excellent example of what makes our county stand out as a leader in all aspects of patient care.

## PEDIATRIC EMERGENCY DEPARTMENT SITE VISITS

By Cynthia Frankel, RN, Prehospital Care Coordinator

Alameda County EMS is ensuring that county hospital emergency departments (EDs) have state-of-the-art emergency medical care for ill or injured children and adolescents.

The EMS Agency is assisting hospitals by:

- facilitating training, resources, and meetings with experts
- acting as a conduit for on-going pediatric information
- proactively addressing pediatric needs and solutions.

Pediatric ED site visits were done at eight hospitals to assess their pediatric emergency care capabilities. Two other hospitals are scheduled for this fall. The site survey team included Ron Dieckmann, MD, Stacey Hanover, RN, and Cynthia Frankel, RN.

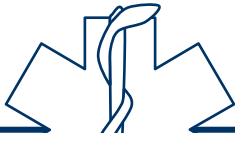
The site visits were a voluntary, collaborative educational assessment. Each hospital's ED team first completed a pediatric self-assessment that was adapted from the current 2008 version of the California EMS Authority's document entitled *Pediatric Preparedness for Emergency Departments*.

The survey team then reviewed the ED's performance in relation to specific components of the assessment. Next, a site inspection of the pediatric resuscitation area was conducted. Finally, the teams discussed areas for improvement, strategies for enhancing pediatric preparedness, and future follow-up options. Customized pediatric protocols (see page 3), guidelines, and resources were compiled to facilitate improvement of the pediatric ED capabilities. The protocols and guidelines were developed by a group of physicians, nurses and hospital associations and are based on those currently in use in EDs around the country. Dr. Dieckmann emphasizes, "Alameda County is on the leading edge for providing EMSC projects statewide and at the forefront for hospital pediatric education."

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## An Interview with EMSA's Dr. Tharratt

Dr. Steve Tharratt is the new Director of the California Emergency Services Authority. Appointed by Governor Schwarzenegger in 2008, Dr Tharratt is responsible for the strategic vision and leadership of emergency medical services and out-of-hospital care for California. He has published widely on emergency management issues and the relationship between the medical and veterinary medical disciplines in response to biodefense and emerging zoonotic diseases, including avian influenza. He has research interests in emergency management and the integration of health issues into public policy and emergency decision making in both natural and technological disasters. Dr. Tharratt stopped by Alameda County EMS in August and we had the opportunity to ask him some questions.

**Q EMS:** What do you see as the challenges facing EMS?

**A Dr. Tharratt:** I see challenges on several different levels. First, on a systems level, we are moving into a phase where we will be more tightly integrated into the continuums of care. We have trauma, cardiac care and stroke centers. We have to document how we add value to these systems and determine if other systems are warranted – asthma and sepsis are two examples. The recent trauma conference is a good example of how we take what we have learned about trauma on a local level and move it to a regional level. In a state as big as California, that's the future of EMS.

**Q EMS:** Under your watch, what would you like to see the Authority accomplish?

**A Dr. Tharratt:** I am still in the process of meeting with stakeholders. Certainly the issues of an EMT registry and background checks, and the organization of that process are at the forefront. We need to mature out the systems I mentioned earlier. From the disaster standpoint of EMS, we are transitioning from primarily a planning organization into a response organization. For example, we have evacuated more hospitals in the past 18 months than we have done in the past 18 years. Having ambulance strike teams and disaster medical support units helps integrate EMS into other disaster response systems. We now have the largest mobile hospital capacity of any state in the country. Determining how these are deployed and leveraged into community medical systems through cooperative efforts of public and private sectors is important.

**Q EMS:** If the EMT registry and background check is passed how quickly can EMSA respond to the new laws?

**A Dr. Tharratt:** We are committed to an EMT registry and all its components. The anticipated deadline is July 1, 2010 and we will be prepared to meet that date. We view this as a value added program that will benefit all sectors of EMS – employers as well as EMS agencies. For instance, right now, the one healthcare provider we cannot validate in our California Medical Volunteers system is EMT-Is. We can validate all other healthcare providers - MDs, RNs, paramedics, respiratory therapists, etc, but we can't validate EMT-Is - and it's our system. We are the only state that doesn't have a centralized

EMT registry.

**Q EMS:** Where do you see EMS in the next 10 years?

**A Dr. Tharratt:** I see a continuation of the systems I mentioned earlier. Additionally, I see the development of specialty paramedics, such as tactical medics. We are working with POST (Police Officer Standards Training) to develop a scope of practice, a curriculum, and training standard for this new EMS role. There's no reason this can't be done for USAR (Urban Search & Rescue) and critical care transport. The question is, where can EMS provide additional value in our health care system - where does it make sense for this to go? Building the framework for the needed education, curriculum and training will be an important area in the future.

In California, we range from urban to frontier. Our EMS systems are organized differently in each. At the end of the day though, all EMS is *local*. It's what the local community decides is right for their system. The role of the state is to set the broad framework for the standards. How the local community and EMS agency chooses to meet those standards is every bit as valid in Alturas as it is in San Diego. Everywhere I go the challenges may be different, but desire of the people in EMS is the same – to provide the best possible care.

**Q EMS:** Any personal goal for your involvement in EMS?

**A Dr. Tharratt:** Yes, that when I'm done, that the system of EMS in California is better than when I started. *Better* is a big word because EMS has so many facets, but the desire is to improve the system. I think that's what all of us in EMS want to do in our careers in EMS.

**Q EMS:** A lot of the discussion in EMS is about paramedics. What words of encouragement can you give to EMTs?

**A Dr. Tharratt:** We recognize them as a different kind of provider with a different role to fill in EMS as a valuable part of the team. We are doing a lot of things to expand their ability to integrate into the system, for instance, creating a new level of provider with the advanced EMT. EMTs are a valuable part of our system, not only to serve as a career pathway to paramedic, for those that choose to do that, but also as a stand alone provider of pre-hospital care themselves. We have an integrated system and we need all parts. I think it is an exciting time for EMTs.

For more information about Dr. Tharratt go to:

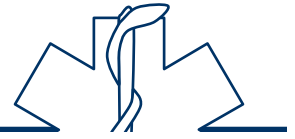
<http://www.emsa.ca.gov>

### New Look - New Logo

As you can see, EMS has a new logo. Designed by Joshua English and approved by staff, this will be our new look going forward. We plan to update the EMS website during the next year.



# Commentary from the Medical Director



By James E. Pointer, MD, Medical Director

We at Alameda County EMS are always looking for the latest scientific evidence in formulating our policies and procedures. Our staff has spent countless hours reviewing the literature on two drugs that have been used in medicine for many generations. They both have passed the test of time in treating our parents and our grandparents. In the past, limited science was available to back up the claims of proponents for both of these drugs; however, we have gone the extra mile and now the truth can be told.

In this issue, I want to review the evidence behind the use of epinephrine in cardiac arrest and the evidence for the use of snake oil in the treatment of joint pain. Why, you ask? We wish to seek the truth and also to provide a perspective on a commonly used cardiac arrest drug.

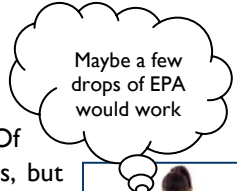
First, let's look at epinephrine. According to the 2005 American Heart Association *Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care*, "Epinephrine hydrochloride produces beneficial effects in patients during cardiac arrest." On the other hand, epinephrine increases myocardial work and reduces subendocardial perfusion. No fewer than seven studies have shown mixed good and bad physiologic effects of epinephrine on survival from cardiac arrest. According to the guidelines, "there is a paucity [scarcity] of evidence to show that it improves survival in humans." Researchers even looked at high-dose epinephrine and its impact on survival to hospital discharge. In eight randomized clinical studies involving about 10,000 patients, no one could find any improvement in outcome in cardiac arrest measured in any way. The authors of the studies looked at subgroups in every way from Sunday to try to find a benefit of epinephrine. Yet, not one bit of definitive evidence exists, to this day, that shows that epinephrine improves outcome from cardiac arrest. So, what's the evidence for snake oil?

According to that famous medical journal, *Wikipedia*, snake oil originally came from China where it was used as a remedy to treat pain and inflammation in joint conditions. In many areas of the world, it is still in use because of its "anti-inflammatory" properties. Back in the day, snake oil that was mixed with hippopotamus, lion, crocodile, or ibex oil served as a stimulant for a number of conditions including the growth of hair in males. Even though there was no evidence to show that snake oil did not work, late in the 1800's many people became skeptical about the benefits of the product. Indeed the term "snake oil salesman" has come to personify a healthcare "practitioner" who cheats customers by selling a bogus product. We have uncovered the real truth about snake oil, and for the first time, this information is public. An analysis of snake oil reveals that the product is composed of 25% oil from Chinese water snakes. This oil is broken down further as 20%

icosapentaenic acid (EPA), 48% myristic acid, 10% stearic acid, 14% oleic acid, and 7% linoleic acid.

It turns out that EPA is a known, effective pain reliever. EPA is absorbed through the skin and results in the release of series 3 prostaglandins that inhibit the production of pro-inflammatory series 2 prostaglandins. What all this means is there is a pharmacologic basis for snake oil's effectiveness as an anti-inflammatory. Snake oil actually works.

This is more than we can say about epinephrine! While we cannot use snake oil in prehospital care (yet) perhaps one day there will be a role for the substance. Of course, I am being cynical when I say this, but keep in mind that we know far more about the efficacy of snake oil than we do about the efficacy of epinephrine. Each time you use epinephrine in the treatment of cardiac arrest, you're using a drug for which there is no evidence of a benefit to your patient. Unfortunately, the same can be said for atropine. Our state of knowledge on the treatment of cardiac arrest is primitive at best. This year, we will institute the Res-Q-POD for the first time. This device should improve our survival rates from cardiac arrest based on available evidence. But this device will not work unless the CPR and the defibrillation that you provide is of both high quality and is administered as quickly as possible. Your skill, good CPR, and early defibrillation are the ingredients for survival from cardiac arrest. Perhaps a little snake oil wouldn't hurt either. Comments on this article are welcome at [james.pointer@acgov.org](mailto:james.pointer@acgov.org). References available upon request.



## ED Site Visits (Continued from page 1)

### Sample Pediatric Protocols:

- Newborn abandonment
- Abuse/Neglect/Sexual Abuse
- Communication with primary care provider
- Disaster preparedness and toolkits
- Family presence
- Immunization status
- Informed consent
- Mental health
- Pain management
- Radiation risk
- Restraints
- Resuscitation, death in the ED & DNR
- Sedation and analgesia
- Transfers for definitive care
- Triage

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## WHAT'S NEW ON THE WEB

- 2009 Field Manual .pdf version

EMS WEBSITE:  
[acgov.org/ems](http://acgov.org/ems)

## Injury Prevention

Fall Prevention Awareness Week  
Sept 21-27, 2008

Older adult falls are a huge issue in California and Alameda County. In 2005, 2,512 older adults were hospitalized as a result of falls in Alameda County. The average cost of a fall-related hospitalization is \$37,000 - and the problem is growing. The county is expected to experience an older adult growth rate of 128% to 180% over the next 15 years.

In an effort to help raise awareness about the issue and methods to reduce falls, the State of California has passed legislation, SCR 77 (Lowenthal), declaring the first week of fall each year to be, "Fall Prevention Awareness Week" (FPAW).

The Alameda County Board of Supervisors and every city in the county signed a Proclamation declaring the week of Sept 21<sup>st</sup> as "Fall Prevention Awareness Week."

SIPP efforts to raise awareness for FPAW include:

- Sending every senior center and senior housing residence information packets about FPAW with posters, suggestions on fall prevention activities, and tip sheets to distribute;
- Conducting over 10 fall prevention discussion groups in community settings during FPAW;
- Contacting Comcast to promote airing segments of "Taking Steps to Prevent Falls;"
- Providing county BLS providers with magnetic FPAW posters that they have agreed to display on their units throughout the week;
- Displays of the FPAW poster by all senior service providers who are members of the Senior Injury Prevention Partnership;
- Creation of Fall Prevention Bingo - a picture bingo game that carries fall prevention messages.

The game is available on the StopFalls.org website.

The first steps in addressing the issue of falls are to insure that the problem is recognized by those who have the ability to create change, and to help older adults and care providers realize that there are many simple things they can do to reduce fall risk. This is the first official "Fall Prevention Awareness Week." We want it to be a significant event this year and an even bigger one in the years to come.

Thanks to all of you who are working with us to raise "falls prevention awareness" this year!

## Teens and Seat Belts

Researchers from the Meharry-State Farm Alliance at Meharry Medical College have discovered lack of seat belt use by teen passengers may be an even bigger problem than was first thought.

In the first ever direct comparison of the differences between driver and passenger seat belt use for a nationally representative teen population, the Meharry researchers found that 59% of teens always buckled up in the driver seat but that only 42% always wore seat belts as passengers. Even more sobering, only 38% of all teens reported that they always buckled up as both drivers and passengers.

The study population comprised over 12,000 African American, white, and Hispanic public and private high school students ages 16 or older who participated in the 2001 and 2003 National Youth Risk Behavior Surveys. The surveys are conducted every two years by the Centers for Disease Control and Prevention to track the leading causes of death and disability among U.S. teens.

Motor vehicle crashes are the leading cause of death for U.S. teens, accounting for nearly 5,000 fatalities each year. About 40% of all teen motor vehicle occupant deaths involve passengers.

## News and Announcements



The 2009 Field Manual has been completed. We anticipate delivery to provider agencies in October. Copies of the manual may also be purchased at the EMS Agency for \$8.00.

Changes for 2009 were contained in the August edition of the EMS News, but briefly:

- ✓ Lasix - Out, D<sub>10</sub> for neonates - In,
- ✓ Combi-tube - Out, King tube - In
- ✓ Prehospital DNR form - still OK
- Physician Orders for Life Sustaining Treatment - preferred

Other additions include treatment for hyperkalemia in the dialysis patient, CO monitoring for smoke inhalation, waveform capnometry as the first CO<sub>2</sub> confirmation, Boussignac added to CPAP procedure.

For more information - Read the book! Or, you may contact Joshua English at [joshua.english@acgov.org](mailto:joshua.english@acgov.org) or 510-667-7753.

**Ambulance Ordinance Implementation** - The cities of Dublin and San Leandro have adopted the language in the Alameda County EMS Ambulance Ordinance. The EMS agency is talking to other city managers in an effort to have every city in the county adopt the ordinance. The ordinance covers BLS and CCT service - not 911-ambulance service which is covered by contract. By the end of the year, the BLS and CCT divisions of AMR, Norcal Ambulance, Pro-Transport-I, and Royal Ambulance must meet the requirements of the ordinance.

The ordinance can be found on the EMS website. Questions on the ordinance or its implementation can be directed to John Vonhof at 510-618-2038 or [john.vonhof@acgov.org](mailto:john.vonhof@acgov.org)

**Change in the EMS News Schedule** - Beginning January 2009, EMS News will switch to a quarterly publication schedule. The first issue on the new schedule will be January-March 2009.