



EMS NEWS

A DIVISION OF THE PUBLIC HEALTH DEPARTMENT



OCTOBER 2006

VOLUME 21

ISSUE 5

Enhancing Pediatric Emergency Care

By Cynthia Frankel, RN
EMS-C Coordinator

Alameda County EMS hosted an innovative regional bay area conference on 9/11/06 titled, *Meeting the EMS-C Challenge - Enhancing Pediatric Emergency Care: Evolve and Improve Pediatric System Capability*. The unique conference provided the opportunity to get "hot off the press" new information on emergent pediatric themes and changing paradigms for the management of children. The participants included 65 EMS-C partners and advocates from multiple agencies and organizations

including hospitals, providers, clinics, EMS agencies, public health departments and community-based organizations. The goal was to provide information and opportunities for county-wide "inclusive" pediatric emergency, and continuity planning.

The keynote speaker was **James Broselow, MD** a leading expert and developer of the *Broselow-Luten System* and President of *Color Coding Kids, LLC*. This program is a standardized therapeutic system, with the goal of increasing safety, efficiency, and comfort level whenever

and wherever children receive medical care. It is an extension of the Broselow tape and the corresponding system that is now used in the treatment of pediatric emergencies. The essence of the new system is the development of color coding zones that are specifically designed to accommodate medication and equipment selection. The zones are accessed by patient weight, when available, by patient length in emergencies or selected home use.



Once the appropriate color has been selected, it is used to access appropriate therapeutic information, tools, and references that make up the system. These tools address physician and nursing calculation and communication issues surrounding a given order for the appropriate concentration of a medication. It is a color-based visual system

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Delegation from China visits ALCO EMS

On September 13, Alameda County EMS hosted a 19 member delegation of political and business leaders from Sichuan Province, China. The group of mayors, commerce executives, and public health officials was on a three week tour to learn about model EMS and disaster planning systems in the U.S. They plan to apply the knowledge gleaned from Alameda County and other jurisdictions to build upon the existing infrastructure back home.

Following presentations by Dr. Jim Pointer and Jim Morrissey about our EMS system, injury prevention programs and disaster preparedness planning, EMS Director Michael King moderated a lively question and answer session, facilitated by an excellent translator, Mr. Yong Zhou. The questions posed to Mr. King and staff were varied and somewhat provocative. One interesting inquiry asked what disciplinary measures would be imposed upon officials who made errors during a natural or manmade disaster scenario.

At the end of the meeting, many members of the group expressed that they were impressed with the completeness of our training, preparation, and prevention programs. Small gifts and business cards were exchanged. Perhaps, in the near future, this lovely area in Central China, known for its spicy food and the Panda, will incorporate components of Alameda County's disaster planning and EMS systems.



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Memoirs of an EMT/Paramedic Instructor

Editor's note: Gail Porto, RN, was honored at our recent EMS Week luncheon with the Ben Matthews Career Lifetime Achievement Award. We caught up with Gail one afternoon and asked her to share about her years of teaching EMT and paramedic students.

What changes have you seen in students since you started teaching in EMS?

"I began teaching EMS in 1985 when I was privileged to teach EMT 1-NA to San Leandro Fire Department's C-Shift. They were such a positive group of students that I was motivated to stay in EMS Education. This had not been my original plan! When I taught the first paramedic class in 1986 at Chabot College, I found the incoming students were experienced EMTs who wanted to enter the relatively new arena of paramedicine. They were, for the most part, extremely motivated and fun to teach."

"Once the paramedic provider contract required two responding paramedics on every 911 ambulance, opportunities to obtain EMT experience were all but eliminated. The incoming EMT students had to scramble for any EMT experiences they could get, often volunteering to provide stand-by medical services at motorcycle races or working with Rock Medicine. This lack of EMT transport experience required a significant change in the paramedic program to ready these students for the field."

"There was also a time when the only way into the fire service was with a paramedic certificate. That was an unfortunate time in EMS education because many students attempted to go through the program only to get that "piece of paper" that would serve as their entree into the Fire Department. Many were not motivated to provide patient care, let alone quality patient care. It became acutely evident to me that you have to love paramedicine in order to be good at it."

"I think equilibrium is finally being achieved now that the incoming students are both motivated and have the necessary EMT experience to be successful in this field."

What is your favorite subject in teaching a class of new paramedics?

"I enjoy classes that require thought processing on the part of the student, such as ethical issues in prehospital care, critical thinking and problem solving. Cardiology and scenario based teaching are also particular favorites of mine."

What wisdom would you offer to EMT and paramedic students?

"Develop your intuition. Listen to what your "gut" is telling you. Developing and utilizing your intuition is every bit as important as what you learn from the book. The two must go hand in hand if you are to be really good at delivering patient care."

What advice would you offer to new EMT's and paramedics once they get in the field?

"Be positive, be nice, and be flexible. This is far more important than having the need to *always be right!* Much more of your career will involve psycho-social and emotional needs of your patients and their families, and colleagues, than just the provision of physical care."

As an EMS educator, what has been your most satisfying experience?

"It is extremely rewarding to see so many former students not only excel in their pre-hospital role but to have found it both satisfying and rewarding. When I see a program graduate still being a positive force in EMS after 20 years, it feels great!"

From your perspective, what are the biggest challenges facing pre-hospital care providers (EMTs and paramedics)?

"Prehospital care is establishing itself as a formidable force in the delivery of health care. We need to continue in our role as one of the essential members of the health care team, leaving the days of "ambulance driver," or "just an EMT," or "just a paramedic" in the dust. We will get there by being involved in our EMS System and setting the bar high for our peers and colleagues as well as for ourselves. We must no longer accept mediocre performance! As long as we view ourselves

as the patients' advocate and to continue to work on their behalf, we will be seen as essential and effective members of the health care continuum."

For more information contact Gail at gaporto@sbglobal.net.

Lesson Learned: Don't Give Up On The Airway

Paul McInnis, Acting Captain/Paramedic with the Fremont Fire Department, emailed EMS with details on a recent cardiac arrest call. The call was for a female victim of a witnessed cardiac arrest. Unit 3877 responded and immediately requested unit 3843 with the Auto Pulse. The patient's husband had begun CPR in their back bedroom. The first crew moved the patient to the living room where the second crew set up the Auto Pulse. Responders reported good initial CPR.

Paul wrote, "On our arrival the patient was pulseless and being ventilated. She had copious amounts of emesis in the airway - really, really bad! The patient was suctioned multiple times while CPR continued with the Auto Pulse. She was intubated and suctioned again with copious amounts of emesis. Unit 3843 placed a French catheter down the ET tube and retrieved a lot of aspirated emesis. CPR was continued. The patient then went pulseless and was defibrillated. Drugs were administered and ventilations continued."

"In the ambulance, 10ccs of NS were administered down the tube, and the patient was suctioned with another French catheter interposed with ventilations. The end tidal CO₂ was 15 and rising. Her pulse ox eventually reached 100% with spontaneous return of pulses, and a blood pressure of 240/140. Admitted to the ER, she had pulses, but did not have spontaneous respirations."

"As a great end of the story, the woman walked out of the hospital one

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New Horizons in EMS

Jim Pointer, MD, FACEP
EMS Medical Director

I would like to describe several enhancements in our system that will take effect on December 1, 2006.

New Procedures:

For the first time, we will have a comprehensive sedation policy. Diphenhydramine and midazolam will serve many purposes including the sedation of selected patients who require endotracheal intubation.

A new infection control and pandemic flu policy will place our EMS providers in a surveillance role. All ALS units will carry patient safe thermometers, and a series of screening questions will be asked to determine possible exposure to AVIAN flu. Dr. Muntu Davis, Deputy Health Officer, has compiled information specifically for prehospital personnel that was presented during mandatory policy update training scheduled for the fall.

We are also adding a patient actuated nebulizer. This ingenious device delivers albuterol or Atrovent approximately three times more quickly than a conventional nebulizer. It also precludes the exposure of EMS personnel in an ambulance to the nebulized medications. Many of the hospitals in the area have turned to this new device.

Perhaps most importantly, we will be utilizing adult intraosseous infusion. Based on thorough research conducted by Alameda County Fire and my personal experience, we will implement the

EZ-IO device. This safe and efficacious implement utilizes a drill technology to quickly access the bone marrow in unconscious patients with difficult venous access. The EZ-IO will allow our EMS providers to conduct a complete cardiac arrest call.

The ET medication route has been deleted. Studies show a lower blood concentration of medications, and epinephrine given via ET can result in hypotension, lower coronary perfusion and reduce potential for ROSC.

Policy Updates/Revisions:

Lidocaine is being removed entirely from our protocols, and amiodarone will be the sole antiarrhythmic drug. (No more lidocaine). Also, the new American Heart Association CPR and ECC guidelines were introduced earlier in the year and are required as our standard of care.

In addition, Bill Sugiyama has complied perhaps the most comprehensive critical care interfacility transfer paramedic policies and procedures in the country.

New Section Added:

The weapons of mass destruction information has been augmented by Jim Morrissey, and it is now included in the field manual as a new section.

Other Changes:

Intranasal naloxone is now the preferred route of delivery in the ALOC or overdose patient.

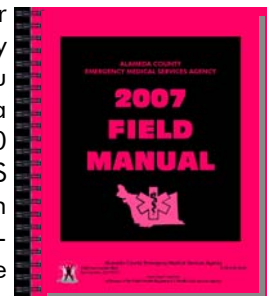
Lasix administration is now limited to patients who show obvious signs and symptoms of pulmonary edema and are taking lasix. Increasingly, nitro glycerine and CPAP are the cornerstones of treatment.

Two new out-of-county burn centers have been added to the resources available for the care and transport of the burn patient.

Please contact me with any questions or concerns you may have about our new policies at 510.618-2022 or

james.pointer@acgov.org. Input from EMS providers in Alameda County is very important in the formulation of our 2007 policies and procedures.

The **2007 Field Manual** will be available from your provider agency this month. You may purchase a copy for \$8.00 from the EMS Agency. It can also be downloaded from the EMS website.



Mandatory policy update training will also be offered by your provider agency beginning in October. All Alameda County EMS field personnel are required to attend one policy update training session prior to December 1st.

Airway (Continued from page 2)

week later with no residual problems. This is a testament to our recent CPR training; the response of another engine on a cardiac arrest (a better success rate, I believe, with the second engine), use of the Auto Pulse, and the benefits of repeated suctioning with concentration on the airway."

"The lesson I learned on this call, that needs to be emphasized is, don't give up on clearing the airway! I believe the woman may have passed out, aspirated, and then gone into cardiac arrest secondary to respiratory arrest. The battle with this airway lasted a good 15 minutes but we stuck with it, even though it looked pretty bleak - and it paid off. Kudos to 3843 and 3877."

Obese nation . . . From 1988-2002 the number of obese adults has increased 30.5%. One in 80 men and one in 200 women weighs over 300 pounds. These numbers emphasize the importance of teamwork in moving and lifting patients.

Source: Greg Friese - *Merginet.com*



EMS-C (Continued from page 1)

that eliminates the need for mathematics or memorization allowing almost instantaneous access to appropriate dosages and sizes. The colors function as part of a "failsafe" system, easily understood by all members of the therapeutic team that encourages a "team approach" to error prevention. The system is applicable to disaster situations and is recommended for lay persons and professionals alike.

The use of color coding has application in all areas in which children are treated: inpatient units, surgery, radiology, schools, and pre-hospital emergency settings. In such settings, it's not always possible to weigh pediatric patients; the tape can therefore be used to estimate weight, and the corresponding color can be placed on an identification wrist band and in the child's chart. The combination of the color-coded identification band and

chart stickers ensures that appropriate equipment and medications can be determined at a glance. Future possibilities for using a color-coding system include a neonatal version of the tape, IV infusion pumps, medication dispensing systems such as Pyxis or Sure-Med, intraosseous needles such as those used with the EZ-IO, defibrillators, and other resuscitation equipment. Outside of the hospital setting, the color-coded system may be applied to car seats, "watch me grow" wall charts, and even dosing guides and medicine cups in a variety of languages.

The conference also highlighted **Ron Dieckmann, MD**, Professor of Clinical Pediatrics and Medicine, University of California, San Francisco and Director of Pediatric Emergency Medicine at San Francisco General Hospital. Dr. Dieckmann shared his innovative web based PEMSsoft Suite, a bedside pediatric clinical decision and medical reference database software. It is designed for in-

stantaneous referencing and rapid clinical decision support, and it is updated continuously using a rigorous evidence-based editing process. PEMSsoft embodies an entire emergency and ambulatory care information support system, modifiable to the specific user site. It instantaneously links millions of pieces of pediatric information and has unique support features that allow individualized application. The program is supported by an ongoing evidence-based infrastructure that is being constantly updated by expert international editors.

The final presentation by **Muntu Davis, MD**, Deputy Health Officer, Alameda

"The memory of 9-11 is a reminder of our responsibility and accountability to address the needs and priorities of children day to day and in emergencies."



County Public Health Department emphasized pediatric Issues and disaster preparedness. Preparing for children in disasters requires an understanding of their uniqueness. Physiologically, children become ill more quickly due to lower exposures or stresses. A child's smaller physical stature requires adjustments in treatment. Dr. Davis emphasized, "A successful response to a disaster requires the interaction of personnel and resources from multiple agencies in an organized and coordinated manner to a well-formulated plan." He supports collaborative regional planning to meet the needs of children in disasters.

Future EMS-C goals are to establish a vision, set priorities, formulate solutions and design a process to improve EMS pediatric regional system plans and capability. The objective is to address major pediatric "best practices" and to sustain a regionalized infrastructure. We encourage participation on the Regional EMS-C Steering Committee.

For additional information, contact Cynthia Frankel, EMS-C Coordinator at (510) 618-2031 or cynthia.frankel@acgov.org.

Did you know... motorcycle fatalities rose 13% in 2005. Almost half the people who died were not wearing a helmet!

Star Techies . . . here, there, everywhere!

No... I don't mean *Trekie*s of Star Trek fame. I am referring to the nineteen "graduates" of the five-day NHTSA Child Passenger Safety (CPS) Technician Certification course held August 21-25, 2006 at EMS in San Leandro. The instructors were Margaret Sirtek (lead instructor), Melody Tucker, Vella Black-Roberts, and Charles Hughes. Barbara Cheatham, EMS/Alameda County Safe Kids Coordinator served as the course administrator. The student participants represented many areas of the state including Anaheim, Watsonville, Napa, Tulare counties, and the cities of San Francisco, Redwood City, and East Palo Alto. Seven students represented Alameda and Contra Costa Counties.



What does it mean to be a *star techie*? It means that you are knowledgeable about California child passenger safety laws, seat belt laws, federal safety standards, the various types of car seats and booster seats, correct car seat installation, and how to set-up and coordinate a car seat check up event and more. The need for certified car seat technicians is great because statistics indicate that four out of five car seats are incorrectly installed and that children are 37% more likely to be injured or killed in a vehicle crash if they are not properly restrained. If you are interested in becoming a certified CPS technician or would like CPS resource information, contact Barbara Cheatham at barbara.cheatham@acgov.org or 510-618-2048.

Interesting . . .

Hospital HRSA Decontamination Training

by Robert Young, PHCC

Alameda County EMS hosted county-wide training exercises for hospitals and their clinics in July and August. The course was one in a series designed to meet the Health Resources and Services Administration (HRSA) requirements for Alameda County emergency care hospital and clinic staff. The training focused on responding to and delivering coordinated care to victims of terrorism and other public health emergencies. The course, "Patient Decontamination by Health Care Providers in the Emergency Department or Health Care Clinic Setting," is an important component of the overall management, assessment and treatment of patients who may be direct or indirect victims of exposure to hazardous materials or a bioterrorism event. A key component of the training was having attendees become familiar with their own hospital or clinic's decontamination equipment. In a disaster situation, hospitals may have to provide their own initial decontamination, triage and treatment for patients and staff from known chemical or biological agents. These trainings provided staff with an excellent opportunity to test and improve their operational readiness for mass decontaminations in

the event of an industrial release or terrorist act. Additionally, a vendor fair on July 10th gave hospitals, clinics, HRSA contractors and grantees the opportunity to meet with companies providing decontamination equipment.

BLS Ambulance Ordinance

Alameda County is unique in the Bay Area in that it does not have a BLS ambulance ordinance. EMS is in the process of establishing a BLS ambulance ordinance to present to the Board of Supervisors and city managers. Through a careful study of more than 20 ordinances of other cities and EMS agencies, we have compiled a comprehensive ordinance to license and regulate the operation of basic life support ambulances to:

- Protect the public by assuring that basic life support ambulances operate safely and meet certain minimum levels and standards of equipment, staffing, and mechanical reliability.
- Allow for adequate, appropriate, and efficient non-emergency ambulance services in Alameda County.
- Allow for the orderly and lawful operation of a local non-emergency medical services system pursuant to the Health and Safety Code Section 1797.
- Allow for non-emergency services to be a part of the county system and thereby have the necessary training, policies, and procedures, and communication systems to interface seamlessly with current county standards.

Behind the Wheel

"Once we turn the lights and siren on, there's an adrenaline rush, and we constantly have to check ourselves." This quote from Dave Long, RN, EMT-P, who teaches driver training in Minnesota, makes a strong point.

Think about the firefighters, EMTs and paramedics you know. Most people in this profession are outgoing and fairly aggressive by nature. We must have a higher awareness and commitment to safety than other drivers. While it may be rare for the average driver to encounter an ambulance approaching them at a high rate of speed, we encounter drivers of all types. The burden of safety in these encounters rests disproportionately on us.

Our focus must be on driving the vehicle, whether it is an ambulance or fire engine. Distractions must be filtered out, and we must be tuned into the major dangers and defensive approaches that keep us safe. At intersections, each lane must be viewed as a separate intersection and that each vehicle recognizes you and is able to stop. The weight of your vehicle and the dynamics of the way it turns and moves while accelerating and braking must be remembered. Long emphasizes, "If you don't focus on your attitude when you get behind the wheel, no matter what the call is, you're going to have a problem." Extracted from *EMS Magazine*, "Drive to Survive" September 2006.



Alameda County Hosts Bay Area EMS Leaders - EMS Directors and EMS Medical Directors from seven bay area counties met at Alameda County EMS on August 4 to discuss state and regional EMS issues. Topics included disaster preparedness, mutual aid, trauma systems, pediatric care, and pending legislation. Attendees found the session valuable, and decided to continue meeting on a quarterly basis.

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What's New on the Web



- Field manual survey
- Upcoming CE opportunities
- Policy update training material

The Changing Face of Falls

By: Colleen Campbell
Senior Injury Prevention Coordinator

Falls are a leading cause of hospital admissions and injury related deaths among older adults. Each year more than one third of older adults in the United States fall, and 10% of those falls result in injuries that require medical attention.

In Alameda County in the year 2003 there were 2,612 older adults who were hospitalized or died as a result of falls. Adults over the age of 65 currently represent only 10% of the population in Alameda County but account for almost 44% of hospitalizations due to unintentional injuries, and 70% of those injuries result from a fall. The RAND Roybal Center for Health Policy Simulation recently completed population projections by county for the state of California. Alameda County is projected to experience a senior population growth rate of 128% to 180% between the years of 2005 – 2030. At the current rate of hospitalizations due to falls, by the year 2030 Alameda County could see well over 10,000

Continuing Education Opportunities

AMR hosts their popular **Hot Topics in EMS** continuing education classes every third Monday of the month from 9:00 am to 12:00 pm. These free classes are held at the Alameda County Operations Center at 640 143rd Avenue, San Leandro. Three hours of CE are given at the end of the classes. A variety of topics keep these classes fast moving and interesting. In October and November, there is also a **12 Lead Review** from noon to 1:00 pm with Dr. Pointer that is worth one additional CE hour. In December, Dr. Pointer will conduct a three hour Hot Topic on 12 Lead EKGs. Food and drinks are provided at each Hot Topic event.

CALSTAR is offering their **Trauma, Tots & Trends 2006 Conference** on October 19th in Sacramento. Seven hours of CE are offered. Go to www.calstar.org or call 916-921-4091 for more information.

REACH Air Medical Services is hosting their **10th Annual California Pediatric Emergency Care Conference** on November 3rd in San Rafael. The conference offers six sessions for seven CE hours. For more information, go to www.ReachAirAmbulance.com or call 866-767-3224.

The California EMS Authority is offering the **9th Annual EMS-C Conference** on November 6th in Sacramento. This popular conference offers nine sessions on pediatric issues in prehospital care for eight hours CE. For more information, go to www.emsa.ca.gov.

The **19th Annual Stanford Trauma Symposium** will be held February 22 & 23, 2007 at Stanford Hospital in Palo Alto. For more information and to receive a brochure, call 650-723-6366 (option #2).

older adults hospitalized per year as a result of falls.

In addition to the increase in our aging population and the rising numbers of falls, the location of falls is changing. A recent study published in the *American Journal of Public Health* found that more falls are occurring outdoors away from the home rather than in and around the home (*Am J Public Health*). In the past as older adults grew fragile and became homebound they were the group with the highest fall risk. Today's aging population is generally more active and spends more time outdoors. According to this study conducted in Northern California with patients from five Kaiser Permanente Medical Centers, of those who reported a fall, 58% occurred outdoors away from home. Many participants cited environmental hazards such as cracked or broken sidewalks as a contributory factor.

The baby-boomer population will present new challenges to falls prevention programs as they age. With the widespread promotion and practice of active lifestyles in this burgeoning

population it is clear that falls prevention is an expanding public health issue. Programs must continue to address the environmental aspects of falls prevention in addition to encouraging healthy lifestyles, safe behaviors, medication management and home safety.

For more information contact Colleen at CCampbel2@acgov.org or (510) 577-3535.



News & Announcements . . .

Field Manual Survey Alameda County EMS wants your opinion. An on-line survey is available on our website about the format and content of the Field Manual. Since policies are in alphabetical order and identified by page numbers, we want to know if the policy numbers continue to be useful. Take a second to tell us what you think!

EMS website:
www.acgov.org/ems