



2002 Policies Released

Alameda County Emergency Medical Services has finalized the policies in the 2002 Policy Review Process. This year we reviewed more than 50 policies. This article highlights the most significant changes in existing policies and three new ones. Final copies were sent out in September. Please note that policy update training is now mandatory. Contact your provider agency for dates.

Apparent Life Threatening Event-ALTE #7317

ALTE has been known in the hospital environment for some time, but it is new to the field. Consequently many paramedics are not thinking of ALTE when they assess a patient. Following a retrospective case review, the Alameda County EMS Agency has decided to implement a policy on ALTE for field personnel.

ALTE is a syndrome that occurs in infants up to 12 months of age (generally) that is frightening to the observer and is characterized by some combination of apnea, color change, marked change in muscle tone, and choking or gagging. Usually these patients appear normal when paramedics arrive. (See Dr. Pointer's column in the June, 2001 *EMS News* for a full description and discussion of ALTE.) About half of the patients who exhibit the symptom complex of ALTE later exhibit significant pathology. In most hospitals children who meet the definition of ALTE are admitted for a 24-48 hour workup, which may include apnea monitoring.

The rationale for implementing this policy is a retrospective case study conducted in Alameda County this year. Three physicians reviewed 382 consecutive paramedic Patient Care Reports (PCRs) for patients under age two. Parents refused care in 105 of the cases. Of those 105, 12 ALTE cases were identified. The other 92 patients had problems as serious as drug overdose or altered level of consciousness. In none of the 105 refusal cases was the base hospital contacted. Due to the potential seriousness of ALTE, Policy #7317 requires base contact if a parent wants to refuse care for a pediatric patient who meets ALTE criteria.

Pain Management (Pediatric) #7316

As part of its emphasis on meeting children's special needs, Alameda County EMS has developed a new policy for pediatric pain management. In Policy #7316 paramedics may now administer morphine to children who

meet certain criteria without base contact. The child must be at least six months of age and have adequate respiration and normal blood pressure for their age. Morphine is indicated for significant isolated extremity injuries (e.g. fractures and lacerations), crush injuries and burns. Use caution if other major traumatic injuries are suspected.

Base hospital contact is required before paramedics may administer pain medication to any child who is less than six months of age, who has abdominal pain or potential intra-abdominal or intra-thoracic trauma, a blood pressure outside the normal limits for their age, depressed respirations or any other condition not covered by this policy.

Crush Injuries/Syndrome #7102

Another new policy addresses crush injuries/syndrome. This policy was developed following a request from field personnel. It addresses treatment for the patient prior to release of compression and after compression has been released.

Treatment prior to release of compression includes administering albuterol, sodium bicarbonate, fluid resuscitation and pain management precautions. In patients where hyperkalemia is suspected, paramedics must make base contact prior to administering calcium chloride and additional bicarbonate.

If a paramedic is considering transporting a patient to a hyperbaric oxygen chamber, notify the base early on so that the base can locate a facility that can accept the patient.

Policies With Changes

The following policies are some of the ones that were changed in this process. This article addresses the most significant changes.

EMT-I Certification #3200

Several changes have been made in this policy. For initial EMT certification or recertification, the applicant needs to have current certification in CPR from the American Heart Association or the American Red Cross. Secondly, a Department of Justice criminal background check will now be required. Details of the process are being developed.

There are no extensions for EMT certification. The Alameda County EMS Agency cannot process an expired EMT certificate for recertification. EMTs who allow their certifications to expire will not be allowed to work as an EMT or

to represent themselves as an EMT. If an EMT's certification expires, he or she must take a certifying exam, obtain the appropriate number of continuing education hours and apply for certification. If the certification has been expired for more than four years, he or she must take an EMT class and apply for certification.

Hyperthermia/Heat Illness #7007 & Hypothermia #7008

These policies were rewritten to reflect the standards of practice currently in use.

Defibrillation and Cardioversion #7207/7223/7226

Additional information regarding monophasic and biphasic wave forms has been added to these policies. Alameda County EMS now allows biphasic energy doses in these policies.

Bronchospasm/Asthma/COPD #7211 & Pulmonary Edema/CHF #7212

Medics no longer need to contact the base hospital if they want to switch between these two policies. They are, however, welcome to contact the base if they have any questions.

Advanced Life Support Responder #8006

Under revisions in this policy, paramedics will be required to take Pediatric Education for Prehospital Personnel (PEPP) or Pediatric Advanced Life Support (PALS) for local accreditation.

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From the Medical Director

We do make a difference. A simple drug and a simple technique: The story of aspirin and spinal immobilization

By Jim Pointer, MD

In this issue, I would like to discuss the use of aspirin in chest pain patients and the issue of spinal immobilization, particularly in light of the institution of *Spider Straps*.

Two years ago Alameda County EMS instituted the "State of Maine Guidelines" for assessment and management of spinal injuries. Because of field observations that spinal immobilization was not being performed according to PHTLS or the State of Maine Guidelines, I changed our immobilization technique standard from seatbelts to *Spider Straps*. While that change has not necessarily been a popular one, proper application of the *Spider Straps* makes it easy to perform adequate spinal immobilization. I appreciate the fact that the straps require more time to apply and even more time to repackage

than seat belts. I would like to review our spinal immobilization protocols and briefly point out that the National Emergency X-Radiography Utilization Study (NEXUS) has recently validated our clinical criteria for assessment of spinal injuries.

The State of Maine Guidelines mandate that spinal immobilization be performed with a positive mechanism for spine injury. These include but are not limited to high velocity injury crashes or high velocity gunshot wounds near the spine. Spinal immobilization is omitted for negative mechanisms. Examples include but are not limited to a twisted ankle that occurs while running or a gunshot wound in an extremity.

The following brief article was written by Dr. Karl Sporer, MD, EMS Medical Director for San Mateo County. His message provides an excellent summary of the information available on aspirin and chest pain and some common questions and concerns that you may have regarding the administration of this lifesaving drug. It is reprinted in its entirety with thanks to Dr. Sporer.

It is for the uncertain mechanisms of injury that you must make a clinical determination of the need for spinal immobilization. If spine pain and tenderness are present, the patient is reliable and sober without distracting injuries, and a brief motor sensory exam is normal, spinal immobilization is not necessary for uncertain mechanisms. The entire process is described in the textbook that was distributed upon initial training in the State of Maine Guidelines. Extra copies are available should you need to review these important principles.

Recently the NEXUS study was published. NEXUS was a prospective observational study at 21 emergency departments which enrolled all patients with blunt trauma for whom cervical spine x-rays were ordered. Briefly, Dr. Jerry Hoffman and his colleagues determined that *low risk* (negative or uncertain mechanism of injury) patients who met all the following five clinical criteria had a very low risk of cervical spine injury: normal level of alertness, no focal neurologic deficit, no evidence of intoxication, no posterior mid-line neck tenderness, and no painful distracting injury. In a cohort of 34,069 patients the decision instrument was 99% sensitive for cervical spine injury. This is an astounding level of sensitivity for clinical medicine.¹

While the NEXUS criteria was devised for decisions regarding emergency department x-rays, NEXUS reinforces and supports our current spinal immobilization assessment and management protocol. Please refresh your memories on these techniques (see Policy #10117). Apply the criteria in every case of possible spinal injury. Your effective management of spinal injuries is one of the most important functions you perform to prevent disability to our patients. As usual, please contact me if you have questions or concerns.

Aspirin Use in Chest Pain/Discomfort Patients

By Karl Sporer, MD

Would you like to have the opportunity to administer a drug in the prehospital arena that will decrease deaths in a group of patients by 17-30%? If we had an anti-arrhythmic drug that had this level of success, we would be clamoring to have it available on our rigs. The simple administration of aspirin in the setting of an acute myocardial infarction has been repeatedly shown to have a large effect on decreasing deaths. This simple, inexpensive, and readily available drug carries the potential to help a large number of patients that we see every day. We can easily save more lives with aspirin than with any new addition to cardiac arrest management.

Chest pain patients make up approximately 15-20% of our transported patients. Our suspicion that some patient is having an acute coronary syndrome (either a myocardial infarction or crescendo angina) is only correct 60% of the time. Twelve lead ECGs will be diagnostic in only 10% of cases. This means that our current method of determining who is having an MI or ACS is very poor. Since aspirin is inexpensive and effective, we should have a very low threshold for administering it to anyone with chest pain.

Chewing the aspirin will promote more rapid absorption by the patient. It works by inhibiting platelet function, making them less sticky and less likely to develop acute clots in diseased blood vessels. It works differently than coumadin and other blood thinners.

A brief look at our use of documented aspirin administration in patients with chest pain has demonstrated that we have some room for improvement in our system. There are a number of reasons for this low use of aspirin in chest pain of suspected origin:

- **It doesn't sound cardiac.** Our prehospital and hospital diagnosis of MI is inadequate at best. With any significant cardiac history, it would be wise to treat with aspirin.
- **I gave aspirin but forgot to document it on the chart.** Every chest pain patient should either have aspirin documented as given, given by first responders, or a valid reason why you didn't give it.
- **Allergy.** A true aspirin allergy defined as bronchospasm, hives, or anaphylaxis is a reason to withhold treatment. Gastric upset or history of prior GI bleeding is not an allergy and not a reason to withhold this one-time treatment.
- **Vague chest or abdominal symptoms.** When in doubt, give aspirin.
- **Aspirin was listed as a usual medication.** A second aspirin in a day will not be harmful. I would administer it even in the setting of aspirin as a usual medication. Patients have enough confusion about their medications that I would err on the side of over-treating.
- **The patient is on coumadin already.** Since they work by different mechanisms, aspirin is still effective in patients on anticoagulants.

Since chest pain is one of our most common complaints, it will be one of our first quality improvement projects this year. By increasing our threshold of aspirin administration and improving documentation, we can all easily make a real and palpable improvement in patient care.

Reprinted with permission from *Priority One*, June 2001.

¹ Hoffman JR, Mower MR, Wolfson AD, Todd KH, Zucker MI: Validity of a set of clinical criteria to rule out injury to the cervical spine in patients with blunt trauma. National Emergency X-Radiography Utilization Study Group. *New England Journal of Medicine* 343 (2): 94-99.

Needle Decompression and Case Presentations

By Tom McGuire

A tension pneumothorax requires prompt needle decompression. Every paramedic knows that. Last year 14 trauma patients were needled in the field (in addition to a couple of atraumatic tension pneumos). Medics rarely get to test their clinical skills by making this diagnosis and performing the procedure. Careful review of the call reveals the details of this difficult decision and is especially useful for medics who haven't performed the procedure.

Peer case presentations may be the best way to share this rare occurrence with fellow medics, to explore the particulars of a specific case, and to answer some specific decision-making questions. Kenneth Howe, PhD, described a seven-step scheme for analyzing clinical decisions that can be applied to any clinical decision. Here are the seven steps applied to tension pneumos that could be incorporated into any call review. This isn't a comprehensive review of tension pneumos, it just poses some questions.

Howe's seven steps:

1. When not to intervene (first, do no harm). Chest decompression can lacerate intercostal vessels, introduce infection, or cause a pneumothorax if none existed. Does the patient's clinical deterioration warrant intervention if the hospital is close at hand? Are reliable signs present and obvious, such as rapidly increasing airway pressure in an intubated patient, decreased lung sounds or hyperresonance on the affected side? Or are the clinical signs more ambiguous?

2. When to intervene. This requires a quick summation of the risks and benefits. For a trauma patient with obvious chest wall trauma the decision may be a bit easier. What about a spontaneous pneumo? Recently, a needle decompression was performed for a non-

traumatic tension pneumo and the medic's documentation clearly supported the decision and good results.

3. When to modify intervention. The needle may be inserted in the mid-clavicular or intercostal space. Does the patient's position or related injuries dictate a preferred site? Must a one-way valve be improvised?

4. When to stop.

5. How often to try.

6. When you've achieved success.

7. When you've failed.

We can combine these steps for this case. The gold standard for needle decompression success is an audible rush of air or bubbles and improved ventilatory status. What if that does not occur? Did the catheter clog? Was your assessment incorrect? Should you insert a second needle? Reassess? The tension may be initially relieved but may reoccur if the catheter kinks. Will you place another?

When difficult patient presentations occur, other medics hear gossip, but real learning opportunities are usually missed. Case presentations benefit both the paramedics on the call and their peers, by discussing the case (sometimes the outcome), considering the decision steps or difficulties along the way, and then soliciting comments or questions. Peers who contribute to this reflective effort add a bit to their own decision-making skills. These 14 needle decompression cases are fine examples, but a huge variety of challenging calls occur daily. Howe's template is one of many formats for case review. Another template explores cases based on the practitioners' values and values ascribed to the patient. I suspect these value decisions frequently affect prehospital care, but they are rarely openly acknowledged or discussed. Case presentations of complex or difficult calls might be the best route to improved decision-making.

More about case presentations:

"Reflection on practice is an old idea and one which paramedics assert they apply as a matter of course.

While acknowledging that informal reflection has its value, this view is simplistic. True reflection on calls is neither instinctive or automatic, but is a deliberate focused activity..."

Adapted from introduction to:
The Case for Structured Reflective Practice in the Paramedic Curriculum.

Full text at:
<http://www.basics.freewire.co.uk/Templates/DLSep00/9956.pdf>



New Interim Health Officer

Dr. Robert Benjamin, a 27-year veteran Alameda County Public Health administrator, assumed the position of Interim Health Officer on August 20. He succeeds Dr. Art Chen, who left to become the medical director for the Alameda Alliance for Health.

Dr. Benjamin is currently serving as the medical director for the Public Health Department's Tuberculosis Control Program, and in that capacity is president of the California TB Controllers Association. He will retain his TB medical director duties along with the new health officer responsibilities.

During his tenure with the Public Health Department, Dr. Benjamin has been medical director of the Hayward Community Health Center, and director of the Community Disease Control Unit. He's worked closely with Behavioral Health Care on substance abuse and mental health concerns, and with Environmental Health Services on communicable disease control. For several years he did inmate medical case reviews as part of the jail inspections conducted by the health officer.

2002 Policies (cont. from pg. 1)

Equipment and Supply Specifications-ALS/BLS #8401

The EMS Supply Committee is comprised of a member of the fire department, transport provider and EMS Agency. All requests for equipment and supply changes must go through the appropriate member of the committee. Several minor changes and two additions have been made in this policy. Colormetric CO₂ detectors have been required equipment, and now digital CO₂ detectors are optional. Asherman seals have been added in place of Vaseline gauze for patients with pneumothorax.

Percutaneous Transtracheal Jet Ventilation #10101

The note that advised caution in the use of needle cricothyrotomy in patients less than 15 years of age has been removed. There are no available alternatives for field personnel.

Intubation-Advanced Airway Management #10102

A note was added to this policy that cites Dr. Marianne Gausche's study of airway management in pediatric patients. This study showed that a bag valve mask device was equivalent to intubation in children. According to the study, paramedics who are not able to intubate a child can expect good results using a bag mask device.



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The EMS News is published bi-monthly to inform and educate its readers about the Alameda County EMS system and issues affecting prehospital medical care.

Your questions and comments are welcome and should be addressed to Kris Helander-Daugherty, 267-3236 or khelande@co.alameda.ca.us

For change of address or number of copies, contact Sonya Lee, 267-3233.

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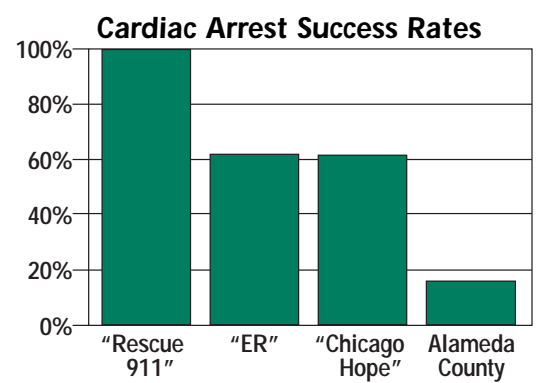
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SEE EMS WEB SITE FOR STAFF DIRECTORY

Television vs. the real world

The Alameda County VF/VT hospital discharge home rate is about 16%. Compared with other EMS systems around the country, this is better than some and worse than others.

On TV, however, cardiac arrest is rarely a terminal event. An entertaining article by S.J. Diem in the *New England Journal of Medicine* reminds us that public expectations for EMS saves may be unrealistic.



Source: Diem SJ et al. CPR on Television, NEJM. 1996



Meeting Notes

Research Committee—Thursday, November 15, 11:00am-1:00pm at the EMS District Office. Lunch will be provided. RSVP to Tom McGuire at 267-3228 or tmcguire@co.alameda.ca.us.

EMOC—Thursday, November 15, 9:00-10:30am at the EMS District Office



EMS News and Announcements

"Bioterrorism-Toolbox for Healthcare Providers" Conference—The 4th Annual Medical and Health Disaster Management Conference will be held Wednesday, October 10, 2001 at the PG&E Conference Center in San Ramon. The course is designed to unite government and healthcare emergency management planners in building a coordinated response to disaster through informative and interactive presentations.

This year's one-day conference offers attendees the opportunity to learn about the probability of a biological terrorist event and preparations required to manage the incident. The curriculum will focus on impacts to the medical and health infrastructure, emergency preparedness, response and mitigation. CEUs will be offered for RNs, EMTs, and paramedics. If you need information, contact Cynthia Frankel at 267-3224, or 442-3170 (pager) or cfrankel@co.alameda.ca.us.

Disaster Drill on November 15—This year's Statewide Disaster and Health Drill will be held on Thurs., Nov. 15, 8:30am-12:30pm. The scenario will focus on weapons of mass destruction.

Several orientation sessions are planned:

- Participating organizations—Oct. 30, 1:30-3:30pm, Eden Hospital.
- Controller/evaluator—November 1, 1:30-3:30pm, Eden Hospital.
- HAM radio operator—November 2, 10:00am-noon, Regional Kaiser, 1950 Franklin, Oakland.

The Disaster Drill Critique is scheduled for December 6, 1:30-3:30pm at Eden Hospital.

Cynthia Frankel is recruiting controller/evaluators for this important event. For more information, contact her at 267-3224, by pager at 442-3170 or at cfrankel@co.alameda.ca.us

Introducing...Molly Alfaro is the finance liaison for the EMS Agency. She works closely with Cindy Abbissinio on

the EMS Agency budget and contract compliance. She coordinates agency grant paperwork and authorizes payments and purchase orders. Another important part of her job functions is the coordination of the county's SB 12/612 funds; these funds are used to reimburse physicians for uncompensated emergency hospital care. Molly has worked for the county for 35 years.

ReddiNet Now Operational—The ReddiNet communication system is now operational in Alameda and Contra Costa counties. ReddiNet, which stands for Rapid Emergency Digital Data Information Network, will allow EMS, dispatch agencies and all the hospitals in the two counties to share vital information such as acute and critical care bed availability, emergency department diversion status, census alert status and other key data almost instantaneously 24-hours a day, seven days a week. (See the December 2000 EMS News for more information about ReddiNet.)

2002 POLICY REVIEW PROCESS DATES

DEADLINE FOR POLICY IDEAS	PUBLIC DRAFT OUT	PUBLIC COMMENTS DUE	PUBLIC HEARING AT EMOC	FINAL POLICIES SENT OUT	UPDATE TRAINING	POLICIES IMPLEMENTED
FEBRUARY 23	MAY 4	JULY 3	AUGUST 16	SEPTEMBER	SEPT. -NOV.	DECEMBER 1