Maryland
EMS News
For All Emergency Medical Care Providers
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To ALL EMS Providers

Protocol Clarification Document

By Richard Alcorta, MD
State EMS Medical Director
Effective March 13, 2007

Educators and EMS providers have requested a formal clarification on certain protocols. This protocol clarification document is designed to interpret variations in protocols and to remove inconsistent dosing, route, or joules settings. This is the formal notification that needs to be distributed to every EMS provider; thus MIEMSS is asking to have this document posted in all EMS stations and to have EMS educators review this document in each protocol class and in other educational settings. The topics are listed as they would appear in the *Maryland Medical Protocols for EMS Providers*. **Please make the changes (indicated in shaded blocks) in your own protocol manuals. (Corrected pages will be distributed to EMS providers at a later date.)**

1. **Oxygen administration on page 27 (GPC) when compared to page 117 (Stroke: Neurological Emergencies).** (The lower NC oxygen delivery dose is intentional for Stroke patients.)
   - General Patient Care section states: Administer oxygen at 12-15 lpm NRB to all priority 1 patients (including COPD) and to all priority 2 patients (including COPD) experiencing cardiovascular, respiratory, or neurological compromise.
   - Stroke: Neurological Emergencies. Administer oxygen at 2-6 liters via nasal cannula (unless hypoxic or in respiratory distress).
   - The reason that Stroke patients have a lower oxygen concentration administration is that there is concern that there will be increased oxygen free radical formation which can cause damage to ischemic or injured brain cells. Use 2-6 liters via NC for suspected Stroke patients.

2. **Cardiac Emergencies, page 60**
   - Add medication name “Calcium Chloride” to line 3. m).

3. **AED Total Number of Shocks before Medical Consultation, pages 76, 138, and 182**
   Clarification:
   - The most important question is when do you make the decision whether to stay at the scene and shock the patient while waiting for ALS or to transport the patient (either for ALS rendezvous or to the hospital emergency department). The key is time determined by whether you are using an old AED device or a new AED device. The “old” AED protocol states three stacked shocks, then one minute of CPR; then an additional three stacked shocks and a minute of CPR; then another three stacked shocks if indicated, resulting in a total of 9 shocks, then the required medical consultation. These actions take between 7 and 10 minutes, usually enough time for ALS to arrive and begin the transition of patient care. But in certain areas of the state where ALS response could be more than 10 minutes, it may be better to transport the patient to an ALS rendezvous point or to the hospital ED. The new AHA guidelines call for single shock sequences that will vary, depending on whether the arrest was witnessed or not witnessed (for example, with unwitnessed arrest, you start with 5 cycles of CPR (about 2 minutes) and then start single shocks. Around the third or fourth shock with this “new” AHA sequence, you should be making the decision whether it is better to stay at the scene and shock the patient while waiting for ALS or to transport the patient to an ALS rendezvous point or to the hospital ED.

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4. **Pain Management, page 102**
   - Delete: "or subcutaneously" from line 3. f).
   - Clarification: in the moderately to severely ill patient, certain medications are more effectively absorbed through IM administration than through the subcutaneous route, since there is peripheral vasoconstriction which reduces the absorption of the medication.
     (This explains the multiple corrections below.)

5. **Allergic Reaction/ Anaphylaxis, pages 103 & 104**
   - Add to line 3. d)(1); "maximum single dose 0.5 mg"
   - Change line 3. f)(1) to read:
     "OR Consider epinephrine 1:1000, 0.01 mg/kg IM; maximum single dose 0.5 mg"
   - Delete: 3. f) (1) "SC"

6. **Respiratory Distress, page 106**
   - Change lines 3. i) & 3. j): replace "SC" with "IM" (explained above).
   - Change dosage on line 3. i): replace "0.3 mg " with "0.01 mg/kg IM; maximum single dose 0.5 mg"

7. **Asthma/ COPD, page 107**
   - Change line 3. q): replace "0.01 mg/kg SC, Maximum single dose 0.3 mg" with "0.01 mg/kg IM, maximum single dose 0.5 mg"

8. **Croup, page 109**
   - Change line 3. f): replace "1:1,000 SC (max dose of 0.3 mg)" with "1:1,000 IM (maximum single dose 0.5 mg)"

9. **Pulmonary Edema/ Congestive Heart Failure, page 111**
   - There are actually two paths with different Nitroglycerin ceiling doses that are not well defined in the protocol.
     1. EMS Operational Programs that have the optional supplemental Continuous Positive Airway Pressure (CPAP)

     2. The EMS Operational Programs that do not have CPAP
   - **For CPAP Nitroglycerin Dose (monitoring BP after each dose):**
     i. give 1 dose of 0.4 mg Nitro (Preparing CPAP)
     ii. give 1 dose of 0.8 mg Nitro (Patient education CPAP)
     iii. give 1 dose of <u>0.8 mg Nitro (CPAP acclimatized patient)</u>
     iv. complete dose = 2.0 mg
     v. Then follow with Captopril (SBP is equal to or greater than 110); then attach CPAP; and then apply Nitroglycerine paste.

   - **For Non-CPAP Nitroglycerin Dose (monitoring BP after each dose)**
     i. give 1 dose of 0.4 mg Nitro
     ii. give 1 dose of 0.8 mg Nitro
     iii. give 1 dose of 0.8 mg Nitro
     iv. give 1 dose of 0.8 mg Nitro
     v. give 1 dose of 0.8 mg Nitro
     vi. give 1 dose of <u>0.8 mg Nitro</u>
     vii. complete dose = 4.4 mg
     viii. Then follow with Captopril (SBP is equal to or greater than 110); administer **Albuterol** (medical consult if there is cardiac history); and apply Nitroglycerine paste.

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- **Captopril Tablet** administration challenges:
  The literature recommended crushing the tablet and placing the granules under the tongue; this promotes more rapid absorption than oral ingestion of the uncrushed tablet. To facilitate administration, the ALS provider may break up the tablet, place it under the tongue, and moisten the tablet with a few drops of LR or saline once it is placed under the tongue. Although the method of delivery for this medication is challenging, it is beneficial to the patient.
- **Removal of Morphine:** There is solid evidence that patients with Acute Pulmonary Edema who receive Morphine Sulfate have a significantly worse outcome compared to patients who do not receive morphine. This is a dramatic paradigm shift from the method previously taught.
- **Medical Consultation Required for Furosemide:** The initial effects of IV Furosemide may cause adverse hemodynamic consequences (eg, elevations of pulmonary capillary wedge pressure, left ventricular filling pressure, heart rate, and systemic vascular resistance) and cause diuresis which may cause dehydration and electrolyte imbalance; this will worsen the condition of the Acute Pulmonary Edema patient who may not be volume overloaded. Many patients are on furosemide for congestive heart failure and may benefit from emergent administration of furosemide, thus the requirement for Medical Consultation before administration.
- **Albuterol:** Current Albuterol pharmacology states: "Medical direction required before administering to pregnant patient or patient having a cardiac history." *(page 213)* Patients who present with Acute Pulmonary Edema may or may not have a cardiac history. Albuterol has a potential benefit and should be used in the Non-CPAP pathway. In the CPAP pathway, the patient will not have time for the nebulized treatment before the CPAP mask is sealed. With that premise, it is wise to still get medical consultation with a patient who has a cardiac history. The addition of Atrovent is allowed with medical consultation.
- **Pediatric Pulmonary Edema/ Congestive Heart Failure:** With Medical Consultation, the new pediatric section allows for Albuterol, Furosemide, Morphine, and Dopamine.

10. Trauma Protocol: Trauma Arrest, pages 130 and 131

- Change line h) and line p): replace "If traumatic arrest is suspected, bilateral needle decompression should be performed." with
  "If traumatic arrest is suspected due to multi-system blunt trauma or due to penetrating neck, chest, or abdominal trauma, bilateral needle decompressions should be performed."

11. Procedures, page 146, Furosemide

- Delete SO for the EMT-P under Furosemide (requires MC always).

12. Airway Management: Combitube, page 170

- Change line c)(1)(a): replace "Combitube SA: patients 4 ft – 5 ½ ft tall" with
  "Combitube SA: patients 4 ft – 6 ft tall" (new parameters from the manufacturer)

13. Accessing Central Venous Catheters and Devices, page 165

Clarification:

- Non-Life Threatening Emergency: No one is allowed to access the central venous catheter or device unless he/she is a CRT-I or EMT-P with MEDICAL CONSULTATION.

14. Automated External Defibrillation, page 183

- Change line (4)(a): replace "Perform CPR for 1 minute" with
  "Perform 5 cycles of CPR."
- AED joules setting are not defined in protocol. (Read explanation in #15 below.)
  1. The old non-programmable AED with stair-step stacked shocks will remain 200 j, 300 j, 360 j.
  2. The joule programmable old stacked AED should be set at 360 joules monophasic for all shocks or 200 joules for biphasic.
  3. The joule programmable and single shock units should be set at 360 joules monophasic for all shocks or 200 joules for biphasic.

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15. **Electrical Therapy, page 186**
    - Change Line c) (1), replace:
      "Adult
      (a) Initial delivered energy 200 J or biphasic
      (b) Repeat delivered energy 300 J or biphasic
      (c) Repeat delivered energy 360 J or biphasic"
      With
      "Adult
      (a) Initial and subsequent delivered energy monophasic 360 J or 200 biphasic"
    - Clarification on joules taken directly from 2005 AHA Guidelines:
      "The optimal energy for first-shock biphasic waveform defibrillation yielding the highest termination rate for VF has not been determined. Several randomized (LOE 2)17, 24, 27 and observational studies (LOE 5)26, 38 have shown that defibrillation with biphasic waveforms of relatively low energy (less than or equal 200 J) is safe and has equivalent or higher efficacy for termination of VF than monophasic waveform shocks of equivalent or higher energy (Class IIa)"

16. **Diltiazem (Cardizem) is no longer being manufactured in lyophilized (dry) form which has a shelf life of over a year. Diltiazem is only available in refrigerated liquid form which has an EMS Ambulance non-refrigerated shelf life of 30 days. The EMS Operational Program has the option of addressing this shortage in one of two ways.**
    - Option one: The EMS Board has approved the replacement drug Verapamil on an emergency basis for the Diltiazem indications. Deployment and implementation of Verapamil will be determined by the EMS Operational Program based on the remaining supply of Diltiazem. The EMS Programs will need to conduct critical, timely pharmacology education on Verapamil with emphasis on the increased risk of Verapamil-induced hypotension. Verapamil will require medical consultation by all providers. (See page 5 for Verapamil pharmacology.)
    - Option two: Those jurisdictions that have refrigeration units on their ambulances or are willing to exchange the liquid Diltiazem every 30 days may continue to use Diltiazem.

17. **ALS Pharmacology, page 231**
    - Change line (3): replace "Anaphylactic Shock/Asthma" with
      "Allergic Reaction/ Anaphylactic Shock/Asthma"
    - Change Line (3) (b): replace "Adult: 0.01 mg/kg IM (NEW '07)" with
      "Adult: epinephrine 1:1000, 0.01 mg/kg IM; maximum single dose 0.5 mg **(NEW '07)**"
    - Change Line (3) (c): replace "Pediatric: 0.01 mg/kg SC (1:1,000); maximum single dose: 0.5 mg" with "Pediatric: epinephrine 1:1000, 0.01 mg/kg IM; maximum single dose 0.5 mg"

18. **ALS Pharmacology, page 241 (Morphine) g) (1) (b)**
    - Delete: "Pulmonary edema: Administer 2-10 mg slow IVP depending on age and weight of patient"

19. **ALS Pharmacology, page 248**
    - Change line g) (1): replace "SC" with "IM"

Note:

I. *TEMS and Wilderness protocols will still have subcutaneous (SC or SQ) routes of administration.*

II. *The Trauma Decision Tree is being modified, and there will be a global educational process for all EMS providers with the rollout.*

Verapamil Pharmacology follows on page 5.

VERAPAMIL (Isoptin)
(CRT-(I) & EMT-P only)

a) Pharmacology
Calcium channel blocker

b) Pharmacokinetics
(1) Inhibits the movement of calcium ions across cardiac muscle cells
(2) Decreases conduction velocity and ventricular rate

c) Indications
(1) Narrow complex symptomatic Atrial Fibrillation or Atrial Flutter

d) Contraindications
(1) Hypotension below 90 mm Hg, second or third degree heart block, hypersensitivity to the drug
(2) Patient with history of Wolf-Parkinson-White syndrome
(3) Ventricular tachycardia
(4) Patients less than 18 years of age

e) Adverse effects
(1) Hypotension (see Treatment of Overdose or Other Adverse Reactions)
(2) Bradycardia
(3) Vomiting
(4) Nausea
(5) Headache

f) Precautions
Use cautiously in patients with renal failure, congestive heart failure, or on Beta Blockers.

g) Significant interactions
Congestive heart failure may result if used along with beta blockers.

h) Dosage

(1) Adult:
a) 2.5 – 10 mg slow IV over 2 minutes; if response is not adequate, repeat in 15 minutes with a dosage of 2.5-10 mg slow IV over 2 minutes with medical consultation

(2) Pediatric:
Contraindicated for patients less than 18 years of age.

i) Overdose or Toxicity Presentation
Generally consists of exaggeration of side effects, including severe hypotension and symptomatic bradycardia

j) Treatment of Overdose or Other Adverse Reactions
(1) Give general supportive measures, monitor vitals, administer oxygen.
(2) Hypotension: Consider Calcium Chloride 250 mg SLOW IVP with medical consultation and IV fluid challenge with Lactated Ringer's; elevate legs.
(3) Bradycardia: Consider Atropine (0.5 to 1 mg); if necessary, consider pacing.

EMS Care 2007/ENA by the Bay
April 13-15, 2007

The Emergency Education Council of Region V, Inc. and the Maryland Emergency Nurses Association are pleased to announce that the EMS Care 2007 and ENA by the Bay conferences will for the first time be held jointly. The theme of this joint conference is "Care Across the Continuum" and has been designed to cover a wide spectrum of topics on both prehospital and hospital emergency care. This conference will provide an opportunity for emergency medical services providers and emergency nurses to network and share innovative practices, case studies, and other experiences. The main conference dates for ENA by the Bay are April 13 and 14, with Sunday, April 15 as optional; the main conference dates for EMS Care are April 14 and 15, with pre-conference offerings on Friday, April 13.

Register by March 30 to be entered to win an iPod

EMS Care 2007

ENA by the Bay

April 13-15, 2007

At the Conference Center at the Maritime Institute for Technology and Graduate Studies (MITAGS) in Linthicum, MD

Sponsored By: Maryland Institute for Emergency Medical Services Systems (MIEMSS)
Emergency Education Council of Region V, Inc.
Maryland Emergency Nurses Association

With the generous support of
Emergency Medical Services for Children's Partnership Grant
R Adams Cowley Shock Trauma Center

Registration Policies
Pre-registration is required. Registrations will be accepted in the MIEMSS Region V Office until April 6, 2007. Space is limited, so please register early to guarantee a space in the workshops selected. No walk-in registrations will be accepted.

Included in Your Registration
Registration includes admittance to all General Sessions and selected breakout workshops for the specific day(s) chosen by the registrant. All registrants will receive one copy of the conference proceedings with all available handouts for each session offered April 13-15, 2007. Registration also includes continental breakfasts and luncheons during the course of the conference.

Registration Confirmation
Confirmation letters will be sent. If the confirmation letter has not been received by April 9, 2007, it is the responsibility of the attendee to verify that his/her registration has been received.

Payment Information
Payment may be made in the form of checks, money orders, Visa, MasterCard, Discover, or American Express. There is a $30 fee for all returned checks. We can invoice Maryland State Government agencies, EMS agencies, and Maryland hospitals directly for the program. We cannot invoice Federal agencies or out-of-state agencies or organizations.

Payment information must be submitted at the time of registration.

Cancellations
Cancellation notices submitted in writing to the MIEMSS Region V Office and postmarked no later than April 6, 2007 will be eligible for a full refund, excluding a $25 administrative fee. Refunds will be made only if requested in writing; the letter must state registrant's name. If a registrant is unable to attend, another person may be substituted, on the condition that a letter from the original registrant or sponsoring agency authorizing the substitution accompanies the new registration and is postmarked no later than April 6, 2007. No refunds will be issued for cancellations postmarked after April 6, 2007.

Schedule Changes and Right to Cancel
Every effort has been made to ensure accurate information in this brochure. However, occasionally, due to unforeseen circumstances, it becomes necessary to make changes to the schedule. *The Emergency Education Council of Region V and the Maryland Emergency Nurses Association reserve the right to cancel or make changes in course offerings, presenters, and session times without prior notice to attendees.*

Continuing Education
Prehospital and nursing continuing education credits for Maryland are indicated after each general session and breakout workshop. Registrants may choose workshops from different "tracks," but please note that not every workshop carries nursing and prehospital CEUs. Each attendee will receive a certificate of attendance for the conference.

Hotel Accommodations
A limited number of overnight guest rooms have been reserved at MITAGS at special discounted rates for EMS Care/ENA by the Bay participants. These special prices can be guaranteed until Wednesday, April 11, 2007, or until the block of rooms sells out, whichever comes first. After this date, the availability of discounted rooms cannot be guaranteed.
To obtain these discounted rates, you must identify yourself as an attendee of EMS Care/ENA by the Bay 2007.
All rates are per day and are subject to 12% tax (5% state tax, 7% county tax).
The cost includes a full buffet breakfast, dinner, and an evening snack!
Single $125 Double $175
To make reservations, please call toll-free 866-900-3517.

Directions
A map and written instructions will be mailed with your registration confirmation.

Special Accommodations
If you require special accommodations to attend the workshops, please provide information about your requirements by April 1.

We have made every effort to choose healthy food for the meals provided.
If you require a special menu or have specific nutritional needs, please let us know by April 1.

Additional Information
For additional information, please contact the Region V Office of MIEMSS at 301-474-1485 or toll free at 1-877-498-5551 (Maryland only). Or go to www.miemss.org or www.eecreg5.org or www.mdena.org.

Friday, April 13, 2007

EMS Care Pre-Conference Programs

Quality Assurance Officer Update (9 AM–4 PM)
Based upon feedback from Quality Assurance Officers, this course will highlight quality improvement projects and case reviews. Experienced QA Officers will provide practical advice.
(6 Hours BLS: L, ALS: 2)

12-Lead EKG Class (8 AM–5 PM)
The EMS provider will learn to obtain and interpret a 12-lead EKG. After completing this course, the student will be able to properly identify and initiate care for the cardiac patient. Presented by Andrew Ballinger, RN, NREMT-P.
(8 Hours BLS: M, ALS: A)

EMS ONE: Everything the EMS Supervisor/Officer Needs to Know about Interfacing with MIEMSS, MEMA, and Local and State Health Departments (9 AM–4 PM)
How to access the Facilities Resource Emergency Database (yes, that's FRED), what you need to know about field and hospital Chempacks, trauma triage changes, EMAIS reports, and other timely topics to keep EMS One's in the know.
(6 Hours BLS: L, ALS: 2)

Friday, April 13, 2007

ENA by the Bay Main Conference, Day 1

8:30 AM	**Opening Ceremonies & Welcome, ENA President**
9:00 AM	**Family-Centered Care** Research has shown that patients have improved outcomes when families take an active role in patient care and the decision-making process. This session will discuss ways to make the transition from solely caring for the patient to caring for the family—providing a supportive environment and beginning therapeutic conversations to promote quality patient care. Presented by Johns Hopkins Pediatric Emergency Department. *(Nursing CEUs TBA; 1.5 Hour BLS: L, ALS: 2)*
10:15 AM	**Vendor Break**
10:45 AM	**Assessing Acute MI in the ED** What is the latest in management of the Acute MI patient in the ED? Helen Bradley, BSN, RN, CCRN, from Dimensions Health Care, will review current practice and the 2005 ACLS guidelines in management for the Acute MI Patient. *(Nursing CEUs TBA; 1.5 Hour BLS: M, ALS: A)*
12:00 PM	**Lunch, Visit with Vendors**
1:15 PM–2:30 PM	**Over-the-Counter Overdoses** Over-the-counter (OTC) medication overdoses are increasing. Lisa Booze, PharmD, CSPI, the Maryland Poison Center, will discuss the assessment and management of patients from intentional and accidental overdoses. *(Nursing CEUs TBA; 1.5 Hour BLS: M, ALS: A)*
1:15 PM–2:30 PM	**What Can Emergency Nursing Offer You?** *Targeted for current student nurses.* You will have the opportunity to ask questions and learn about the excitement and challenges of emergency nursing and how to get started in this rewarding field. Panel discussion with leaders and members of the Maryland State Emergency Nurses Association. *(Nursing CEUs TBA)*
2:30 PM	**Vendor Break**
3:00 PM	**Changes in Emergency Care: A Historical Perspective** Health care is rapidly changing, especially in the emergency setting. This session will explore how these changes have impacted emergency nursing. Presented by Gail Lenehan, PhD, FAAN, FAEN, a nationally recognized emergency nursing speaker. *(Nursing CEUs TBA; 1.5 Hour BLS: L, ALS: 2)*
4:45 PM	**Silent Auction, Emergency Nurses Association Meet and Greet**

Saturday, April 14, 2007

EMS Care Main Conference, Day 1
ENA by the Bay Main Conference, Day 2

7:30 AM **Registration, Vendor Exhibits, Continental Breakfast**

8:00 AM **Opening Ceremonies**
EMS State of the State -- Robert R. Bass, MD, FACEP, Executive Director, MIEMSS

8:30 AM **From the Battlefield to the States: The Road to Recovery, the USAF Aeromedical Evacuation System**
Lt. Col. Naomi Deshore-Osborne, USAFR, served as Senior Flight Nurse and Medical Crew Director, providing aeromedical evacuation and combat casualty care to wounded troops during Operation Enduring Freedom/Operation Iraqi Freedom. She will share her experiences of transporting the wounded warrior from the battlefield to U.S. soil.
(Nursing CEUs TBA; 1 Hour BLS: L, ALS: 2)

9:30 AM **Morning Break, Visit with Vendors**

9:45 AM **Decisions in Trauma: What We Are Doing Right and How We Can Improve**
Richard Alcorta, MD, FACEP, State EMS Medical Director, will discuss the new American College of Surgeons' and the Center for Disease Control's trauma triage algorithm and how it will impact the triage of patients in Maryland. He will also discuss specific issues in geriatric trauma triage.
(Nursing CEUs TBA; 1 Hour BLS: T, ALS: B)

10:45 AM **Understanding the Cycle of Violence: Can It Be Broken?**
The factors that contribute to violence create a cycle that is multi-faceted and inter-related. This non-clinical presentation explores the role of poverty, self-esteem, substance abuse, and other factors that can lead to violence. Some successful programs that have broken this cycle will also be highlighted. Presented by Robbi Hartsock, MSN, RN, PCNP, Trauma Designation and Process Improvement Manager, R Adams Cowley Shock Trauma Center.
(Nursing CEUs TBA; 1 Hour BLS: L, ALS: 2)

11:45 AM **Lunch, Visit with Vendors**

1:00 PM–2:15 PM **Breakout Workshops**

A1. How Death Saves Lives?
EMS faces death every day. Sometimes we win, sometimes we lose. But what if we make more of a difference than we realize? This session will provide information on how EMS impacts organ donation and will help providers understand the added value of their resuscitation skills. Presented by Karen Kennedy, Director of Clinical Services at the Transplant Resource Center of Maryland.
(1.5 Hour BLS: M, ALS: A)

B1. Management of the Adult Burn Patient
Burn management is consistently one of the most challenging in emergency care. This session will enhance the emergency care provider's knowledge of effectively and safely assessing and managing various burn injuries. Presented by Katie Hollowed, RN, Washington Hospital Center.
(Nursing CEUs TBA; 1.5 Hour BLS: T, ALS: B)

C1. Pediatric Cardiovascular Emergencies
Karen O'Connell, MD, FAAP, Region V Pediatric Medical Director, will present the keys to early recognition, appropriate management and stabilization of compensated and decompensated shock, arrhythmias, and cardiopulmonary failures in children. Both prevention strategies and risk factors for CV emergencies will be discussed.
(Nursing CEUs TBA; 1.5 Hour BLS: M, ALS: A)

D1. Military Medicine: Reflections of the Future
Military medical management of the wounded warrior will provide the crystal ball into the future of civilian emergency management and care. Presented by Lt. Col. Naomi Deshore-Osborne, USAFR Senior Flight Nurse and Medical Crew Director during Operation Enduring Freedom/Operation Iraqi Freedom.
(Nursing CEUs TBA; 1.5 Hour BLS: L, ALS: 2)

E1. Writing for Publication
Have you ever read a journal and thought "I could have written that article?" Nationally recognized author Gail Lenehan, PhD, FAAN, FAEN, will teach you the steps needed to become published and answer questions from the audience.
(Nursing CEUs TBA; 1.5 Hour BLS: L, ALS: 2)

2:15 PM **Break, Visit with Vendors**

Saturday Schedule Continued on Next Page

Saturday, April 14, 2007

EMS Care Main Conference, Day 1
ENA by the Bay Main Conference, Day 2

(Saturday Schedule Continued from Previous Page)

2:30 PM–3:45 PM Breakout Workshops

A2. Medication Histories: Steps to Take, Pitfalls to Avoid, and When to Suspect a Therapeutic Error
Establishing an accurate and complete drug history is an important but often overlooked skill. This presentation will highlight the steps to take and pitfalls to avoid when obtaining a drug history, and review common therapeutic errors that result in calls to poison centers and 911. Presented by Lisa Booze, Pharm D, CSPI, Maryland Poison Center.
(1.5 Hour BLS: M, ALS: A)

B2. Managing Traumatic Brain Injuries
EMS is usually the first to identify patients with severe head injuries. This course will assist EMS providers with the early identification of potential TBI patients and provide information in the appropriate treatment to reduce the likelihood of secondary injury and improve the patient's outcome. Presented by faculty from the R Adams Cowley Shock Trauma Center.
(1.5 hours BLS: T, ALS: A)

C2. Pediatric Case Studies
EMS calls involving very young children present a unique challenge because the patient does not talk—yet. Assessment skills are critical and the right interventions make a key difference. This session will focus on the importance of early recognition and rapid assessment of children in distress. Presented by Elizabeth Berg, BSN, RN, CCRN, Johns Hopkins Children's Center.
(Nursing CEUs TBA;
1.5 Hour BLS: M, ALS: A)

D2. What's New in Federal EMS?
An overview of the National Highway Traffic Safety Administration (NHTSA) Office of Emergency Medical Services providing information on current Federal "hot topics" and illustrating how Federal agencies work together. Presented by Drew Dawson, OEMS Director, and Gamunu "Gam" Wijetunge.
(1.5 Hour BLS: L, ALS: 2)

E2. Stroke Care in the 21st Century
Rapid assessment and early intervention from 911 to definitive care are part of the new stroke clinical pathway. This session will look at the evolving management of the stroke patient. Presented by faculty from Suburban Hospital-NIH Stroke Center.
(Nursing CEUs TBA;
1.5 Hour BLS: M, ALS: A)

3:45 PM Break, Visit with Vendors

4:00 PM–5:00 PM Breakout Workshops

A3. Beyond Broselow: Advanced Pediatric Pharmacology
This session will discuss the indications, dosages, and critical care implications of medications for rapid sequence intubation, vasoactive support, sedation, and suppression of dysrhythmias in children. Presented by Jamie Schwartz, MD, Pediatric Transport Team Director at the Johns Hopkins Children's Center.
(Nursing CEUs TBA;
1 Hour BLS: M, ALS: A)

B3. Trauma in Pregnancy
This workshop will discuss the normal physiologic changes associated with pregnancy and identify how those changes may affect your decisions while performing a trauma assessment. The session will emphasize the early signs and symptoms that warn of serious complications for both the mother and the fetus. Presented by Dr. Robert Atlas, perinatologist and Chairman of OB/GYN at Mercy Medical Center.
(1 Hour BLS: T, ALS: B)

C3. Pediatric Cardiac Arrest: Maryland's Experience with AEDs and Kids
The cardiac arrest data and experience with the pediatric population are changing EMS practice and protocols. Joseph Wright, MD, and Chris Handley, MS, EMT-P, from MIEMSS, will share state and regional trends seen in pediatric arrests and defibrillator use in children in Maryland. You filled out the forms—come see the impact!
(Nursing CEUs TBA;
1 Hour BLS: M, ALS: B)

D3. Stress Management Techniques for EMS Providers
EMS providers face a great deal of stress from a variety of sources on a daily basis that must be reconciled or they face burnout. Allyn Sweet, a healing practitioner, will provide an alternative approach to managing and relieving harmful stress.
(1 Hour BLS: L, ALS: 2)

E3. X-Rays—What Do They Show Us?
Hospital triage guidelines and critical pathways identify criteria for early x-rays. Learn the basics of x-ray interpretation or "wet readings" and when to call for specialists.
(Nursing CEUs TBA;
1 Hour BLS: L, ALS: 2)

Sunday, April 15, 2007
ENA by the Bay Post-Conference

7:30 AM — **Registration, Vendor Exhibits, Continental Breakfast**

7:30 AM–5:00 PM — **ENPC and TNCC Instructor Course**
PRE-REGISTRATION IS REQUIRED. This combined instructor course is for those RNs who have taken one of these courses, were given an "Instructor Potential" letter at their course, and would like to teach one of these courses in Maryland. Applications for the courses can be found on the Maryland ENA website (www.mdena.org). Applicants must also complete pre-testing (exam and skills). For information about ENPC, contact Linda Arapian, ENPC Chair @ 301-367-6966 or for TNCC, contact Sandy Waak @ 301-618-6143.

Sunday, April 15, 2007
EMS Care Main Conference, Day 2

7:30 AM — **Registration, Vendor Exhibits, Continental Breakfast**

8:30 AM–9:30 AM Breakout Workshops

A4. Case Studies—From Dispatch to Discharge
Roger Stone, MD, Medical Director for Montgomery and Caroline counties, will present a series of cases that highlight the importance of accurate medical dispatch. Essential information from the 911 caller is critical for EMD and EMS professionals. Patient outcome feedback is a critical component.
(1 Hour BLS: M, ALS: B)

B4. Spanish for EMS
The Hispanic population in Maryland is an ever-growing, vibrant community made up of individuals from many backgrounds. Are you able to communicate with these families when they need you most? Come learn some basic phrases to use during an assessment and to describe interventions.
(1 Hour BLS: L, ALS: 2)

C4. The Right Care for Children with Special Health Care Needs
One-quarter of all pediatric emergency department visits involve children with special health care needs, chronic illness, and technology-assisted care. Their families bring lots of unique equipment and long histories into your ambulance or aircraft. This presentation will expand your knowledge of and comfort level with caring for these children and working with their families.
(Nursing CEUs TBA; 1 Hour BLS: M, ALS: A)

D4. Managing a Line of Duty Death
We don't want to think it can happen, but it does. When a fellow provider dies in the line of duty, we need to know how to honor their sacrifice and care for the families left behind. Executive Director Ronald Siarnicki of the National Fallen Firefighters Foundation will address this topic.
(1 Hour BLS: L, ALS: 2)

E4. CHF vs. COPD
Is it wheezes or rales? Asthma or heart failure? Dr. Terry Jodrie, Region V Medical Director, will provide the clues to understanding your patient, including medications, signs, and symptoms. Differentiating between CHF and COPD is critical to providing the appropriate patient care. The new CHF protocol will also be discussed.
(1 Hour BLS: M, ALS: A)

9:30 AM — Vendor Break

9:45 AM — **Disaster Medicine**
Matthew Minson, MD, Director of the Office of Preparedness and Response at the Maryland Department of Health and Mental Hygiene, will present this timely topic. An expert on mass casualty medical management and difficult airway management, Dr. Minson will share his extensive experience in various disasters.
(1.5 Hour BLS: L, ALS: 2)

11:00 AM — Vendor Break

11:15 AM — **Survival of the Fittest: Health & Wellness of the EMS Provider**
EMS providers take care of patients but who takes care of the caretaker? Region V Medical Director and guru Dr. Terry Jodrie will explore why EMS providers need to focus on taking care of themselves. True wellness focuses not just on the body but on the mind, spirit, and relationships as well.
(1 Hour BLS: L, ALS: 2)

12:15 PM — Lunch, Visit with Vendors

Sunday Schedule
Continued on Next Page

Sunday, April 15, 2007

EMS Care Main Conference, Day 2

(Sunday Schedule Continued from Previous Page)

1:15 PM–2:30 PM Breakout Workshops

A5. Coping with Mechanical Ventilator Emergencies
With advancements in technology, patients that previously would have required hospital care are able to go home. But what happens when the technology fails? This presentation will identify the background of most ventilator-dependent patients, discuss the operation of common devices, and provide information on how to address problems to provide appropriate patient care. Presented by Ed Monaghan, RRT, Associate Professor, Baltimore City Community College.
(1.5 Hour BLS: M, ALS: B)

B5. Diagnosis & Management of Pelvic Fractures in the Field
Carnell Cooper, MD, FACS, Trauma Director at Prince Georges Hospital Center, will review the mechanisms of injury leading to pelvic fractures. The appropriate assessment and management of these painful and often life-threatening injuries directly impact patient outcome.
(1.5 Hour BLS: T, ALS: B)

C5. Pediatric Transports: Looking at EMS through the Eyes of Children
Communication and coping for children during transports can be a challenge. This session will offer techniques to help children cope with the sudden, unanticipated, and sometimes new experience of medical transport and pre-hospitalization. Ideas for EMS providers working with children of different ages during transport will be presented by faculty from the Johns Hopkins Pediatric Emergency Department.
(Nursing CEUs TBA; 1.5 Hour BLS: L, ALS: 2)

D5. EMS at Mass Gatherings
Ever wonder where to start when you've been asked to provide EMS coverage at a special event or mass gathering? How many crews do you need? What specialized tools exist to make it safer for your crews and patients? How do you safely access, remove, and track patients in large crowds? When do you call it an MCI? These questions and more will be answered by Capt. Chuck King, with Howard County Fire & Rescue, EMS Programs and Special Events Group, whose experiences range from Merriweather Post Pavilion events to the Columbia Triathlon. Learn how to make your next event effective, safe, and fun!
(1.5 Hour BLS: L, ALS: 2)

E5. Pearls for Patient Assessment
Physical examination is one of the most important, but often overlooked skills in emergency medical services. David Denekas, MD, Calvert County Medical Director, will share tips and tricks for polishing your patient assessment skills.
(Nursing CEUs TBA; 1.5 Hour BLS: M, ALS: A)

2:30 PM Visit with Vendors

2:45 PM–4:00 PM Breakout Workshops

A6. What Does Stroke Center Designation Mean to Me?
Stroke Center site visits are currently underway. Learn how stroke center designations will change the way you care for and transport stroke victims. Presented by John W. Young, CAS, BS, RN, MIEMSS Office of Hospital Programs.
(1.5 Hour BLS: M, ALS: A)

B6. Cultural Considerations in Patient Care
Maj. Chauncey Bowers, Prince Georges Fire/EMS Department, will present a series of cases where provider bias influenced patient care management. Come listen and learn why keeping an open mind is so important to quality patient care.
(1.5 Hour BLS: L, ALS: 2)

C6. Broken Bones, Strains, Sprains
Children play, explore, and learn; in doing so, they find unique places to become injured. Faculty from Children's National Medical Center will present the incidence, variations by age groups, and field management of orthopedic injuries seen in children. Triage guidelines for a Pediatric Trauma Center will include major trauma, hidden injuries, and interesting case examples.
(Nursing CEUs TBA; 1.5 Hour BLS: T, ALS: B)

D6. What's a DMAT?
Disaster Medical Assistance Teams exist across the U.S. as part of the National Disaster Medical System (NDMS) under the federal government. John Donohue, Chief of Emergency Operations and Field Programs at MIEMSS, will discuss the nature and history of DMATs and lead a discussion about a DMAT for Maryland.
(1.5 Hour BLS: L, ALS: 2)

E6. Advanced Pharmacology for Adult Critical Care
With the increasing number of specialty care centers, the inter-facility transport of critical patients leads to a need to increase the understanding of medications that were previously limited to the ICU. This course will look at the pharmacological management of these critical patients. Presented by Joseph Bottner, MD, FACEP, Medical Director for Lifestar Response.
(Nursing CEUs TBA; 1.5 Hour BLS: M, ALS: A)

Conference Registration

LAST NAME _____ FIRST NAME _____

PROVIDER ID OR SSN _____

STREET ADDRESS _____

CITY _____ STATE _____ ZIP CODE _____

PHONE: Day _____ E-MAIL ADDRESS _____

PRIMARY AFFILIATION _____

CERT./LICENSURE/POSITION (CIRCLE) Student Nurse, EMD, FR, EMT-B, CRT, EMT-P, PA, LPN, RN, MD

___ **April 13, Friday Session**
- ___ ENA, Day 1, Main Program ***OR***
- ___ EMS Care Pre-Conference Daylong Program
  (select one below)
  - __Quality Assurance Officer Update
  - __12-Lead EKG Class
  - __EMS One

___ **April 14, Saturday Session**
Both ENA and EMS Care registrants should circle one workshop per session:

Session 1	A1	B1	C1	D1	E1
Session 2	A2	B2	C2	D2	E2
Session 3	A3	B3	C3	D3	E3

___ **April 15, Sunday Session**
- ___ **ENA, Post-Conference Daylong Program**
  (ENPC and TNCC Instructor Course) ***OR***
- ___ **EMS Care, Day 2 Main Program**
  (Circle one per session)

Session 4	A4	B4	C4	D4	E4
Session 5	A5	B5	C5	D5	E5
Session 6	A6	B6	C6	D6	E6

ENA by the Bay Fees:

3-Day ENA Members	$200
3-Day Non-ENA RN's	$225
3-Day RN Students	$100
2-Day ENA Members	$150
2-Day Non-ENA RN's	$175
2-Day RN Students	$ 75
1-Day ENA Members	$ 75
1-Day Non-ENA RN's	$125
1-Day RN Students	$ 50

Total Due: _____

EMS Care Fees:

3-Day EMS Provider	$200
2-Day EMS Provider	$150
1-Day EMS Provider	$ 75

Total Due: _____

Pay by Credit Card

Card # ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

Exp Date _____/_____

Signature _____

OR Make checks payable to:
Emergency Education Council of Region V, Inc.
Mail to MIEMSS Region V:
5111 Berwyn Road, #102, College Park, MD 20740
OR FAX 301-513-5941

Registrations will be accepted until April 6, 2007 if space is available. Please let us know by April 1, 2007 if you need special accommodations.

Peninsula Regional Provides Local EMS Crews With New, Advanced Heart Attack Technology

Time is muscle. Time is money. Time is outcomes. The longer it takes to open blocked arteries of the heart during a heart attack, the more heart muscle is damaged, and the outcome for the patient is less favorable.

In an effort to improve the care of the heart attack patient, the Peninsula Heart Center of Peninsula Regional Medical Center has donated 31 Rosetta systems to the EMS Advanced Life Support (ALS) ambulances of Wicomico, Worcester, and Somerset counties. "This donation fills a void in those three lower shore county EMS jurisdictions where the Rosetta system was not available," said Alan Newberry, president/CEO, Peninsula Regional Medical Center. "Our Medical Center and local EMS have been strong partners in saving lives for many, many years and we're privileged to provide these devices that improve the odds for our patients in critical care situations."

When a patient is having a heart attack, one of the most valuable pieces of information is an electrocardiogram (ECG). "An ECG can show where the area of damage is in the heart. It is performed in the field by the paramedics and the results radioed to the ED," added Rose Marie Patin, executive director, Peninsula Heart Center. "Prior to use of this device, the description of the ECG was phoned to the ED or an ECG was not done until the patient arrived at the ED, potentially delaying care to heart attack patients."

The Rosetta device is a small "translator" that connects the ambulance's heart monitor to the handheld radio. It transmits the ECG over the radio to the ED, providing an actual printout of the test directly into the hands of the ED physician and staff. By providing this printout to the ED, an appropriate plan can be initiated prior to the patient arriving at Peninsula Regional's Robert T. Adkins, M.D. Emergency/Trauma Center. The ED will alert the cardiologist and other integral Peninsula Heart Center personnel that a heart attack patient is en route. Emergency personnel can save time preventing loss of heart muscle, they don't waste time repeating testing, and better outcomes for patients are realized.

The tri-county area is the only area on the Delmarva Peninsula with this type of technology. By providing local EMS providers with it, Peninsula Regional Medical Center will remain on the cutting edge of care for all Delmarva Peninsula heart attack patients.

Tim Collins, NREMT-P, Somerset County Jurisdictional Representative/MIEMSS – Region IV, seated left, explains the workings of the Rosetta system to William Todd, MD, medical director of Peninsula Regional Medical Center's Emergency/Trauma Center. Looking on behind is John Wilson, NREMT-P, Wicomico County Jurisdictional Representative/MIEMSS – Region IV.

EPINS to Be Expanded

Maryland's public safety partners are looking to expand the implementation of EPINS (Electronic Provider Identification Number System). EPINS is an online computer system that provides the official, universal method to assign Provider ID numbers in Maryland. This number is also the provider's ID number in the licensure and education system of MIEMSS and the Maryland Fire and Rescue Institute (MFRI). In the near future, MIEMSS will be looking to the jurisdictions to identify key individuals to be the EPINS contact within that particular jurisdiction. This has been a collaboration between MIEMSS, MFRI, and the Office of the State Fire Marshal.

MSP Launches New Aviation Cadet Program

The Maryland State Police (MSP) Aviation Cadet Program is actively recruiting for young men and women between the ages of 18 and 20 to serve as second care providers onboard MSP med-evac helicopters. Interested applicants must have already obtained State of Maryland EMT-B certification prior to the date of hire.

Cadets appointed to the MSP Aviation Command will become part of a three-person flight crew comprised of a pilot, trooper/paramedic, and cadet. MSP flight crews routinely perform a multitude of med-evac missions to provide emergency medical care to the critically sick or injured, as well as search and rescue, law enforcement, and homeland security missions. Aviation Cadets are assigned duties that do not require police authority. Cadets will be assigned to work under the direct supervision of a State Trooper who is also a Nationally Registered Paramedic with years of experience.

According to Colonel Thomas E. Hutchins, Secretary of the Department of Maryland State Police, "This is an exciting opportunity for young people interested in emergency medical services to become part of a team of dedicated women and men who literally save lives everyday."

Aviation Cadets will undergo rigorous training to acclimate them to the aviation environment and improve their medical skills. Prospective candidates will be hired as full-time employees, earning $22,871 a year. They must maintain a minimum EMT-B certification.

For more information about the Aviation Command and the Aviation Cadet program, visit the Maryland State Police website at www.mdsp.org or www.mspaviation.org or contact Lieutenant Anita L. Allen, Program Manager, Aviation Command, 410-238-5800

Equine Emergency Response Symposium

The Baltimore County Fire Rescue Academy, in conjunction with the Maryland Horse Council and the Maryland State Animal Rescue Team, will present the Equine Emergency Response Symposium on May 5 and 6, at the Maryland State Fairgrounds.

The rescue of a large animal is dynamic and can be inherently dangerous. Personnel involved in such rescues must possess not only the technical skills needed for the rescue, but an understanding of animal behavior.

The Symposium will consist of two full days of tactical and emergency training for firefighters, EMS providers, rescue personnel, horse owners, and veterinarians. Educational highlights include: horse trailer rescue and extrication, basic equine rescue, horse handling, lifting large animals, equine disaster management, barn fire tactics, and the care of injured riders. There will also be educational opportunities for children.

Participants will hear from experienced animal handlers and veterinarians who have been involved in the rescue of large animals, and learn how to integrate with these professionals on the scene of an emergency.

Continuing education credits will be provided.

For a complete listing of the program and for pre-registration forms, visit www.equineemergencyresponse.com. Interested personnel may also contact Kelly Reed at kreed@baltimorecountymd.gov.

◆ *Kelly L. Reed*
Baltimore County Fire Department

Bowman Speaks at Miltenberger Conference

Dana Bowman, Sgt. First Class (Ret.) (pictured above) spoke at the Miltenberger Emergency Services Conference 2007, held March 16-17 at Rocky Gap Resort in Flintstone, Maryland. Bowman was a Special Forces soldier and a member of the U.S. Army's elite parachute team, the Golden Knights. In 1994, a mid-air collision cost him both of his legs. His determination in the Army, and now in the business world, has earned him worldwide recognition as a motivational speaker and skydive demonstrator. About 400 Miltenberger attendees and staff listened to Bowman speak about overcoming adversity and mastering change, emphasizing that "attitude" is the number one determinant of success.

Maryland Fire Deaths Reach Historic Low

During 2006, the State of Maryland achieved the lowest number of fire deaths since statewide data collection began in 1975, according to the Office of the State Fire Marshal. Sixty persons lost their lives during calendar year 2006 which represents an 18 percent drop compared with 2005 and a dramatic 32 percent drop from 88 fire deaths during 2004. The number of residential fire fatalities also set a record low during 2006 at 43 deaths, with fewer fire fatalities occurring in the home—where people feel the most safe, than in any previous year.

This information was presented during a press conference on January 31, 2007 with many fire prevention partners in attendance. According to State Fire Marshal William E. Barnard, several factors have helped achieve the record-setting 2006 results. "Maryland's fire service along with many partners in the public and private sectors have focused on proven fire and life safety strategies such as working smoke alarms, home fire escape plans, and residential sprinklers. Community outreach programs, that emphasize personal responsibility for surviving a home fire are showing positive results," said Fire Marshal Barnard.

Mark the Date

April 13–15, 2007
EMS Care.
Maritime Institute for Technology and Graduate Studies (MITAGS) in Linthicum.
For information, call 301-474-1485.

April 22, 2007
Frederick County EMS Conference.
For information, call Region II at 301-791-2366.

May 20–26, 2007
EMS Week. Theme "EMS: Extraordinary People, Extraordinary Service."

May 22, 2007
Trauma Care 2007.
Theme "A Team Approach"
For information, call 410-328-3662.

June 16–22
Maryland State Firemen's Convention.
Ocean City, Maryland
Information: www.msfa.org

September 25
Mid-Atlantic Safety Conference.
Johns Hopkins Applied Physics Lab
Laurel, Maryland
Information: Office of the State Fire Marshal, 410-653-8980 / 800-525-3124

National Poison Prevention Week

March 18-24, 2007 is National Poison Prevention Week, which revolves around the theme "Children act fast…and so do poisons!"

For more information on what steps you can take to help prevent accidental poisonings, and for tips on promoting community involvement in poison prevention, contact Angel Bivens, Maryland Poison Center, 410-563-5584, abivens@rx.umaryland.edu.

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Governor Martin O'Malley
Lt. Governor Anthony Brown

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