

BUCKS COUNTY EMERGENCY HEALTH SERVICES ADVISORY COUNCIL NEWSLETTER—AUTUMN 2008

EXECUTIVE DIRECTOR REPORT

Jeryl L. DeGideo – Bucks County EHS Director

I would like to thank Bensalem Emergency Medical Service; Ed Copper, Bud Baughman, Rich Slack and Brian Hyams, Bucks County Rescue Squad; John Russell, Martin Liczbinski, and Tom Dougherty and St. Luke's Emergency & Transport Service; Larry Grake, Mike Mercer, Lester Schaeffer and Mike Hunsiker for participating in the PA STRIKE Team drill held at Fort Indiantown Gap on August 12th and 13th. I believe they all came home with a new vision of where our STRIKE Teams are headed.

The PA Bureau of EMS describes the goal for the STRIKE Teams as follows:

To develop trained, equipped and protected Emergency Medical Services ambulance services for mutual aid, intrastate and interstate requests for EMS assistance in responding to catastrophic casualty events. The participating EMS services will be resources allocated for local, regional, state, and national assets to be activated when the current assets have been exhausted.

In the August drill, Ed Copper was assigned as the Bucks County STRIKE Team leader. John Russell, Rich Slack and Larry Grake were their squad's Captains. John Russell was then assigned as the Housing sector, handing out keys to the barracks to the other teams from across Pennsylvania.

The first day entailed checking in the vehicles and staff, receiving housing assignments for the barracks and setting up the tents and cooking areas. There was a briefing explaining the arrangement of the two camps; one camp housed the tent sleeping

area and the hospital tent; and the other camp was for barracks sleeping, food prep dining area and the command post.

After both camps were up and operational, the teams were encouraged to walk around the camps to observe what other teams had in regards to equipment. The entire event was run under the Incident Command System along with all communications being conducted on the Pennsylvania 800 MHz radio system. While there were some glitches, overall the drill was a success. Glitches are why we drill, fix as many as you can during drills and the real event will go smoother.

Each STRIKE Team must have enough food, water, cooking and bathroom facilities, as well as housing for their own team for the first 72 hours of their deployment; complete self-sufficiency is a must. These types of drills are encouraged so that when the teams are deployed they will be confident that they are fully prepared to support themselves in a real event.

The current STRIKE Teams in Bucks County are; St. Luke's Emergency & Transport Service, Tri-Hampton Rescue Squad, Warminster Volunteer Ambulance Corps., Pt. Pleasant-Plumsteadville EMS, Central Bucks Ambulance and Rescue Unit (2 teams), Bucks County Rescue Squad, Levittown-Fairless Hills Rescue Squad and Bensalem Rescue Squad (2 Teams).

Please remember to wear your seatbelt and like the commercial says; "Driving buzzed is drunk driving."

COMMISSIONERS' CORNER **Commissioner Chairman Jim Cawley**

As you, the valued members of our emergency health and first-response community are aware, each year the month of September doubles as Emergency Preparedness Month. In the spirit of interoperability and cooperation, the counties of Southeastern Pennsylvania have banded together to launch **ReadyNotifyPA**, an alert service that sends emergency message directly to cell phones, personal data assistants and e-mail accounts.

There are two ways to sign up, by visiting www.ReadyNotifyPA.org or by entering a text message on your cell phone. We invite you to use rapid enrollment. Just text your county code to 411911 using your cellular device. The county codes for the region are BUCKS, CHESCO, DELCO, MONTCO and PHILA. It's that easy. Emergency alerts will be automatically sent to the devices that you signed up.

Also through www.ReadyNotifyPA.org you can customize your subscriptions and choose the types of alerts—such as severe weather alerts, transportation delays and crime information—that you wish to receive. This one simple step can be your lifeline to critical information that can help you protect your family during an emergency.

We extend our thanks to the Southeastern Pennsylvania Regional Task Force, which is responsible for implementing **ReadyNotifyPA**, a free service funded by the Task Force through a grant from the U. S. Department of Homeland Security.

ReadyNotifyPA is a service of Ready Region, a public education program introduced to Southeastern Pennsylvania in 2006. Ready Region educates the public about being prepared for any kind of emergency, such as having a minimum of three days of supplies on hand if basic services such as water, gas, electricity or telephones are cut off.

ReadyNotifyPA is powered by the Roam Secure Alert Network™ (RSAN) from Cooper Notification. Cooper has deployed other RSAN systems in major metropolitan areas across the country including the National Capital Regions (the

Washington, D.C. metro area), New Orleans, San Francisco and Central Florida.

During September, and throughout the year, we encourage you to take advantage of this customized emergency preparedness and notification tool.

MEDICAL DIRECTOR'S CORNER **Gerald Wydro, MD - Regional Medical Director** **Medical Director's Corner**

The Changing Paradigm in the Management of Acute Pulmonary Edema: Revolutionary or Evolutionary?

In recent years there has been a tremendous shift in how we in EMS manage patients with acute pulmonary edema (APE). Just as therapy such as phlebotomy for APE went out of style in the early Twentieth Century, we have seen old trusted modalities pushed aside and new “interventions” surface in the beginning of this century. In this edition of the “Medical Director's Corner” I will go over current recommendations for the treatment of APE.

Acute Pulmonary Edema is the leakage of fluid from the pulmonary vasculature into the interstitial tissues and alveoli of the lungs. Although a multitude of clinical entities can cause APE, we will be discussing the most common form for EMS, Cardiogenic APE. This is secondary to increased capillary hydrostatic pressure which forces fluid out of the vascular space and into alveoli. This increased hydrostatic pressure may result from many causes, including excessive intravascular volume administration, pulmonary venous outflow obstruction, or left ventricular failure secondary to systolic or diastolic dysfunction. Whatever the cause, the end result is the same; loss of alveolar O₂ / CO₂ gas exchange which will lead to hypoxia, tissue ischemia, and respiratory failure.

APE may be broadly categorized into Systolic or Diastolic dysfunction. Systolic dysfunction occurs when the left ventricle has reduced contractility (LV Infarct) and is unable to maintain cardiac output. Diastolic dysfunction is found when there are problems with left ventricle compliance and corresponding resistance to filling (tachycardia, rapid atrial fibrillation) which increase the diastolic

pressure. Often times APE is a circular phenomenon in which initial systolic dysfunction leads to concurrent diastolic dysfunction.

It should be noted that APE is a different clinical entity than Chronic Congestive Heart Failure. The clinical picture of CHF generally develops over time, has a preponderance of right sided heart failure clinical findings, and management goals which differ from the patient with APE.

Therapy of APE starts with the basics. Maintenance of the ABC's with appropriate oxygen therapy to improve the impaired gas exchange that is occurring secondary to interstitial / alveolar edema fluid. Maintenance a pulse-ox reading of greater than 90% should be the goal of oxygen therapy in APE. Other therapeutic options are generally aimed at 3 areas: **Afterload Reduction, Preload Reduction, and Ventilatory Support.**

AFTERLOAD REDUCTION

ACE Inhibitors – These medications have been used for years in the maintenance of CHF, but more recent data suggests a role in the early management of APE as well. ACE Inhibitors have effects on afterload, preload, and also improve cardiac output. The most common formulations used for APE are captopril 25mg administered sublingually or enalapril 1.25mg administered IV. The Pennsylvania Emergency Health Services Council (PEHSC) Medical Advisory Committee recently recommended that ACE Inhibitors be added to the Commonwealth medication list as well as the APE protocol.

PRELOAD REDUCTION

Diuretics – Loop diuretics such as furosemide (lasix) have long been the cornerstone of APE therapy. Their two prong effect of vasodilatation and diuresis was thought to have great benefit. However there is increasing data suggesting that their delayed onset of action (generally 30-90 minutes), questionable vasodilator effects, adverse affect renal perfusion, and the delayed hypotensive effects on patients who are in APE but not in volume overload has lead to a change in the aggressive use of this medication. Most now agree that there is little benefit to the immediate use of loop diuretics in APE and that in some patients they

may actually be harmful. For that reason, this medication has been moved into a secondary role for the treatment of APE in the pre-hospital setting.

Morphine Sulfate – The reported benefits of vasodilatation and anxiety reduction are unproven and some data suggests that patients receiving this medication actually have worse outcomes than those who do not receive morphine for APE. For this reason, morphine sulfate is no longer an option for the treatment of APE in the pre-hospital setting.

Nitrates – Nitroglycerin is the most reliable vasodilatation medication available in the pre-hospital environment. It is both rapid (onset of action within minutes of sublingual administration) and predictable in the preload reduction that it provides. The dosages for APE are higher than those used for anti-angina purposes. Recall that a single 0.4 mg sublingual nitroglycerin given every 5 minutes is roughly equivalent to a nitroglycerin infusion at 80mcg/min. The dosages for APE are often much higher so that administering 2 or 3 sublingual nitroglycerin tablets every 3-5 minutes is often required in the initial resuscitation of a patient in APE. Caution should be exercised in the hypotensive patient as well as the patient who is taking medications for erectile dysfunction (re: Viagra) as a precipitous drop in blood pressure may occur.

VENTILATORY SUPPORT

Non-Invasive ventilation – The use of Continuous Positive Airway Pressure (CPAP) has revolutionized the treatment of APE in the pre-hospital setting. CPAP has reduced APE morbidity with proven reductions in both the need for intubation as well as ICU admission. CPAP works by maintaining a continuous flow of positive airway pressure administered via a mask fitted snugly to the patient's nose and mouth. This pressure maintains the patency of the fluid-filled alveoli and prevents them from collapsing when the patient expires. This allows for reduced work of breathing in reopening collapsed alveoli. CPAP also improves pulmonary air exchange, and works to reduce both preload and afterload. CPAP should be considered early in the management of patients with severe APE as the benefits are clear.

The management of APE in the pre-hospital environment has evolved in recent years. Old standard therapies such as morphine and furosemide have been eliminated or relegated to a secondary role. The aggressive use of nitrates and the early application of CPAP have been found to improve patient morbidity. And new interventions such as ACE Inhibitors will likely be introduced in the near future as EMS continues to utilize evidence based medicine to improve patient care.

LICENSURE AND DATA REPORT **Jason Diefenderfer – EHS Field Representative**

Data Collection

It seems like it has been going on for a while and you keep hearing that it's coming. Tablet PCR is still scheduled to be released. There are several factors delaying the "go live" date. The major factor is the federal standards for data collection elements. We know this means nothing to you, but the positive side of the delay is that this gives you more time for input into the system you use.

Once we go live we feel confident you will find this a more user friendly way to complete your PCR's. We are currently configuring the new system and making changes where we found deficiencies and/or confusion. If you have any input, please contact our office we want to hear from you.

Reminder ANSI is coming. Protect yourself.

ANSI/SEA 107 (Reflective Clothing) - requirements are **mandatory November 24, 2008**

"All workers within the right-of-way of a Federal aid highway who are exposed either to traffic (vehicles using the highway for purposes of travel) or to construction equipment within the work area shall wear high-visibility safety apparel."

Based on the currently information available emergency workers are required on federal right of ways to don PPE (Personal Protective Equipment) meeting ANSI/SEA 107 (Reflective Clothing), when the following conditions are met:

- 1) Class 1 - Speeds less than 25 MPH and workers cannot give full attention to the traffic
- 2) Class 2 - Speeds less than 25 MPH during inclement weather and workers attention

is occasionally diverted from traffic.

- 3) Class 3 - Work environment is a high task load, speeds of 50 MPH and emergency service workers are utilizing full range of motion and their attention must be focused on the task.

Note you will not find ANSI/SEA 207-2006 it never made final approval due to the amendments we are following as directed 107-2004

From here down is supporting evidence if you decide you want to know more:

<http://www.pabulletin.com/secure/data/vol36/36-5/179.html> = Pa Code §212.2
<http://mutcd.fhwa.dot.gov/hdm/2003r1r2/part6/part6d.htm> = MUTCD
<http://edocket.access.gpo.gov/2008/pdf/E7-24863.pdf> = Federal Register
http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=2006_register&docid=E6-19910 = 23 CFR
<http://nvfc.org/index.php?id=1005> = sample policy
http://muitimedia.mmm.com/mws/mediawebserver_dyn?6666660Zjcf61V s6EV s666NA8COrrrQ- = ANSI/SEA 107-2004 made easy

"OI GUY"

Larry Loose – QA Coordinator

How am I doing?

Whenever I have a discussion about our EMS system overall someone always brings up the issue of patient outcomes from the hospital. This is a nationwide problem; getting information from hospitals to evaluate our treatments is an obstacle. This problem also impedes EMS research.

I found it quite interesting as I read the JEMS reader poll in their July of 2008 issue. The poll reported that more than sixty percent of providers who responded to the poll do not receive regular feedback on their patient from their organization. I frequently speak to providers who tell me they don't know how well they are doing within their organization. Some providers are advised of concerns and sometimes have to respond to a quality assurance letter, but it stops with the notice or response. I guess no news is good news until there is a questionable outcome or someone complains. Then you find out you have been doing something incorrectly or misunderstood a protocol

for a long time, but no one told you until there is a problem.

I provide the chief's association, MAC, and service QA coordinators with issues I come across and ideas to improve our system. Services should give their providers a performance review that is measurable. For example, what is the services overall protocol compliance for a specific differential diagnosis? Identify the strengths and the opportunities to improve. Tell individual providers what their compliance is for the same diagnosis.

Feedback is very important to individuals and helps them improve. Getting a letter from the QA committee feels like "internal affairs" although sometimes it is necessary. Just giving the global service picture alone may make a provider realize their own opportunities to improve and they'll make the appropriate correction themselves.

BUCKS COUNTY SQUAD CHIEFS' ASSOCIATION

Evan N. Resnikoff, M.S. NREMT-P - President

One of the many functions of the Bucks County Squad Chiefs' Association is to work with the EHS office to ensure we are equipped to handle a Mass Casualty Incident (MCI). In 2006 Bucks County EMA purchased four trucks to be used as MCI vehicles. These vehicles replaced the aging fleet of MCI trailers the Association has maintained since 1993. Also in 2006, the Chiefs' Association secured a \$99,000 grant from the CDC to modify and equip these trucks for MCI use (this grant also paid for the scholarship and tuition reimbursement program).

Any EMS provider can request an MCI truck to a scene. MCI trucks are logged on 24/7, and are required to respond to any call for a Mass Casualty Incident. Fire responses are dependant upon available manpower at each station, however generally the MCI units are able to respond and are dispatched accordingly. The purpose of the MCI vehicle is to carry additional equipment to be used by the on-scene EMS providers. The MCI vehicle may often respond with a driver only, therefore if additional manpower is needed you must consider dispatching additional squads for assistance.

Each vehicle has been stocked with the same baseline level of equipment and supplies to handle an MCI. Some vehicles have additional equipment to handle extended rehab assignments for fires and other long-term operations such as Hazmat incidents and police actions.

The vehicles, locations, and basic capabilities are as follows:

MCI1 for rehab)	Squad 115	MCI (SS115
MCI2 rehab (medical only)	Squad 125	MCI, Fire
MCI3 rehab*	Squad 108	MCI, Fire
MCI4 rehab*	Squad 143	MCI, Fire

Units marked with an asterisk have extra fire rehab equipment and carry a limited supply of water. MCI4 took the place of SS143, and has most of the rehab equipment from the old unit. Squad 115 also operates Special Service 115, which is a fire rehab unit. When in that area and considering adding additional resources for rehab equipment, request SS115 for rehab instead of an MCI truck.

When considering fire rehab it is important to consider what you are looking to do on scene before requesting additional equipment. What we often do as "rehab" may differ from conventional NFPA standards for a true rehab assignment. If you need additional equipment and manpower to assess and treat firefighters an MCI unit may be appropriate. If you need water and food, utilize a canteen unit. If you need equipment for both needs, request both a canteen and an MCI unit. Bucks County has three canteen units available for our use:

Canteen 4 (CT4) - Trevoise Fire Company
Canteen 19 (CT19) - Doylestown Fire Company
North Penn Goodwill Fire Company - Montgomery County

The MCI trucks do not carry extra sheets & blankets beyond typical MCI use, coffee or other food products, or large volumes of water. They do carry a long list of BLS medical equipment, typical of what would be used during an MCI.

Anyone who would like the complete inventory list of the vehicles or would like to become more familiar with these vehicles can contact the squads that host each vehicle for a tour.

TRAINING REPORT

Michele Rymdeika, BC EHS Training Coordinator

Con-Ed Classes: Please continue to check our website for con-ed course information from various organizations at www.bcehs.com

CPR Cards: Please remember to forward a copy of your CPR card to our office. They can be faxed, emailed, or mailed. CPR cards are processed within 3-5 business days after our office receives them. You can check your profile after that time to see if your CPR has been received and entered.

Con-Ed Reports: You can check your con-ed report online through the State's website. There is a link to it from our website. If you go to our homepage and click on "**View your con-ed online,**" it will walk you through the process. You can also search for courses through this same website, after you are logged in.

LMS con-ed credits: LMS con-ed credits are automatically transferred to your con-ed report. The process takes about 3 weeks, so make sure you complete the courses early so the credits transfer in time for your recertification.

Con-Ed Handbook: The State has a continuing education handbook that outlines the requirements for recertification. To view/print this handbook, go to: www.health.state.pa.us, on the left-hand side, page down and under **Professionals and Providers**, click on **Emergency Medical Services**; then click on **EMS Training Information** and then click on **EMS Con-Ed Manual**.

BUCKS COUNTY CRITICAL INCIDENT STRESS MANAGEMENT

Deb Kates, BC CISM Coordinator

The Bucks County Critical Incident Stress Management Team exists to serve the Emergency Service Personnel and their families in the Bucks County area. The 50 member team consists of peer

support personnel (fire fighters, police officers, EMS personnel, nurses, dispatchers and mental health professionals.) All our team members have been trained in the CISM process according to national standards. The goal of the team is to help reduce the impact of traumatic events or critical incidents experienced by any Emergency Service Personnel in Bucks County. Through a structured CISM management process, it also seeks to accelerate the recovery of the Providers and lessen the effects of any harmful stress. This process validates and normalizes stress reactions, encourages ventilation, provides coping strategies, and provides additional sources of assistance and referrals when needed.

It is normal for a person to experience symptoms of stress because of an unexpected abnormal situation. However, what is traumatic for one person may not be traumatic for another; individuals will vary in their responses to a critical event.

A traumatic event or critical incident can be described as a:

Line-of-duty or traumatic death
Suicide
Fires/arson
Accidents
Threats or acts of violence
Terrorism events

The Bucks County CISM team can be accessed 24/7 by calling the Bucks County Dispatch Center at 215-348-6617 or by contacting the BC CISM Coordinator at 215-340-8735 Monday through Friday from 8am-5pm, or via email at drkates@co.bucks.pa.us. There are no fees involved for the BC CISM Team's Services.

AMERICAN RED CROSS

Deb Myatt, Director of Health & Safety Services

Say Hello to the American Red Cross, Lower Bucks County Chapter!

The American Red Cross Lower Bucks County Chapter is the place where a stranger provides food, shelter, comfort and hope when your life is disrupted by a disaster. It's the place where someone you'll never see donates blood to help

save your life. It's the place where service men and women hear a voice telling them of a new addition to their family. It's the place where someone can learn to save your life, purchase an AED or mini-safety lantern, or learn about Lifeline—a personal emergency response system that helps seniors live in their homes. The American Red Cross Lower Bucks County Chapter is also the place where our homeless neighbors can find a roof, warm meal and helping hand.

We responded to 38 emergency crisis incidents, helping more than 250 individuals with food, shelter, clothing, and financial needs after a devastating disaster affects their lives. This incurred a total financial commitment of over \$48,000. We sheltered more than 400 men, women, and children in our homeless shelter services. The shelter provides intensive casework, a 24 hour Homeless Hotline service that serves all of Bucks County, and provides referrals for food, shelter, clothing, and addiction/mental health treatment. We also certified 9580 people in First Aid and CPR, trained 6563 in Aquatics, trained over 300 in other Red Cross related courses, certified 65 new instructors, and assisted 99 families with emergency communications to service men and women.

The Red Cross has a worldwide network that families of service men and women can utilize to reach overseas loved ones in case of a birth, death, or illness. Volunteers from the Lower Bucks County Chapter were at more than 275 blood drives.

The American Red Cross is always looking for reliable, energetic people who would like to teach CPR and First Aid in their community. We provide classes for churches, businesses and community groups throughout Lower Bucks County. The next Instructor Course will be held at the end of October and is free to those candidates who agree to teach at least 2 classes for the Chapter. Basic prerequisite classes may be required and can be taken in September/October, prior to the instructor class. Paid instructor positions are available for instructors who can teach during the work week. Once a candidate completes the ARC instructor course, they can bridge up to teach CPR for the Professional Rescuer, Babysitting and Pet First Aid.

We are also looking for people who would like to teach youth classes such as “Tommy the Safety

Cat” and “Scrubby Bear” to children (ages 4-8). The American Red Cross will be hosting a FREE Work Place Training Seminar at the end of October to help businesses improve their workplace safety programs. It will feature an OSHA representative, basic ARC Health & Safety products & services, and a continental breakfast. Attendance is limited and by invitation only. To request an invitation, please contact Debra Myatt, Director of Health & Safety Services, at: Dmyatt@redcrosslbcc.org.

AEDs are critical to saving lives. The American Red Cross provides free Adult CPR/AED training for up to 8 students to groups who purchase an AED through the Chapter.

To find out more about the Red Cross or how you can get involved, please contact the Chapter at (215) 946-4870 or visit our website at: www.redcrosslbcc.org