



Emergency Medical Services *Partners*

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New 2010 AHA Guidelines Released

On October 19, the American Heart Association released its 2010 Guidelines for CPR and Emergency Cardiovascular Care. The AHA Guidelines are based on an international review of the science published over the last five years. Here are the highlights:

New Link in Chain of Survival



Immediate recognition and activation, early CPR, rapid defibrillation, effective advanced life support **and integrated post-cardiac arrest care.**

The new chain reflects the importance of post-cardiac arrest care, in particular induced therapeutic hypothermia.

Basic Life Support: CAB instead of ABC

"Look, Listen and Feel" has been removed from the algorithm. Now, after checking for pulses (no longer than 10 seconds) in any unresponsive adult victim with no breathing or no normal breathing (ie, only gasps,) start chest compressions before giving rescue breaths. (C-A-B rather than A-B-C).

Chest Compressions: The Foundation of CPR

There is a continued emphasis on quality compressions. Compress at a 100/minute rate. Compress to a 2" Depth (NEW!) for Adults. Allow complete recoil after each compression. Minimize Interruptions. Rotate compressors every two minutes.

Ventilations: Avoid Hyperventilation

Deliver each rescue breath over 1 second. Give a sufficient tidal volume to produce *visible chest rise*. Once an advanced airway is in place, (ET, Combi-tube, LMA, or King-LT) maintain continuous compressions. Ventilate with 600 ml at 8-10 a minute. For a 1 liter ambo-bag, squeeze 2/3 of bag. For a 2 L bag, squeeze 1/3.

One Shock/2 Minutes CPR

The 1-shock protocol has not been changed. Evidence has accumulated that even short interruptions in CPR are harmful. Rescuers should minimize the interval between stopping compressions and

delivering shocks Resume CPR immediately after shock delivery.

Mechanical Devices and ACLS Drugs Deemphasized

No device has been shown to consistently outperform standard CPR. If you are going to use a mechanical CPR device, make certain that compressions are not interrupted while placing patient on device. There are still no data showing that any drugs improve long-term outcome after cardiac arrest. Atropine has been removed from the PEA/Asystole algorithm. Lidocaine has been removed from the VF/VT without pulses algorithm.

Alternative Airways to ET Intubation Emphasized

There is no evidence that advanced airway measures improve survival rates in the setting of out-of-hospital cardiac arrest. Limit CPR interruptions to gain airway. During CPR, the supraglottic airway or simple bag-mask ventilation is a reasonable alternative to endotracheal intubation. Always use continuous capnography for airway confirmation

Post Cardiac Arrest Care

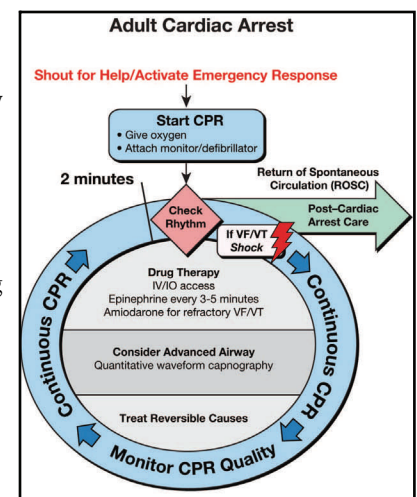
Induced Hypothermia is now recommended for all post-cardiac arrest patients who are unable to follow verbal commands (not just patients with VF/VT arrests). 12-leads are recommended for all ROSCs. Post -cardiac arrest patients with suspected cardiac etiology will be brought to the cardiac cath lab.

Implementation

EMS responders in the North Central region should continue to follow regional guidelines. These new AHA guidelines will likely be incorporated into the NC guidelines when the region reviews them during its regular protocol review process.

The full guidelines with extensive discussion of the science are available for free download at :

http://circ.ahajournals.org/content/vol122/18_suppl_3/



Dangers of Hyperventilation

Quality chest compressions receive deserved emphasis in CPR training, but also vital to patient outcome is the delivery of quality ventilations. Studies show that many responders in the excitement of the call consistently hyperventilate patients. Hyperventilation can happen in two ways – too many ventilations and/or too much volume with each ventilation. We breathe normally through negative pressure. When we ventilate a patient, we do it through positive pressure. Too much positive pressure in the thoracic cavity can compress the vena cava and hinder critical blood return to the heart. Limit both rate and volume of your positive pressure ventilations. In an adult, the rate should be 8-10 per minute with a tidal volume of only 600 ml.



Transport Ventilator



The UCONN Fire Department recently put its new transport ventilator on-line. The ventilator, which can provide a precise tidal volume and respiratory rate, has already been used several times with notable success. Along with responders from the Farm-

ington Fire Department and American Medical Response (AMR), the UCONN medics were able to restore pulses and blood pressures to two victims of sudden cardiac arrest in Farmington. They also achieved return of circulation on a patient in cardiac arrest in Avon, thanks to the help of responders from the Avon Police Department and AMR. Great CPR and great job by all!

PCR Policy

At John Dempsey Hospital please leave a copy of your PCR with your patient's nurse or place the PCR in the appropriate room slot in the row along the main medical desk. Please never leave the PCR in the patient's room which can lead to HIPAA violations. In the event you are called out of the hospital to respond to an emergency call, the run form must either be faxed immediately following the call, or hand-delivered. Per regional policy all PCRs must be left within eight hours. The prehospital run form **is essential reading** to the emergency physician and later physicians in the patient's continuing care. It is also important that prehospital ECG strips be affixed to the PCR. Thanks!

UCONN Health Center EMS Web Site

For news, educational information, CME schedule and past copies of our newsletter *Partners*, check out our web site at:

uconnems.uhc.edu



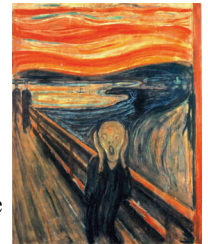
**North Central Connecticut
EMS Council**

Regional Guidelines Review

The North Central Region will be reviewing and updating its treatment guidelines this fall and winter. If you have suggestions for guidelines changes or have any confusion about existing guidelines that you think should be made more clear, do not hesitate to contact your clinical coordinator or Peter Canning at canning@uchc.edu. Your input is vital to improving our guidelines.

Pain Scale Reminder

Per regional guidelines, all patients should have pain scales. The EMS provider will evaluate all conscious patients (regardless of presenting complaint) for the presence and severity of pain once immediate life threats have been addressed. This assessment will be repeated after any pain management intervention, change in apparent pain level or at least every 15 minutes. This evaluation will consist of, at a minimum, either a verbal numeric score or a visual analog score. If possible, also use the verbal score. Pain scores **must be documented** on the patient care report.



November 4, 2010 Morning CME

All EMS providers are welcome to join us at our monthly Thursday morning CME on November 4, 2010 at 9:00 A.M. This month's topics include:

Obstetrical Emergencies: James Giddings, M.D.

Death Determination: Richard Kamin, M.D. and Peter Canning, Paramedic, R.N.

Journal Review: American Heart Association: 2010 CPR and ECC Guidelines Executive Summary

Case Reviews: Review of recent EMS cases brought to the John Dempsey Hospital.

(Meetings are held on the first Thursday of each month in the ground level conference room of the Administrative Resources Building (ASB) located by the helipad. 3 hours CME are given. 4 if assigned articles are read. For questions about CME or to obtain a copy of journal article, send an email to Peter Canning at canning@uchc.edu or call at (860) 679-3485. Free parking is available in the lower lot of the Medical Arts & Research Building (MARB) next to the ASB.

CONTACT US:

Any questions or suggestions about EMS? Looking for patient follow-up?



Contact EMS Coordinator Peter Canning at canning@uchc.edu or call (860) 679-3485.