MINUTES

EMERGENCY MEDICAL SERVICES & TRAUMA SYSTEM

DRUG/DEVICE/PROTOCOL COMMITTEE

March 2, 2011--10:00 A.M.

MEMBERS PRESENT

Richard Henderson, MD, Chairman
David Slattery, MD, LVFR
Eric Anderson, MD, MedicWest
Scott Scherr, MD, Sunrise Hospital
Chief Scott Vivier, HFD
Chief Troy Tuke, CCFD
Gina Schuster, EMT-P, Community Amb
Jarrod Johnson, DO, MFR
K. Alexander Malone, MD, NLVFD
Bryan Bledsoe, DO, MedicWest
Michele McKee, MD, UMC
Eric Dievendorf, EMT-P, AMR
Nancy Cassell, EMT-P, CSN
Rebecca Dennon, CCUPP (Alt)

MEMBERS ABSENT

Mary Levy, RN, UMC
Derek Cox, EMT-P, LVFR

SNHD STAFF PRESENT

Rory Chetelat, EMS Manager
Trish Beckwith, EMS Field Representative
Mary Ellen Britt, Regional Trauma Coordinator
Judy Tabat, Recording Secretary

PUBLIC ATTENDANCE

Steve Johnson, EMT-P, MWA
Joyce Faltys, Spring Valley Hosp
Brian Rogers, Henderson Fire
Tracey Metcalf, RN, TriState CareFlight
Christian Young, MD, BCFD
Melanie Robison, AMR
Gary Robison, CCFD
E.P. Homansky, MD, AMR
Pat Elkins, Spring Valley Hosp
Walter West, Boulder City Fire
Philis Beilfuss
Jo Ellen Hannom, RN, CCFD
Rick Resnick, Mesquite Fire & Rescue
Richard Main, NCTI

CALL TO ORDER – NOTICE OF POSTING OF AGENDA

The Drug/Device/Protocol Committee convened in the Clemens Room of the Ravenholt Public Health Center on Wednesday, March 2, 2011. Chairman Richard Henderson, M.D., called the meeting to order at 10:08 a.m. The Affidavit of Posting was noted in accordance with the Nevada Open Meeting Law. Dr. Henderson noted that a quorum was present.

I. CONSENT AGENDA

Chairman Henderson stated the Consent Agenda consisted of matters to be considered by the Drug/Device/Protocol Committee that can be enacted by one motion. Any item may be discussed separately per Committee member request. Any exceptions to the Consent Agenda must be stated prior to approval.

Minutes Drug/Device/Protocol Committee Meeting, February 2, 2011

Dr. Henderson asked for a motion to approve the minutes of the February 2, 2011Drug/Device/Protocol Committee meeting. A motion to accept the minutes was made, seconded and passed unanimously.

II. REPORT/DISCUSSION/POSSIBLE ACTION

A. Review of Revisions to Bundle A

Dr. Henderson questioned if Bundle A included all the suggested changes. Mr. Chetelat answered in the affirmative and added that in the General Patient Care (GPC) protocol, the Airway Management Task Force is making some changes to the airway section under D3: Breathing.

Dr. Slattery stated that the biggest section of Bundle A that was not reviewed at last month's meeting was the cardiac protocols for ACLS and PALS changes and suggested that Philis Beilfuss go through her revisions.

Ms. Beilfuss thanked the Committee for inviting her and stated that she went through the primary issues that were affected by the American Heart Association (AHA) changes in 2010.

General Patient Care (GPC)

- D1: Initial Assessment - Added new language to support initial assessment of cardiac arrest using CAB (chest compressions, Airway, Breathing) instead of ABC (Airway, Breathing, Chest compressions).
- D4: Circulation – Added exact AHA language to state that an AED (automated external defibrillator) is now recommended for all ages including infants and children.

Acute Cerebral Vascular Accident

- #3: The recommendation from AHA was to maintain oxygen saturation over 94% and questioned whether the protocol should be this specific – no change.
- Dr. Bledsoe recommended changing Acute CVS to Stroke since it is not always acute.

Acute Coronary Syndrome (Suspected)

- #10: Suggested additional language limiting the number of doses of Nitroglycerin to 3 doses.
- Alert box for Nitroglycerin contraindications: Added additional language that states if there is not a reason for the tachycardia, they are recommending not administering Nitro.
    - Ms. Britt questioned the contraindications for erectile dysfunction drugs. Ms. Beilfuss stated that there was a check on that and most of the drugs are 48 hours or under and stated that she didn't know how specific she should get.

Altered Mental Status

- Add an alert box under Narcan stating "not recommended for use in the newly born".

Cardiac Arrest (Adult CCC CPR)

- Suggestion: Change to CCC-CPR
- Take out any suggestion of using positive pressure ventilation with continuous compressions.
- Limit the use of CCC-CPR – the science is unclear as to how long this may be effective, but there is one reference in the AHA guidelines, on page S730 in *Circulation* that suggests up to 6 minutes, at which time standard CPR should then be instituted.
- It is very clear that the science does not support CCC-CPR in infants and children.
    - Ms. Beilfuss stated that AHA did not endorse this because they do not have enough information. She added that AHA was very clear in all of the algorithms in the 2010 guidelines that if there is not an advanced airway in place, there should be no positive pressure ventilation and 30:2 is to be done in the standard way of compressions and ventilations. There is some discussion that continuous chest compressions (CCC) have

value during the first 4 to 6 minutes with just passive ventilation but once everything is set up and logistically allows for either IO or IV to be started then go to 30:2.

- Dr. Slattery stated that he was very disappointed that AHA didn't go with CCC and was adamantly against 30:2 for ALS providers. The initial protocol was modeled off of Dr. Bobrow's study in Arizona that allowed EMS providers to either do 100% Non Re-Breather (NRB) mask on the patient and do chest compressions in the first 3 to 4 minutes of the cardiac arrest or do CCC plus BVM and that is how we integrated this into our protocol initially.
- Chief Vivier stated that when this was rolled out, it was a mid cycle change and not in accordance with AHA standards but felt that the science that had come out of Arizona and Wisconsin primarily was sufficient enough to warrant this change. He realized that this does create some issues because this is adult CCC CPR but only indicated when the arrest is a suspected cardiac in nature. By removing the NRB the provider may get the wrong impression that this happens on all cardiac arrests in adults because it doesn't adequately address the cardiac arrest from a respiratory nature or a drug overdose and AHA clearly says that positive pressure ventilation is indicated in those types of arrests. This protocol was not intended by choice to match AHA; we were attempting to adopt CCC CPR with minimal positive pressure ventilation in suspected cardiac origin arrest in adults.
- Dr. Bledsoe stated that AHA specifies BLS healthcare provider and not ALS, but when you look at the level evidence it's a fine line and balance seems to support Dr. Slattery.
- Ms. Beilfuss questioned why the ALS guidelines support 30:2 in the cardiac arrest with no advanced airway. Dr. Bledsoe commented that people are poor at doing BVM ventilation and the concern is about gastric insufflation. Dr. Slattery expressed the fact that there are disadvantages with positive pressure in the endotracheal tube but felt strongly that they should encourage CCC and what happens with the airway happens. Ms. Beilfuss disagreed and stated that it should be just with the NRB because once they start bagging with a BVM during CCC there will be airway problems. Chief Vivier stated that they only use NRB with CCC but agreed that it was a choice to also go to BVM. He added that they teach their providers to do 100 compressions a minute all the time with no interruptions, proper depth, proper rate, allow chest recoil and if they do use a BVM it's 6 breaths per minute. He believes it will avoid all the ill effects of positive pressure ventilation which was gastric distention and positive pressure in the thorax.
- Dr. Henderson summarized the discussion by saying to leave #7 the way it was and make all the other changes. Dr. Slattery stated he would support that. Chief Vivier suggested that more work be done on this protocol because it was meant to allow us to adopt district wide, the CCR that Arizona was doing which specifically differs from ACLS in that they delayed intubation and positive pressure ventilations for certain arrests. After a brief discussion it was agreed that Dr. Slattery will work on this protocol with Chief Vivier and Ms. Beilfuss.

Cardiac Dysrhythmia: Asystole/PEA

- Removal of Atropine
- #6: Took out language of "prolonged arrest"
- #6: Removal of sodium bicarbonate for acidosis in the H's & T's, and replaced it with Ventilation, CPR
- Combined the Asystole and PEA protocols because there is no difference since Atropine was removed.
    - Dr. Bledsoe stated that AHA has made it a point of having capnography a Category I, Level I recommendation and questioned if that should be included throughout. Ms. Beilfuss agreed and questioned how to address it.

- Ms. Beilfuss questioned using the Bag Valve Mask (BVM) with the end-tidal CO2. Dr. Bledsoe stated that it is fraught with problems. Chief Vivier stated that Henderson has found ways to adapt it appropriately and have not problems with the CO2 washout. Dr. Bledsoe stated that in the AHA guidelines they call it continuous waveform capnography.

Cardiac Dysrhythmia: Bradycardia

Chief Vivier questioned if there was a push where Dopamine does not have to be indicated in a stepwise fashion and that it can be indicated as Atropine or pacing. Ms. Beilfuss stated that if Atropine isn't effective, pacing, Epinephrine drips, and Dopamine drips are all considered the same. Chief Vivier stated that the protocol states "if patient is refractory to maximum dose of Atropine; administer Dopamine" and his only concern was there may be some patients where Atropine is clinically not indicated because of other conditions. Dr. Bledsoe stated that the AHA guidelines state if Atropine is ineffective consider transcutaneous pacing, Dopamine or Epinephrine infusion.

- #7: Chief Vivier suggested that a change be made to #7 that would include that language: "if Atropine is ineffective consider transcutaneous pacing, Dopamine or Epinephrine infusion."
  - Ms. Beifuss stated that the AHA does indicate Atropine first line when indicated for the hemodynamically unstable patient and this protocol reads transcutaneous pacing. Dr. Bledsoe felt it should be left up to the paramedic's discretion. Chief Vivier agreed and felt that Atropine should be an approved treatment for unstable Bradycardia.
- #3: Chief Vivier suggested adding "If IV access is established, Atropine may be…" adopt language that is consistent with the guidelines which allows Atropine to be used in an unstable patient because it is indicated.
- #5: Dr. Bledsoe recommended the dosage should read IV/IO and remove ETT.

Cardiac Dysrhythmia: Monomorphic Ventricular Tachycardia

- #11: Added Adenosine 6 mg fast IV push dose for patients with SVT with aberrancy
  - Dr. Bledsoe suggested adding "If first dose is unsuccessful, may repeat dose at 12mg" to mirror AHA guidelines.
- Added Pediatric Adenosine dose by telemetry order.
  - Dr. McKee stated that she would like to add for pediatric indications the Amiodarone needs to be given slowly IV.

Cardiac Dysrhythmia: Pulseless Electrical Activity

- Removed – Combined with Asystole.

Cardiac Dysrhythmia: Supraventricular Tachycardia (Narrow Complex)

- Housekeeping only

Cardiac Dysrhythmia: Torsades de Pointes

- Eliminated use of synchronized cardioversion-replaced with "high energy defibrillation"
  - Dr. Bledsoe stated that it is now called polymorphic; they have taken torsades out even though it is one cause of polymorphic VT.
- Possible suggestion – add an alert box with some possible causes for torsades or polymorphic VT not caused by QT abnormalities might be from myocardial ischemia and possibly better treated with Amiodarone and beta blockers and that magnesium is unlikely to be effective.

Cardiac Dysrhythmia: Ventricular Fibrillation or Pulseless Ventricular Tachycardia

- Stayed consistent with AHA's arrest algorithm
  - Ms. Beilfuss suggested adjusting continuous chest compressions in the first alert box.
- #3: Removed the statement about pediatric CCC-CPR with BVM ventilation- this is not supported by AHA guidelines.

- Chief Vivier clarified #4 by stating "as soon as possible" was language right from Arizona knowing it was not consistent with AHA and this needs to be considered when talking about Cardiocerebral Resuscitation (CCR).

- Removal of sodium bicarbonate for the acidosis in the H's & T's, and replaced it with Ventilation, CPR
  - Dr. Slattery suggested changing Dysrhythmia Focused therapy under Thrombosis, Heart (AMI) to Emergency PCI (Percutaneous Coronary Interventions)
  - Dr. Bledsoe commented that AHA adopted Arrhythmia as the term as opposed to Dysrhythmia.

Hyperkalemia

Ms. Beilfuss stated that AHA suggests Calcium IV over 2-5 minutes and Sodium Bicarbonate IV over 5 minutes and asked the Committee if they wanted the protocol to reflect that suggestion. Dr. Slattery felt that should be an educational effort.

Chief Vivier questioned whether the statement "Bradycardia with widened QRS complexes" needs to be in the alert box or is it an educational issue on what electrocardiographic findings are consistent with hyperkalemia. Ms. Beilfuss felt that it is very helpful for the paramedics because it's not something they run into often and it gives them some reference. Chief Vivier then asked if we need to add in some of the other findings. Mr. Chetelat suggested that after this Committee works on all the changes to send it to the Education Committee to come up with what belongs where.

B. Discussion of Revisions to Bundle B

Tabled

III. INFORMATIONAL ITEMS/DISCUSSION ONLY

Dr. Slattery stated that since there is still a lot of work to be done at the subcommittee level, he suggested that the Medical Advisory Board (MAB) meet in May and only subcommittee's meet next month. The Committee agreed.

Dr. Slattery informed the Committee that there have been some issues with rolling out the CyanoKits. He reported that there is still some work that needs to be done on the protocol and they are working on a grant to replace those units when they are used. The current protocol for cyanide poisoning is for indications in the field or for patients that have smoke inhalation plus cardiac arrest, smoke inhalation plus altered mental status or hypotension. He felt that those indications were pretty liberal and since the CyanoKit is $900 to $1000 a dose he suggested that they limit the kits to smoke inhalation plus cardiac arrest or smoke inhalation plus intractable hypotension. He asked Dr. McKee to address this with her colleagues and look at the literature regarding pediatric use and come up with some recommendations in terms of direction. Dr. Henderson questioned the number of hypotensive patients coming out of a fire. Chief Vivier stated that it is less than 5 a year that meet the indications. He added that he feels very comfortable with the protocol and the potential use that he would be able to afford that expenditure. Dr. Bledsoe stated that they have worked on their protocols at UMC and would be glad to share them with other hospitals.

IV. PUBLIC APPEARANCE/CITIZEN PARTICIPATION

None

V. ADJOURNMENT

As there was no further business, Dr. Henderson called for a motion to adjourn. The motion was made, seconded and passed unanimously to adjourn at 11:12 a.m.