MINUTES

EMERGENCY MEDICAL SERVICES & TRAUMA SYSTEM

DRUG/DEVICE/PROTOCOL COMMITTEE

May 5, 2010--10:00 A.M.

MEMBERS PRESENT

Richard Henderson, MD, Chairman
David Slattery, MD, LVFR
Mary Levy, RN, UMC
Eric Dievendorf, EMT-P, AMR
Mark Calabrese, EMT-P, MWA
Chief Bruce Evans, NLVFD
Allen Marino, MD, MWA
Brian Rogers, HFD (Alt)
Jo Ellen Hannom, RN, CCFD
John Higley, EMT-P, MFR
Jarrod Johnson, DO, MFR

MEMBERS ABSENT

Chief Mike Myers, LVFR
Nancy Cassell, College of Southern Nevada
Kevin Nicholson, BCFD
E.P. Homansky, MD, AMR
Eric Anderson, MD, Southern Hills Hospital

SNHD STAFF PRESENT

Joseph J. Heck, DO, Operational Medical Director
Mary Ellen Britt, RN, Regional Trauma Coordinator
Trish Beckwith, EMS Field Representative
Judy Tabat, Administrative Assistant
Rory Chetelat, EMSTS Manager
John Hammond, EMS Field Representative
Lan Lam, Recording Secretary

PUBLIC ATTENDANCE

Chris Baker, RN, TriState CareFlight
Walter West, EMT-P, BCFD
Brandie Green, EMT-P, AMR
Mike Gorman, MW & AMR
Tamara Henderson, EMT-P, TriState CareFlight
Michele McKee, MD, UMC
Larry Johnson, EMT-P, MWA & AMR
Victor Quon, RN, TriState CareFlight
Marc Johnson, RN, AMR
Jose Febre, TriState CareFlight
Joyce Faltys, Spring Valley Hospital
Derek Cox, EMT-P, LVFR
Jay Fisher, MD, UMC
Steve Johnson, EMT-P, MWA

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, May 5, 2010. Chairman Richard Henderson, M.D., called the meeting to order at 10:00 a.m. and 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 March 3, 2010

Dr. Henderson asked for a motion to approve the minutes of the March 3, 2010 Drug/Device/Protocol Committee meeting. A motion to accept the minutes was made, seconded and passed unanimously.

II. REPORT/DISCUSSION/POSSIBLE ACTION

A. Report from Cardiac Workgroup

Adult CCR Cardiac Arrest

Dr. David Slattery stated that he suspects the AHA will be focusing on continuous chest compressions for their 2010 guidelines. The draft protocol presented directs the provider to give two minutes of CPR at a rate of 100 chest compressions per minute for an unwitnessed arrest, which constitutes the majority of arrests. While one provider is giving uninterrupted chest compressions, another provider establishes IV access, gives Epinephrine and puts the patient on a non-rebreather mask or BVM asynchronously to get ROSC (return of spontaneous circulation). Dr. Slattery stated that the protocol was mirrored after Arizona in that they allowed providers the option of putting patients on a non-rebreather mask with no positive pressure ventilation or BVM. There have been published outcomes showing that neurological outcomes are worse for patients who got BVM although it is not definitive; however, it does support the physiology of what is believed to occur in positive pressure ventilation. Patients who get ROSC are determined by the adequacy of coronary artery profusion pressure which is the measured difference in the aorta and right atria pressure. It takes 8-10 chest compressions to establish the difference in flow and get good coronary blood flow. The right side of the heart pressure is unchanged with the exception of positive pressure ventilation; every time you ventilate, the right side of the heart pressure goes up and the coronary artery profusion pressure goes down. This is the rationale for giving the option of the non-rebreather mask or BVM. Dr. Slattery emphasized that he'd like the physiology emphasized during the educational component of this rollout so that providers are aware of the outcomes for both methods.

John Higley suggested they change the verbiage from "200 chest compressions" with "two minutes of CPR" so that providers are not counting when performing chest compressions.

Dr. Joseph Heck asked for clarification for #18 that states:

"Consider Advanced Airway Management protocol as indicated by the following:

a. Patient does not have agonal respirations AND,
    i. After the first 200 compressions, patient is in a non-shockable rhythm.
    ii. After the completion 3 cycles of compressions."

He questioned whether this step suggested putting the patient on a non-rebreather or BVM for six minutes and then proceeding to the Advanced Airway Management protocol if the patient does not have agonal respirations. Dr. Slattery suggested striking "a" and "i" and advising providers to consider the Advanced Airway Management protocol after the completion of 3 cycles of compressions.

Brian Rogers expressed a concern stating that he's read in a non-PEA (pulseless electrical activity) you should first intubate and then begin CCR (compression-only cardiopulmonary resuscitation). Dr. Slattery stated that he understood this method to include a commitment of six minutes of no advanced airway management. He further expressed a desire to emphasize attempting direct laryngoscopy and if the provider needs to stop to pass a tube they may, but do not stop chest compressions for more than 5 to 10 seconds.

Dr. Marino proposed removing #19 since hypothermia is currently a pilot study and not a standard of care. After considerable discussion, Dr. Slattery agreed to remove the language but felt the need to add an alert box advising providers to consider transporting patients who get ROSC back to a cooling center. Dr. Heck agreed as this will put hospitals on alert that providers will be transporting patients to cooling centers. In turn, the facilities will feel the need to provide this service to capture those clients.

Dr. Slattery questioned why there was a need to wait until January 1st to roll out this protocol. Dr. Heck replied that historically the protocols are rolled out in September for the purpose of training, with an effective date of January 1st. This allows for time to make appropriate changes to the protocol, update the exams and allow for training centers to teach their graduates. Dr. Slattery felt an exception should be made as this protocol update could potentially save lives and improve patient outcome. Dr. Heck suggested moving up the entire rollout date since most of the protocols have already been reviewed. He noted that the fiscal year for the fire departments begins July 1st in case this may impact their funding. Chief Bruce Evans stated that mid-year budgets will be reduced tremendously; he felt it was a good idea to move up the rollout date as there may be additional cuts in January.

John Higley questioned how the cooling protocol would affect Mesquite Fire & Rescue as there are no cooling centers unless they transport into Las Vegas.

Dr. Heck recapped the changes suggested by the Committee and stated that he will be changing the redundant verbiage in #16. He suggested removing "Follow CCR guidelines, WITNESSED vs. UNWITNESS". Instead, the verbiage will direct providers to administer Epinephrine.

A motion was made to approve the protocol with the suggested changes. The motion was seconded and passed unanimously.

Cardiac Dysrhythmia

Dr. Slattery suggested they review the protocol and make any necessary changes to make it consistent with the changes suggested in the Adult CCR Cardiac Arrest protocol. Walt West pointed out that #1 directed providers to proceed to #4 after performing defibrillation which would mean skipping the administration of Epinephrine. Dr. Slattery agreed and suggested the removal of "Proceed to Step 4." He also suggested they revise #1 and move it to #4 where it states, "After 3 minutes, perform defibrillation" to "After 2 minutes defibrillate if prompted or if the patient remains pulseless immediately resume chest compressions." Dr. Slattery suggested to strike #3 as it restates #1.

Walt West suggested revising the verbiage in #2 that states, "400 compressions" to "or four minutes" to be consistent.

Dr. Michele McKee suggested revising the verbiage in #1 to note that pediatric patients should not be ventilated at the same rate as adults. She also pointed out the administration of Epinephrine and Amiodarone should include IO in addition to IV.

A motion was made to approve the protocol with the suggested changes. The motion was seconded and passed unanimously.

B. Report from Pediatric Airway Management Workgroup

Dr. Jay Fisher presented a handout which included the four pieces of research analyzed for recommendation to the Committee. The first was the Gauche Study done about ten years ago. He noted the study was random but struggled in its design as only one of three intubation groups actually got intubated showing there were lots of failed attempts and protocol deviations. The results of their intention to treat analysis showed outcomes were worse for patients that were intubated. Dr. Fisher made mention of a subgroup analysis showing that drowning victims had an improved outcome with intubation. Although he did not find the study to be reliable, the conclusion was that the end result of using a BVM is as good, or perhaps even better than endotracheal intubation.

The second piece of research was conducted by the Cooper group in New York. They utilized the national trauma database and looked retrospectively at charts. Dr. Fisher noted this was a non-randomized process. They looked at head injured patients with an AIS (abbreviated injury scale) of four or greater; of those 83% were intubated while 17% were BVM. The end result showed the mortality to be the same for both groups. It was noted there were external validity questions as these were head injury patients.

The third research presented was from a European paper published last year where emergency physicians were required to take two years of anesthesia and one year of critical care in addition to their emergency medicine residency. He pointed out that these doctors were sent out to the scene of the arrest and if there was a failed intubation, a second anesthesiologist was sent out to the scene. The study showed 14% of intubations were classified as "difficult," with a first attempt success rate of 76%.

The last piece of research was published in the *Journal of Trauma* in 2005. They utilized the national trauma registry and a logistic regression model using receiver operating characteristic occurrences. Dr. Fisher noted they analyzed their control measure very carefully and their predictive mortality based on their controls was correct 98% of the time. This group had a much higher mortality rate than patients that were not intubated for respiratory arrest. Despite the risk stratification in this paper, intubation was the predictor of negative outcome.

Dr. Fisher also presented data that was compiled by Troy Tuke regarding pediatric intubation within Clark County. He acknowledged the data was inaccurate but stated the big picture is that Henderson Fire Department shows 32 intubations within a time frame of January 2007 through March 2010. This equates to less than one intubation a month. He guesstimated a total of 50-100 tubes done annually and with 700 paramedics in the system, the results are one intubation every seven years. In his opinion, he does not believe pre-hospital pediatric intubation can be validated at this time.

C. Review of Proper Administration of Magnesium Sulfate

Dr. Slattery presented a handout showing the various indications of eclampsia, asthma and torsades along with their doses, the recommended method of dilution, and rate of administration. He noted that although asthma is not listed as an FDA indication for Magnesium, large trials have shown that severe asthmatics benefit with little downside; so at times, it is given. Eclampsia patients should be given a 4 gram dose, diluted with 250 cc of Saline over 15-20 minutes rather than an IV push. Most experts agree that there is little downside to giving two grams IV push when dealing with torsades, but Dr. Slattery suggested directing providers to give a slow IV push to be safe. He explained that the table provided is his recommendations based on the research he's done. He noted that the recommendation for asthma and torsades is a consensus agreement as there is no real evidence.

Dr. Heck pointed out that for eclampsia a 250 cc bag of Saline is recommended; the current inventory requires only 50 cc bags. He questioned whether it would be okay to use 50 cc bags to dilute the 4 gram dose of Magnesium over 20 minutes. Dr Slattery stated that was fine as the concern lies with the rate of administration.

A motion was made to approve the draft Magnesium protocol. The motion was seconded and passed unanimously.

D. Review of Hospital Capabilities

The Committee reviewed the handout showing the labor & delivery and NICU resources for all valley hospitals. It was noted that St. Rose DeLima no longer offers these services.

III. INFORMATIONAL ITEMS/DISCUSSION ONLY

None

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 11:04 a.m.