



MINUTES

EMERGENCY MEDICAL SERVICES & TRAUMA SYSTEM

DIVISION OF COMMUNITY HEALTH

DRUG/DEVICE/PROTOCOL (DDP) COMMITTEE

December 5, 2018 – 10:00 A.M.

MEMBERS PRESENT

Mike Barnum, MD, AMR, Chairman
Tressa Naik, MD, HFD
Chief Troy Tuke, CCFD
Scott Scherr, MD, GEMS
Shawn Tobler, MFR
Frank Simone, NLVFD
Chelsea Monge, CA (Alt.)
Corbin King, Mercy Air (via phone)

David Slattery, MD, LVFR
Jeff Davidson, MD, MWA
Jarrod Johnson, MD, MFR
L. Cole Sondrup, MD, CA
Chief Kim Moore, HFD
Derek Cox, LVFR
Steve Johnson, MWA
Jim Kindel, BCFD

MEMBERS ABSENT

K. Alexander Malone, MD, NLVFD

Matthew Horbal, MD, MCFD

SNHD STAFF PRESENT

John Hammond, EMSTS Manager
Laura Palmer, EMSTS Supervisor
Rae Pettie, Recording Secretary

Christian Young, MD, EMSTS Medical Director
Scott Wagner, EMSTS Field Representative
Gerry Julian, EMSTS Field Representative

PUBLIC ATTENDANCE

Syed Saquib, MD
Mark Calabrese
Glenn Glaser
Mary Martinat
Tony Greenway
Citlali Mejia
Alex Lynn
Melanie Robison
Steve Krebs, MD
Jim McAllister
Paul Stepaniuk

Karen Dalmaso-Hughey
August Corrales
Shane Splinter
John Fildes, MD
Perfecto Hinojosa
Jessica Bryce
Anthony Viggiano
Michelle Zahn
Dan Shinn
Jason Driggars
Brett Olbur

CALL TO ORDER - NOTICE OF POSTING OF AGENDA

The Drug/Device/Protocol Committee convened in the Red Rock Conference Room at the Southern Nevada Health District on Wednesday, December 5, 2018. Chairman Mike Barnum called the meeting to order at 10:15 a.m. The Affidavit of Posting was noted in accordance with the Nevada Open Meeting Law. Dr. Barnum noted that a quorum was present.

I. PUBLIC COMMENT

Public comment is a period devoted to comments by the general public on items listed on the Agenda. All comments are limited to five (5) minutes. Chairman Mike Barnum asked if anyone wished to address the Board pertaining to items listed on the Agenda. Seeing no one he closed the Public Comment portion of the meeting.

II. CONSENT AGENDA

Chairman Barnum 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.

Approve Minutes for the Drug/Device/Protocol Committee Meeting: November 7, 2018

Chairman Barnum asked for a motion to approve the November 7, 2018 minutes of the Drug/Device/Protocol Committee meeting. A motion was made by Steve Johnson, seconded by Dr. Slattery and carried unanimously to approve the minutes as written.

III. REPORT/DISCUSSION/POSSIBLE ACTION

A. Review/Discuss Draft Burns Protocol

August Corrales introduced the committee to Dr. Syed Saquib, UMC's medical director at the Burn Care Center. Dr. Saquib stated his formal training on burns was completed at Johns Hopkins University. He thanked the committee for giving him the opportunity to discuss the new recommendations based off the best practices guidelines set forth by the ABA (American Burn Association), not just for prehospital treatment, but in-hospital treatment and beyond. He stated the ABA is made up of world renowned experts that meet multiple times a year to update patient care guidelines. They realize burn patients, especially the bigger burns, have been over-resuscitated, which has consequences and morbidities attached to them which oftentimes cannot be reversed. The idea is if they're overtly hypotensive, then of course bolus the fluids that are needed to get their vital signs better; get them better clinically. But in the absence of signs of over hypoperfusion, gradually replace the fluids over time because the fluid loss is usually over hours and the replacement needs to be over that same period, in the same spirit.

Dr. Barnum referred the committee to the Draft Burns Protocol Recommendations and asked if the fluid challenges are multiple aliquots, or multiple 2000 ml boluses. Dr. Saquib noted they are multiple aliquots, usually 500 ml or a liter, up to a maximum of 2L. He added that if the patient is hypotensive, they're hypoperfused, and it's okay to give fluid boluses in increments of 500 ml to 1L, as appropriate with the conditions in the field. Dr. Naik suggested they add "up to a max of 2L" for clarification. Mr. Cox stated that in the prehospital setting they have the patient for a short time, so they focus on systolic pressure. Dr. Saquib stated he is okay with a systolic pressure of 100 to 110. Mr. Cox clarified that if their systolic pressure is at 80 they should be giving them fluids starting at 500 ml, up to 2L, and if their pressure is at 150 they should not be giving fluids. Dr. Saquib stated they can still give fluids, but don't bolus them with fluids. That's the reason they have a set rate based on the age because they'll be looking okay for that 30 minutes they have them, but they still need that fluid rate because they're going to lose fluid gradually over several hours. Having that fluid set up initially will mitigate the risks and the sequela that they will see several hours down the road when they're in the care of the Burn Care Center. Dr. Young noted that's why the "OR" is there, because they're not hypotensive but they have greater than 20% BSA burn present; you're still giving the fluid bolus. Mr. Cox noted that when the term "hypoperfusion" is used they're really focusing on the systolic pressure. They should make it that simple for the EMS providers. Dr. Young stated that aside from the burn protocol there are protocols in place for hypotension. He suggested they line up the burn protocol with the other protocols for managing a hypotensive patient. Dr. Saquib stated they can make the verbiage consistent with whatever guidelines they have for hypotension in other patient population sets.

Dr. Young related that after the initial rollout there was a variability of different ml's per kilogram, be it mechanism, electrical or thermal. Dr. Saquib stated that they simplified the TBSA and weight components. They understand it's not going to be the exact single digit, but just a ballpark of what it is so they're being as accurate as possible knowing that they only have the patient for a few minutes and the conditions may be less than ideal.

Whatever the field providers can provide on their end gives the Burn Care Center doctors the best opportunity to have the best outcome for these patients. He explained that 20% TBSA, second degree and above, is when they start having the massive inflammatory response where the capillaries and blood vessels become leaky and they start becoming dehydrated gradually over the next several hours. Dr. Sondrup asked, if they strictly use blood pressure as a criterion to administer fluid, is there a TBSA at which they wouldn't care about blood pressure and they would just start administering fluids. Dr. Saquib replied that based on age, they should start the fluids at 500 ml so they at least get fluids on board up front because the changes, the potential deterioration, will not be evident in that first 30 minutes. But if you give them zero fluids and they're at 25% TBSA they'll pay the price in hour seven, hour eight, and so forth. Even if their vital signs look perfect, it's a big burn, so you'll want to start the fluids at 500 ml so at least they've got something going. Once they get to the Burn Care Center they can do the finer calculations and make the fluid adjustments based on their metrics. Dr. Saquib clarified that LR's (Lactated Ringer's) can be substituted for normal saline (NS). Dr. Naik recommended they note on the protocol that LR's can be substituted for NS because they carry NS for the most part. Chief Moore noted that they don't have pumps on the rigs to monitor the drip rates. Dr. Slattery recommended using the word "hypoperfusion" instead of "hypotension." They could include a definition in the pearls for blood pressure that is already used for other protocols for hypotension as one cause, or one manifestation of hypoperfusion.

Dr. Saquib emphasized the 500 ml bolus is to be given over an hour, provided their vital signs are stable. The committee discussed issues related to the one-hour time frame because of the short transport times. Dr. Sondrup asked about the downside of giving the bolus. Dr. Saquib replied that the issue is that the fluid loss is gradual; in that same spirit, they need to replace it gradually. You can exaggerate the edema for the bigger burns. You can have compartment syndrome of the abdomen and of the extremities that will warrant additional procedures which carry significant morbidity. You can worsen the risk of acute respiratory distress syndrome and cerebral edema. They can reverse some of the patients, but there are a lot of consequences and morbidities that they can't reverse once the patient gets to the Burn Care Center. That's why the ABA has discouraged multiple boluses for EMS providers if their vital signs are fine. They have moved towards gradual fluid replacement over time if there are no signs of hypotension.

Dr. Sondrup stated that it's difficult to be able to put someone on a 500 ml bolus over one hour. It's easier to bolus them at 100 ml because that's all it's going to be with the short transport times, which seems like a paltry amount of fluid. Dr. Saquib noted that every little bit makes a difference in giving the Burn Care Center the best opportunity to help these patients and have the best possible outcome. Dr. Naik asked if they could compromise and give smaller boluses, unless there are signs of hyperperfusion. Dr. Slattery stated he is comfortable with the verbiage as written, although it's a huge change in practice where they've calculated for much larger boluses. If the patient's hypotensive, burn or no burn, they're going to give them at least a 500 cc bolus, which is a little bit more than a can of Coke. He wondered what evidence they have that the bolus needs to be given over an hour, and stated that it seems like a very small amount of fluid and they might as well not give it. Dr. Saquib stated they are committed to educating the EMS providers. It's a dynamic process, and recommendations change based on the information they learn, not just in burns, but in medicine altogether. They can continue to revisit the protocol down the road.

Chief Tuke expressed concern from the provider level that that to give 500 cc's over an hour they would need to deliver 8 cc's a minute without an IV pump. There's no accurate way to do that in the field. Either it's KVO (keep vein open) until they get the patient to the hospital, or they give it 200 or 500 at a time. Dr. Saquib stated the smaller aliquot is every 200 ml, or 250 ml, which would be more of a reasonable thing to do, especially without an IV pump to calibrate that. Giving small, frequent amounts is preferable.

Dr. Slattery made a motion to approve the draft adult and pediatric Burns protocols as written. Mr. Simone seconded the motion. The motion passed with nine in favor and six opposed.

B. Review/Discuss Potential Protocol Development for IV Acetaminophen and other Non-Opioid Alternatives for Pain Management

Dr. Scherr proposed that the committee develop a protocol for IV Acetaminophen as an alternative for pain management in the prehospital setting. The drug shortages and opioid epidemic in the country is huge, and it would be a non-narcotic solution for pain management. He noted that it's currently cost prohibitive, but IV

Acetaminophen is going to be generic in less than a year and it will be less expensive. He stated that the Clark County Fire Department would like to propose a pilot study and develop a protocol. The Committee was not opposed to the idea. Dr. Barnum asked Dr. Scherr to bring a draft protocol to the next meeting for further discussion.

C. Review/Discuss Use of Ketamine in Pain Management and Chest Pain Protocols

Mr. Wagner asked for specific wording for the warning box for the use of Ketamine in the Pain Management and Chest Pain protocols. Dr. Naik suggested they add the wording “Do not use Ketamine for pain management” in the Chest Pain protocol. Dr. Barnum stated they will need to add the same wording to the ACS and Pain Management protocols. He noted that in the future they may need to revisit the way they address pain management within the ACS pathway with specific agents. Dr. Sondrup stated they will need to also add it to the STEMI pathway; whereas if they just add it to the Pain Management protocol then it covers all of them because both protocols refer you to that protocol for continued pain management.

Chief Tuke made a motion to add the warning, “Do not use Ketamine for pain management” to the Chest Pain (Non-Traumatic) and Suspected Acute Coronary Syndrome, STEMI (Suspected), and Pain Management protocols. The motion was seconded by Mr. Simone and carried unanimously.

D. Review/Discuss Use of Epinephrine in Adult/Pediatric Shock and Allergic Reaction Protocols

Mr. Wagner stated that with the addition of push dose Epinephrine to the adult and pediatric Allergic Reaction protocols they need to revise the fourth pearl that reads, “Anaphylaxis refractory to repeat doses of IM Epinephrine may require IV Epinephrine (1:10,000) administration by IV push.” That pearl has now become somewhat irrelevant in the 1:10,000 as we’ve added the push dose pressors at 1:100,000. Dr. Holtz noted that he researched the correct dosing for pediatrics and found that it is actually higher than the adult dose per the AHA’s recommendation. It works out correctly to use weight-based dosing for pediatrics; when you calculate the adult drip, standard rate versus the pediatric standard drip rate, the doses work out appropriately.

Dr. Steve Krebs stated he has been reviewing the Allergic Reaction protocols with both colleagues and the ICU staff at UMC. The push dose pressors have been established in adults and are gaining more traction in the pediatric critical care literature. There is mounting literature and comfort from both the pediatric ER and pediatric ICU standpoint. The Committee agreed to table the discussion to do more research and come back with a proposal with regard to consideration for establishing radio contact.

E. Review/Discuss Fluid Boluses in Pediatric Abdominal Pain and Pediatric Shock Protocols

Mr. Wagner stated the Pediatric Shock protocol and the Pediatric Abdominal Pain, Nausea and Vomiting protocol are not consistent in the amount of NS given for hyperglycemic states. Dr. Naik noted that what’s causing cerebral edema is how sick these patients are---due to the acidosis, not the amount of fluids. They’re recommending not differentiating between the two. Dr. Krebs stated that that is consistent with what they’re doing in the pediatric ED. It is evolving on the pediatric side, especially the highest risk patients, or the ones you didn’t know were diabetic to begin with.

Chief Tuke made a motion to strike the 5th pearl that reads, “Pediatric fluid bolus is 20 ml/kg; may repeat to a maximum of 60 ml/kg” from the Pediatric Abdominal Pain, Nausea & Vomiting protocol. The motion was seconded by Dr. Slattery and carried unanimously.

F. Review/Discuss Use of Nitroglycerin in Adult Chest Pain & STEMI (Suspected) Protocols

Tabled.

IV. INFORMATIONAL ITEMS/ DISCUSSION ONLY

None.

V. PUBLIC COMMENT

Public comment is a period devoted to comments by the general public, if any, and discussions of those comments, about matters relevant to the Committee’s jurisdiction will be held. No action may be taken upon a matter raised under this item of this Agenda until the matter itself has been specifically included on an agenda as an item upon

which action may be taken pursuant to NRS 241.020. All comments are limited to five (5) minutes. Dr. Barnum asked if anyone wished to address the Board. Seeing no one he closed the Public Comment portion of the meeting.

ADJOURNMENT

There being no further business to come before the Committee, Chairman Barnum called for a motion to adjourn. A motion was made by Mr. Cox, seconded by Mr. Simone and carried unanimously to adjourn at 11:08 am.