



MINUTES

EMERGENCY MEDICAL SERVICES & TRAUMA SYSTEM

DIVISION OF COMMUNITY HEALTH

DRUG/DEVICE/PROTOCOL (DDP) COMMITTEE

November 7, 2018 – 9:00 A.M.

MEMBERS PRESENT

Mike Barnum, MD, AMR, Chairman
Jason Driggars (Alt.), AMR
Mark Calabrese (Alt.), CCFD
Shawn Tobler, MFR
Paul Stepaniuk, HFD (Alt.)
Larry Johnson, CA

David Slattery, MD, LVFR
Jim Kindel, BCFD
Derek Cox, LVFR
Steve Johnson, MWA
Frank Simone, NLVFD
Derek Cox, LVFR

MEMBERS ABSENT

Jarrod Johnson, DO, MFR
K. Alexander Malone, MD, NLVFD
Corbin King, Mercy Air

Tressa Naik, MD, HFD
Jeff Davidson, MD, MWA

SNHD STAFF PRESENT

John Hammond, EMSTS Manager
Laura Palmer, EMSTS Supervisor

Christian Young, MD, EMSTS Medical Director
Rae Pettie, Recording Secretary

PUBLIC ATTENDANCE

Dan Shinn
August Corrales
Cole Sondrup, MD

Fernando Juarez
Glenn Glaser
Michelle Zahn

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, November 7, 2018. Chairman Mike Barnum called the meeting to order at 9:00 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 Barnum asked if anyone wished to address the Committee 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: September 5, 2018

Chairman Barnum asked for a motion to approve the September 5, 2018 minutes of the Drug/Device/Protocol Committee meeting. *A motion was made by Mr. Driggars, seconded by Dr. Slattery and carried unanimously to approve the minutes as written.*

III. REPORT/DISCUSSION/POSSIBLE ACTION

A. Review/Discuss Draft Burns Protocol

Laura Palmer referred the committee to the adult and pediatric draft Burns Protocol and stated that substantial changes were made to the Pearls. They replaced the Parkland Formula for Burns with a modified formula for fluid replacement and added early intubation indicators.

August Corrales stated the recommendations are consistent with the ABA (American Burn Association) guidelines with the greater piece being added to the Pearls. For adults, the modified replacement formula is 2 ml/kg per BSA (Body Surface Area). For both electrical and non-electrical burns it is 4 ml/kg per BSA. For pediatrics, the modified replacement formula is 3 ml/kg, and electrical burns remains the same at 4 ml/kg. The ABA lists the pediatric age up to the age of 14, whereas our system is up to the age of 12. Mr. Corrales suggested they add the provision to check the pediatric patient's blood sugar when they're in trauma or distress because they burn through their sugar source very rapidly.

Dr. Barnum asked whether the disparity between the adult and pediatric formulas would lead to issues. Dr. Slattery stated that incorporating the pediatric modified formula for fluid replacement of 3 ml/kg will be too confusing and that they should decide on one dosing for both. The Burn Center can either accelerate or slow down the hydration for that first 24-hour period to meet their goal. Dr. Barnum wondered whether the Burn Center could come up with a compromise catch all. Mr. Corrales stated the maximum prehospital for pediatrics is 500 cc's for patients under the age of three. Mr. Corrales noted he can get clarification if they want the singular prehospital bolus for the age categories. Dr. Barnum replied that the community would appreciate that. It would probably result in better compliance and be much easier from an education standpoint.

Dr. Young stated the revisions to the modified burn formula for fluid replacement were made at the recommendation of the Burn Center. He suggested they consult with them once again to get their input. Dr. Slattery replied that we shouldn't need to consult with a sub-specialist on how we deliver prehospital care for burn patients. He reiterated that they have great flexibility to accelerate or slow that effort in the first 24-hour period. He suggested they agree on the cc/kg for BSA resuscitation that they should be delivering in that first hour. Dr. Barnum agreed there is value in the simplification, especially where compliance is concerned. Dr. Young reminded the committee that the MAB agreed to have a representative from the Burn Center speak with them because their recommendations have been updated. Most of the changes are on the Burn Center side in terms of fluid resuscitation and making sure they're capturing the patients that need to be there. He believes they approached the ED staff and the EMS community to change our protocols to make sure we get those patients to the right place. He wants to be accommodating, but if we're going to have different mathematical constructs for the prehospital providers when the transport times are so short, most of the guidance should be for urine output, not for initial boluses. He suspects the Burn Center will not agree with them. Dr. Sondrup suggested they choose 3 ml/kg; it splits the difference and the difference in the amount of fluid given for a 15-minute transport time, which is going to be minimal. Chief Tobler stated if they go with the Burn Center's recommendation it may be simpler to give half in the first eight hours so the math is simpler.

Dr. Slattery stressed the importance that the committee and MAB not advocate decision-making to sub-specialists. He stated that the suggestion of splitting the difference of 3 cc/kg per BSA is a great idea. He suggested they go back to the Burn Center and tell them what the group is considering and ask if they're comfortable with that. He emphasized it's the physicians and operations chiefs in the room at the MAB that will make the decision. Mr. Corrales stated that from a historical perspective when they were using the Parkland Formula for Burns at 4 ml/kg they were over-hydrating patients, causing greater damage to the tissue, which made it harder to treat the patient long-term. Dr. Slattery argued that that wasn't administered prehospital; fifteen minutes of resuscitation by prehospital wasn't causing that fluid overload. He stated he would love to see evidence of that because that's not what he's seeing with LVFR's burn patients. He's not seeing large amounts of fluid being administered prehospital. Mr. Corrales stated that the manager at the Burn Center related there were actual cases of patients that were received who were over-hydrated. They had to reduce the rate fluctuation to

correct that. Dr. Barnum stated that simplifying the math will more likely result in compliance and fewer episodes of that happening.

Dr. Sondrup suggested they combine the first two criteria for patients needing to be transported to the Burn Center since the wording is redundant. The Committee agreed to combine the two and revised it to read, "Second and/or third degree burns greater than 10% BSA."

Dr. Slattery expressed concern that they removed "Early intubation is required when the patient experiences significant inhalation injuries" from the Pearls. He agreed intubation should not be "required" but he feels it is very important that it be considered. The Committee agreed to replace the wording previously deleted, and revised it to read, "Consider early intubation with significant inhalational injuries."

B. Review/Discuss the Use of Droperidol in Chest Pain Patients

Ms. Palmer referred the committee to the draft Droperidol formulary page that includes a warning box for them to consider. The warning box can be added to every protocol where Droperidol is recommended. She noted that Dr. Davidson would also like to add Reglan to the December MAB consent agenda for consideration. If they choose to eliminate Droperidol, Reglan may be an alternative. Dr. Barnum noted that Dr. Davidson also wants Compazine to be considered. He stated that he has given millions of carefully catalogued doses of Inapsine and never had anything other than some dystonia. In the past the FDA decided to black box Inapsine due to a few case reports of people going into Torsades. Most hospital systems are not using or stocking Inapsine. He is leery of eliminating it from the formulary because of the shortages on anti-emetics.

Mr. Cox asked why Droperidol is included in the Behavioral Emergencies protocol. Dr. Slattery replied it is a sedative and anti-psychotic. Mr. Cox asked if it is dose dependent. He questioned why the same dose is given to ACS and abdominal pain patients. Dr. Barnum explained that it is dosed in increments of 0.625 mg, 1.25 mg, 2.5 mg which makes it a little more confusing. It's not as though the 2.5 mg is the dose for nausea while the 0.625 is the dose for psychosis. Whatever you're treating, more is intended to have more effect.

Dr. Slattery asked why Inapsine is contraindicated in STEMI and ACS patients. Dr. Young responded it is because of the supposed prolonged QT issues and people getting arrhythmias. Dr. Slattery asked if the black box warning from the manufacturer states specifically, "Not for STEMI and ACS patients," as those aren't the only patients that have prolonged QT. Dr. Young stated he just recalled that that was the reason; he doesn't believe it was quoted in the black box. Dr. Barnum asked whether the committee thought it would be better to remove it for the patients with AMI and leave it with the known prolonged QT. Dr. Young stated he would read the black box warning before they remove it. It should be administered with extreme caution in the presence of risk factors for the development of prolonged QT syndrome such as clinically significant bradycardia less than 50 to any clinically significant cardiac disease, treatment of Class I and Class III antiarrhythmics, treatment with AMOIs, concomitant and treat with other drugs known to prolong QT interval. There's no statement there that you shouldn't use it with clinically significant cardiac disease. Dr. Barnum suggested they leave it in for AMI and STEMI patients with the understanding that it's not really being used and revisit it if they get into a situation where it needs to be brought back to the forefront. Dr. Young agreed and stated if a person who has had a CABG who is on cardiac medications comes in with gastro and you treat him with an anti-emetic, maybe Inapsine shouldn't be the one to give. But if you don't have any other anti-emetic and you have elevation on the monitor he thinks it would be fine for that transport. Dr. Sondrup noted that their discussion is for prehospital; in an ER setting you can decide who really has risk for prolonged QT and who doesn't. In the prehospital setting we need to make it broad and just say if it's a cardiac patient, don't give it. Dr. Slattery agreed and stated he was just trying to figure out why that one cause of prolonged QT is the only one that ended up as a contraindication.

Mr. Simone suggested they remove Droperidol from the STEMI protocol, leaving Ondansetron as the only medication so as not to confuse the EMS providers. The committee agreed to remove Droperidol from the ACS protocol as well.

A motion was made by Frank Simone to add Droperidol to the formulary that includes a warning box that it is contraindicated in suspected STEMI and chest pain patients. In addition, remove Droperidol from all cardiac pathway protocols. The motion was seconded by Steve Johnson and carried unanimously.

Fernando Juarez suggested they replace Droperidol with Haldol because it is used as an anti-emetic in low doses. It doesn't have the QT or Torsades black box warning. It's also an anti-psychotic. Although Haldol is listed on the drug shortage list, it doesn't include the injectable. Dr. Barnum stated the discussion would need to be placed on the MAB consent agenda for consideration. Dr. Slattery stated that, in his opinion, Haldol's therapeutic safety window is a lot narrower than Droperidol. It prolongs the QT just as significantly, if not more, than Haldol. In addition, there are other adverse effects associated with Haldol. For that reason, he would not support Haldol as an anti-emetic in the field. He noted that Droperidol is a very effective anti-emetic and effective for mild to moderate psychosis.

C. Review/Discuss the Vascular Access Protocol

Ms. Palmer related that the Vascular Access protocol was brought back to discuss alternatives because of the shortage of 2% Lidocaine. Mr. Driggars stated that it is completely on back order. Dr. Barnum noted that it would be an alternative to the preparation because it's fairly easy to get 1% Lidocaine. He asked if anyone objected to including 1% Lidocaine as an option as an anesthetic. Dr. Young stated that the EZ-IO manufacturers go with the dose of 2 cc's, 2%, over two minutes. It needs to be given slowly. He doesn't think anyone is pushing anything over two minutes in the field. He related that a medic in Chattanooga, TN did an EZ-IO on a person who was awake and remembered it. The patient did some sub-optimal things down the road that involved social media, but they came back and said it was an assault and they harmed the patient because it caused him a lot of harm when the medication was given through an EZ-IO. It sounds like it was probably an indicated medication. There are optics of this and he wants to ensure they have adequate analgesia on what is otherwise a painful procedure.

Dr. Slattery stated that for patients allergic to Lidocaine one of the options is to infiltrate Benadryl. He asked if anyone knew if Benadryl has ever been used in this setting. Dr. Barnum stated it may work as you can infiltrate it into wounds the same as Lidocaine, but it's a fundamentally different pathway instead of being sodium channel mediated—the histamine suppression. He suggested they contact the EZ-IO manufacturers for their recommendation.

A motion was made by Frank Simone to add 1% Lidocaine to the Vascular Access Protocol. The motion was seconded by Steve Johnson and carried unanimously.

Mr. Cox suggested they remove "excessive tissue" from D. under contraindications to read, "Absence of adequate landmarks." Mr. Hammond stated that it could be a problem depending on the size of the needle. Mr. Cox stated it doesn't say correct size; it just says excessive tissue. Dr. Sondrup noted that a lot of people in whom we are using it have excessive tissue.

Derek Cox made a motion to remove "Excessive tissue (severe obesity) and/or" as a contraindication in the Vascular Access Protocol. The motion was seconded by Frank Simone and carried unanimously.

D. Review/Discuss the Endotracheal Intubation Protocol

Ms. Palmer stated the only revision was to add Oxymetazoline as an option to the Endotracheal Intubation protocol for nasotracheal intubation because it was added to the epistaxis protocol.

Jason Driggars made a motion to approve the draft Endotracheal Intubation protocol. The motion was seconded by Frank Simone and carried unanimously.

E. Review/Discuss Addition of Lidocaine and Oxymetazoline to the Formulary

Ms. Palmer referred the committee to the formulary for Oxymetazoline and stated that the only addition was adding the Endotracheal Intubation protocol to the list of related protocols.

A motion was made by Jason Driggars to approve the revised formulary for Oxymetazoline. The motion was seconded by Frank Simone and carried unanimously.

F. Review/Discuss Ketamine in Cardiac and Sepsis Patients

Dr. Barnum stated that Dr. Davidson would like to reevaluate our use of Ketamine for cardiac and sepsis patients. His suggestion would be to remove Ketamine as a pain option for the cardiac pathways and sepsis patients. He asked the committee if losing Ketamine for those sub-populations of patients would put us in a bad situation. Steve Johnson asked if any of the agencies are carrying Ketamine for pain because they can't give Morphine or

Fentanyl. Mr. Calabrese replied that CCFD doesn't like their providers giving Ketamine for those patients. Historically, he hasn't seen a tremendous number of people even giving Morphine for cardiac chest pain during the transport. Dr. Young stated the protocol doesn't list Ketamine; it just says pain management for continued pain. They could add that Ketamine should be avoided in cardiac patients. Dr. Michael Holtz suggested they keep it simple for the most complicated patients. If he had to choose someone to not give Ketamine in the prehospital setting it would probably be cardiac and septic patients.

Dr. Holtz stated the concern for Ketamine in septic patients, specifically patients that have been in sepsis or severe sepsis for a prolonged period of time and have depleted their catecholamine reserves because Ketamine as an agent itself is actually a direct cardiac depressant. It only has the cardiac promoting effects based on a secondary adrenergic release—catecholamine release. Patients that have been severely septic or severely sick for a long period of time aren't able to do that catecholamine release. Giving Ketamine, or at least large amounts of Ketamine, to a patient who has been septic for a long period of time is a concern. He feels it's less of an issue for the septic patients they frequently see in the prehospital setting, patients that have been in the ICU, vented, intubated, or on multiple pressors for multiple days that you have this issue with; he is not entirely sure that it's much of a concern in the prehospital setting. Dr. Barnum suggested they include a statement in the Pain Management protocol that Ketamine is to be avoided in cardiac patients and revisit the sepsis discussion at a later time. Dr. Young suggested they add the same caveat to the Chest Pain protocol as a Pearl. Dr. Slattery stated he doesn't think the evidence supports the use of Ketamine for septic patients, especially given the problems and controversy with Etomidate for intubating patients that are septic.

A motion was made by Jim Kindel to add a warning statement to the Pain Management and Chest Pain protocols that Ketamine should be avoided. The motion was seconded by Jason Driggers and carried unanimously.

Dr. Slattery noted that it would have been nice to look at prehospital cases where Ketamine was given for chest pain or ACS to see if there were adverse outcomes. It could have been funneled through the QI Directors Committee for review and recommendation prior to going to the DDP. They should encourage the use of the QI Directors Committee at the Health District. Dr. Barnum agreed that that would be the ideal pathway for things to emerge.

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

H. Review/Discuss Protocol Development of MCI Protocol

Mr. Hammond stated the draft language was developed at the request of Dr. Carrison following the October 1 shooting incident. The language authorizes the use of EMS licensees outside of the incident itself to operate within their scope of practice on hospital property to help with surge. Mr. Driggers asked about the italicized language that reads, "...if requested by an authorized agent of the receiving facility." Mr. Hammond confirmed that permission to work on hospital property needs to be done through the EOC. Dr. Sondrup asked if Dr. Carrison's goal is for EMS providers to help triage patients to other hospitals and/or trauma centers as needed. Mr. Hammond stated it was not; it's to help with sifting and sorting of the patients at the hospital itself. EMTALA is still in effect so you can't leave hospital property without a medical screening. They can help with the actual surge of patients needing to be sifted and sorted that are on their property awaiting medical screening, and then coordinating transfers for those patients who have been medically screened. He confirmed that the licensee can operate within their scope of practice if they have the appropriate equipment available to perform the function. He noted that it adds another layer of flexibility if they want to call in more individuals or relieve some of the providers at the scene and send them to the hospitals. Dr. Barnum agreed that if we're able to put additional health care providers into that environment it's going to be of benefit. Mr. Hammond added that it helps the crews from any untoward reaction because they were helping on hospital property. If approved, it will be added to the protocol manual as Appendix E.

A motion was made by Dr. Slattery to approve the Mass Casualty Incident language to be added as Appendix E in the back of the protocol manual. The motion as seconded by Mr. Driggers and carried unanimously.

I. Review/Discuss the Termination of Resuscitation Protocol – Tabled

J. Review/Discuss the Prehospital Draft Determination Protocol – Tabled

IV. INFORMATIONAL ITEMS/ DISCUSSION ONLY

Steve Johnson asked for clarification that Reglan and Compazine will be placed on the December MAB consent agenda. They have found a couple protocols nationwide where Reglan is an included drug. He will bring the protocols as examples of what other EMS systems are doing. Mr. Driggars reported they are currently dealing with a shortage of Benadryl injectable. They are submitting for discussion and consideration adding Decadron and Solu-Medrol, with the understanding that it's not new ground, but they are having a hard time navigating the shortages. They've had the pain killer shortage for quite some time now, and they're having difficulty with anti-emetics and antihistamines. The push dose pressors are great for taking care of the Dopamine shortage, but it doesn't look like the pharmaceutical shortages are going anywhere soon. Dr. Young noted that he read it's the most symptomatic drug shortage right now that's causing those problems. Mr. Driggars stated he is worried about losing Benadryl, and that Dr. Davidson mentioned maybe exploring elixirs. Benadryl elixirs are fairly easy to find and may help in some scenarios. Mr. Hammond stated there are some best practices he's noticed from other states with regard to formularies and inventories that support protocol and the mission of this committee and the MAB, so it's time to start looking at alternatives as well. The OEMSTS is looking to add a little more flexibility to the inventory. Other systems simply state that you need an analgesic; it doesn't specifically state Morphine or Ketamine, so they may explore that route for certain medications.

Dr. Sondrup stated he was looking at the Burns protocol and calculating the amount of fluid that we would give to a standard 70 kg patient who had 20% total BSA burns. First, it's a lot of calculating and he doesn't see that happening in a prehospital setting. Second, if you use 2 ml/kg as recommended, it says you are giving 2,800 mls in a 24-hour period, which if we cut it in half is 1,400 mls in the first eight hours. So theoretically they're going to divide that by eight and give 175 mls per hour. He asked if there was any EMS agency that is taking a burn patient on a 15-minute transport and giving them one-quarter of 175 mls of normal saline because it fits within the burn protocol. He stated that he is positive the answer is no. He believes they are all giving a liter of fluid en route to the hospital. We're leaving it to the hospital to use the formula and figure out how much remaining fluid they need. He suggested they eliminate the formulas altogether. He doesn't see anyone making those calculations, and if they do, he doesn't see anyone giving that small amount of fluid en route to the hospital so that we can follow the whole 24-hour resuscitation guideline. He added that the formula wasn't made to be used in a prehospital setting for that very reason; the math is complex. Mr. Hammond stated that the Burns protocol is coming back for discussion and we can address it again at that time.

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 include on an agenda as an item upon which may be taken pursuant to NRS 241.020. All comments are limited to five (5) minutes. Chairman Barnum asked if anyone wished to address the Committee pertaining to items listed on the Agenda.

Michelle Zahn brought up concerns about some protocol corrections. Mr. Hammond asked her to forward them to him to be placed on an agenda should changes need to be made.

ADJOURNMENT

There being no further business to come before the Committee, Chairman Barnum called for a motion to adjourn. A motion was made by Member Cox, seconded by Member Simone and carried unanimously to adjourn at 10:08 am.