PRC Meeting

Wednesday, May 11, 2022
9:30 AM to 12:00 PM
****The Committee does not anticipate a need for a closed session during this meeting****
****VIRTUAL ONLY****

Meeting called by:	Dr. Timothy Chizmar
Type of meeting:	Protocol Review Committee

PRC Agenda Items

Call to order		Dr. Chizmar
Approval of minutes	March 2022 minutes	
Announcements	Career ALS and ALS Alternate positions	Dr. Chizmar
Old Business	Ketamine for Pacing/Cardioversion	Dr. Stone
New Business	Push Dose TXA and Epinephrine for Wilderness EMS Proposals IV Nitro	Dr. Millin Dr. Sward
Journal Club	Jeff Jarvis – Airway Management in Cardiac Arrest	Dr. Stone/Dr. Chizmar
Discussion(s)	New National Trauma Triage Algorithm (if time allows)	Dr. Chizmar
Adjournment		Dr. Chizmar

Next Meeting	July 13, 2022 9:30am-12:00pm	

Updated 4/27/2022

Protocol Review Committee Meeting Minutes

May 11, 2022

Attendance:

Committee Members in Attendance (Remote/Virtual): Mary Alice Vanhoy, Dr. Jennifer Anders, Richard Schenning, Tyler Stroh, Marianne Warehime, Rachel Itzoe, Mark Buchholtz, Gary Rains, James Gannon, Dr. Thomas Chiccone, Dr. Roger Stone, Dr. Matthew Levy, Dr. Janelle Martin, Dr. Jeffrey Fillmore, Dr. Jennifer Guyther, Dr. Timothy Chizmar (Chair), Meg Stein (Protocol Administrator)

Guests: Erich Goetz, Ben Kaufman, Nadav Korman, Mike Salvadge, Sam Weinstock

Excused: Melissa Fox, Mary Beachley, Steve White

Alternates: N/A

Absent: Kathleen Grote, Kevin Pearl

Meeting called to order at 9:34 by Dr. Chizmar.

Minutes: The March 9, 2022 Minutes were distributed by email. A motion was made by Marianne Warehime and second by Mary Alice Vanhoy to accept the March 2022 minutes as written. The motion passed without objection.

Announcements: Nominations for the open Career ALS and Career ALS Alternate positions must be submitted by 5/12.

Old Business:

Ketamine for Pacing/Cardioversion – Dr. Stone, Paramedic Sam Weinstock, and Chief Tim Burns: When the initial proposal was presented at the March 2022 meeting, concerns were raised regarding safety and medication dosing. Paramedic Weinstock presented a revised proposal with supporting evidence addressing these concerns. Ketamine has been shown to be safe at higher doses than in the current proposal. While there is little evidence supporting safety at lower doses, there is no reason to think that the lower dosing is not also safe. As to the concern regarding pain management for patients with unstable vital signs, especially hypotension, data from Montgomery County shows that the majority of patients are receiving no analgesia during the procedure.

In the revised proposal, indication for the use of ketamine would include pain management during cardioversion and pacing. Dosage would be the same as for general pain management. Administration would be a standing order for adults but a medical consultation would be required for pediatrics. It was pointed out that the proposed use of ketamine is not intended to replace opioids or midazolam, just to add another option.

Dr. Chizmar thanked Paramedic Weinstock for the proposal and opened the floor for discussion.

Dr. Levy: Commented that this proposal would basically just expand the indications for analgesic use of ketamine. Ketamine would be an additional option rather than a replacement for other medications. He asked about possible guidance for choosing which pain medication to choose.

Chief Burns: Responded that the intuitive answer is that ketamine would be for situations in which the BP is "soft". He also noted that in most situations when a patient is being paced or cardioverted their BP is "soft".

Dr. Chizmar: Asked for any objections to ketamine in general for this application. No objections were raised. The second question is how much guidance is needed in the protocols regarding which medication to choose.

Dr. Guyther: Suggested guidance come in the rollout. She also noted that people tend to choose the drug they are most comfortable with.

Dr. Millin: Pointed out that BP is not as important as perfusion. He also pointed out that there are not good studies regarding which medication is better than another in this context. He suggested that it may be better to have training rather than adding instructions into the protocol.

Dr. Chizmar: Asked for objections to forwarding the proposal as written. No objections were raised. Dr. Chizmar will present the proposal to Dr. Delbridge.

New Business:

Push Dose Epi for Wilderness EMS (Optional Supplemental) – Dr. Millin: Dr. Millin presented a proposal for Wilderness EMS to treat shock using push dose administration of epinephrine rather than an infusion. Dr. Millin explained that Wilderness EMS clinicians carry all of their supplies in a back pack. Packing in fluids becomes problematic due to weigh and space restrictions. Maintaining an IV and monitoring drips is also problematic in a wilderness setting. The Wilderness EMS crews are small so the logistics of getting clinicians trained would not be cumbersome. Dr. Millin pointed out that in the wilderness setting, they cannot give blood or large volumes of fluid so they need an alternative treatment for their peri-arrest patients as a bridge to definitive treatment. Wilderness EMS clinicians already carry 1mg/1mL epinephrine and his proposal details the protocol for mixing the medication for push-dose administration.

Dr. Chizmar opened the floor for discussion.

Mary Alice Vanhoy: Expressed concern regarding the need for training and clinician competency for push-dose administration. She likes the idea but wants to make sure that oversight and training is the same and adequate for both Maryland Wilderness EMS teams.

Dr. Millin: Explained the training procedures for his team and advised he is involved in all ALS training for that team. Dr. Sward is involves in the oversight for the other team.

Dr. Chizmar: Reported that Dr. Sward might not use the optional protocol. Dr. Sward's team is smaller, handles fewer patients, and is more focused on search and rescue. Dr. Sward is medical director for MSAR, another WEMS team, but was unable to attend today's meeting. He reviewed the agenda and

provided Dr. Chizmar with feedback. Dr. Millin's team is more medical focused and stands-by at large events, etc. Infusions for general ALS protocols are for safety issues. Push-dose administration would only be for Wilderness EMS.

With no further comments and no objections, it was agreed to forward the proposal as written.

Push Dose TXA for Wilderness EMS (Optional Supplemental) – Dr. Millin: Dr. Millin presented a proposal for the use of push-dose administration of TXA as an Optional Supplemental Protocol for Wilderness EMS. The reasoning behind the need for push-dose administration of TXA is the same as described above for push-dose epinephrine. Dr. Millin reported that they are already using push-dose TXA in Virginia where the formulary is given by the state but the protocols are written by the jurisdictions. Studies comparing drip versus push-dose administration of TXA from OR setting were presented along with a smaller number of uses in the military environment. These studies all used larger doses than are proposed for Wilderness use and all showed good results. There is no evidence that push-dose administration is unsafe but there is little evidence available. Due to the small group of clinicians that would be involved, training and oversight would be very thorough and all conducted by Dr. Millin.

Dr. Chizmar opened the floor for discussion.

Dr. Stone: Asked about whether push-dose administration is an off-label use of TXA. Need to consider the benefits and costs of off-label use.

Dr. Millin: Advised that the FDA insert does not include push-dose TXA and he is not sure if it will be included in the future.

Dr. Chizmar: Discussed between military and tactical use versus civilian use and questioned whether administration of a drip would be compromised in an austere environment. He also expressed concern over off-label use.

Dr. Millin: pointed out that the threat in the wilderness is not bullets but weather and distance of extrication. Getting and maintaining an IV in a cold, wet situation is a problem. Distance to extricate and weight of equipment are also concerns. He acknowledged the concern regarding off-label use but also pointed out that there is not a lot of evidence regarding drip administration. He will look further into off-label use.

Dr. Fillmore: Asked how extensive the military studies were and how many patients were involved.

Dr. Millan: Reported the numbers of patients were small but there were no reported bad outcomes.

Dr. Gannon: Advised he has no feedback on push-dose- use of TXA but noted that use of TXA in Trauma Net is increasing due to blood shortages. He had no information on whether any trauma centers are going to push-dose TXA.

Dr. Levy: Questioned whether there is a compromise between the existing drip and push-dose administration. His concern regarding push-dose administration is that people's perspective of time can be inaccurate, compromising their ability to push at the correct rate. He suggested that maybe the middle ground is a 30-50 mL syringe with 1 gram of TXA diluted in saline and a slow push over 4 minutes.

Dr. Millin: Liked Dr. Levy's suggestion stating that while he knows of no supporting evidence, conceptually this is reasonable as a middle ground and more practical than a drip in a wilderness setting. He is willing to research Dr. Levy's suggestion and also look into what other wilderness teams are doing.

Dr. Stone: Defended the protocol as written, pointing out that if a patient is really in danger of exsanguination during extraction that the benefits appear to outweigh the risks.
Dr. Millin: Pointed out that the current protocols have a time limit for administration of 1 hour from the time of injury. Evidence shows that 3 hours is a safe limit and his proposal asks for a 3 hour time limit for Wilderness EMS. As to Dr. Stone's comments, he reported the case numbers are small but for a patient to be this sick, but when it happens, appropriate tools are needed. He feels that at the patient level rather than the system level, when it is life vs death, there is not a lot of risk in push-dose TXA.

Dr. Chizmar: Pointed out that at the patient level we must remember to first do no harm. If push-dose TXA caused hypotension then that would be harm. Right now there is little evidence for or against whether there would be harm. He feels that looking into Dr. Levy's suggestion is worthwhile and suggests the proposal be tabled until the July meeting.

Dr. Millin: Agreed to bring a modified proposal back to the July meeting.

IV Nitroglycerine for CHF – Dr. Sward and Paramedic Erich Goetz: Paramedic Goetz presented a proposal to allow IV nitroglycerine administration for CHF patients that are on CPAP. When patients with pulmonary edema are on CPAP, administration of nitroglycerine becomes problematic. Sublingual administration cannot be done after CPAP is underway and paste nitroglycerine is not as effective. Research of IV nitroglycerine use by EMS in other states has shown that many states are using IV nitroglycerine safely in larger doses than proposed here.

Dr. Chizmar: Asked whether they would be open to adding infusion pump dosing to the protocol. Infusion pumps are becoming available in Howard County and hopes are to expand this use to other counties in the state.

Paramedic Goetz: Advised addition of infusions pump dosing would not be a problem.

Dr. Chizmar asked whether this should be an OPS as proposed or a Pilot Program. He also suggested moving the BP limit to the Indications rather than the Contraindications.

Discussion:

Dr. Levy suggested tightening the indications adding "evidence of pulmonary edema". He commented that "moderate CHF" is subjective and suggested maybe limiting it to patients in extremis. He also suggested the use of MAP rather than BP.

Dr. Chizmar: Asked whether the possibility of right-sided MI was considered.

Paramedic Goetz: Reported a mixed review on from Dr. Sward regarding right-sided 12-lead requirement. He was open to adding a suggestion/requirement for V4R to be obtained prior to administering IV nitro. He also suggested changing "moderate to severe CHF" to "patient that remains in extremis despite CPAP."

Dr. Garfinkel: Was in favor of the idea of changing the BP threshold to 180 mmHg. He also commented that right-sided MI is usually already hypotensive. The CPAP recommendations in the protocol are for moderate to severe CHF and there should be consistency in the protocol.

Dr. Levy: Commented that this could be a good tool in the toolbox. He raised the question of whether this would be a situation where medical direction should be considered. Do we want to make this a standing or should a consult be required?

Cyndy Wright-Johnson: Commented that she doesn't see the role for this in pediatrics.

Dr. Anders: Agreed that it should be left as a contraindication for pediatrics.

Dr. Chizmar: Returned to the question of whether this should be a Pilot Protocol with tighter reporting requirements rather than an OSP. He also asked for opinions on whether a consult should be required or not.

Dr. Garfinkel: Agreed that a Pilot Protocol was a good idea.

Dr. Wendell: Commented on whether requiring a consult would result in the protocol being less utilized.

Mary Alice Vanhoy: Thinks this should definitely be a pilot as very little literature is available and further suggested that a research pilot would be better than a QA pilot.

Dr. Chizmar: Suggested that Dr. Wendell do a research pilot since he is doing the ultrasound.

Dr. Wendell: Commented that his ultrasound is on supervisor vehicles so is not always available. He is open to doing the pilot study. He raised concerns that if a consult is required, ED doctors may not give approval even when a good consult is given.

Dr. Levy: Suggested revisiting the dosing as the current proposed range is large.

Chief Schenning: Agreed this is a good treatment with good potential benefits. His was concerned, though, with the logistics of implementation, particularly in mixed fire/EMS systems. Due to logistical and training concerns, he feels that a consult should be required.

Dr. Chizmar: Hearing stated concerns, feels that the proposal needs revision to adjust dosing and to emphasis that his is a 2nd line treatment after CPAP and repeat vital signs.

Dr. Millin: Noted that in the right patient, this would be a great treatment. There are many causes of heart failure besides CHF and in less seasoned paramedics the subtle differences will need to be taught. He also agrees with Dr. Levy that the large dosing range is of concern. He favors no consult be required due to inconsistencies in medical direction.

Dr. Chiccone: Agreed with Dr. Millin that medical direction should not be required.

Dr. Chizmar: Thanked Paramedic Goetz for his presentation and asked that they bring back a revised proposal in July.

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Journal Club:

Airway Management in Cardiac Arrest (Jarvis / Wang) – presented with attached slides by Dr. Stone:
The review article by Dr. Wang looked at the safety, efficacy, and utilization of ETI vs SGA. Take-away lessons included that there is no proof that ETI is superior over SGA or BVM. The questions remained whether better intubation success rates would make ETI more beneficial than the alternatives. The studies included in the review where done without video-laryngoscopy. No studies looked at SGA vs BVM. It is important to note whether ETI or SGA interfere with other tasks. Survival rate decreased with number of intubation attempts.

Dr. Chizmar: Noted that this brings up a great question about limiting the number of intubation attempts and confirming placement.

Dr. Levy: Commented that looking at the number of ETI attempts and success rate is eye-opening. He offered to present data at a later date if there was interest. He also brought up the point that there is even inconsistency in what constitutes an attempt.

Dr. Hack: Commented on the need to look at ventilation and oxygenation between attempts.

Dr. Stone: Concluded with the comment that Montgomery County has seen success locally with limiting clinicians to 1 ETI attempt before moving on to an alternative.

Discussion:

New National Guideline for Field Trauma Triage of Injured Patients:
Dr. Chizmar described the new proposed guidelines. He pointed out that Maryland already incorporates more than 95% of the guidelines already. The change that is of concern is the need to consider "geographical constraints of the trauma system" in determining destination and how that might impact patient volume at lower and higher level trauma centers.

After brief discussion, Dr. Chizmar advised he will put a review of the Trauma Decision Tree in light of the new guidelines on the July agenda.

Adjourned by acclimation at 12:37 PM