Meeting Minutes



Subject: Medical Services Committee

Date: October 9, 2015 – final approved 12/11/15

Voting Dr. Burstein (chair), P. Brennan, Dr. Conway, Dr. Dyer, S. Gaughan, Dr. Geller,

Members: L. Moriarty, Dr. Old, Dr. Tennyson, Dr. Tollefsen and Dr. Walter

Absent

Members: Dr. Restuccia, Dr. Walker and Dr. Wedel

1.0 Agenda 1 2.0 Call to Order 1 3.0 Motions 1-3 4.0 Action Items 3 Old Business 3 New Business 3-12 Next Meeting 12

2.0 Call to Order

Dr. Jon Burstein called to order the October meeting of the Emergency Medical Care Advisory Board's Medical Committee at 10:02 am on October 9, 2015, in the Training Room at the Massachusetts Emergency Management Agency in Framingham, MA.

3.0 Motions

The following table lists the motions made during the meeting.

Motion	Result
Motion: by Dr. Dyer to approve the June	Approved – unanimous vote
minutes. Seconded by L. Moriarity.	

Motion	Result
Motion: by Dr. Geller to recommend the	Approved – unanimous vote
Department continue existing Sepsis/Lactate	
monitoring Special Project Waiver for enrolled	
services. Seconded by Dr. Tennyson	

Motion	Result
Motion: by L. Moriarty, to recommend the Department open Sepsis/Lactate Special Project to other services, by their sending a letter to OEMS, not returning to MSC for approval. New services applying must follow the exact same protocols as the existing waiver. If changes are made, must return to MSC for authorization. Seconded by P. Gaughan	Approved – unanimous vote.
Motion	Result
Motion: by Dr. Walter to recommend the	Approved - P. Brennan, Dr. Conway,
Department approve "Utilization of a	Dr. Dyer, S. Gaughan, Dr. Geller,
Supraglottic Airway by Basic Life Support	L. Moriarty, Dr. Old, Dr. Tollefsen and
personnel for airway management during adult	Dr. Walter.
cardiac arrest" Special Project Waiver by Patriot	Abstentions-Dr. Tennyson, opposed-none.
Ambulance, with changes as discussed. Motion	
seconded by L. Moriarity	

Motion	Result
Motion: by Dr. Walter to recommend the	Rejected- Opposed- P. Brennan,
Department allow additional ambulance services	Dr. Conway, Dr. Dyer, S. Gaughan,
to participate in cardiac arrest SGA SPW	Dr. Geller, L. Moriarty, Dr. Old,
following Patriot's approved format by sending	Dr. Tollefsen and Dr. Walter.
letter to OEMS and not coming before MSC.	Abstentions-Dr. Tennyson, opposed-none.
Seconded by Dr. Dyer	

Motion	Result	
Motion: by Dr. Tollefsen to recommend the	Approved - P. Brennan, Dr. Dyer	
Department approve Professional Ambulance's	S. Gaughan, Dr. Geller, L. Moriarity,	
Emergency Surgical Airway Protocol SPW, as	Dr. Old, Dr. Tennyson, and Dr. Tollefsen.	
submitted. Seconded by L. Moriarty.	Abstentions-Dr. Walter,	
	opposed-Dr. Conway.	

Motion	Result
Motion: by P. Brennan to recommend the	Approved-P. Brennan and Dr. Geller
Department allow additional ambulance services	Opposed- Dr. Conway, Dr. Dyer, S.
to participate in the Surgical Cricothyrotomy SPW	Gaughan, L. Moriarty and Dr. Tollefsen.
following Professional Ambulance's approved	Abstentions-Dr. Tennyson, Dr. Old and
format by sending letter to OEMS and not being	Dr. Walter.
required to come before MSC.	
Seconded by Dr. Geller.	

Motion	Result
Motion: by Dr. Walter to recommend the	Approved – unanimous vote
Department require all field cricothyrotomies be	
reported as Serious reportable events, including	
those by Critical Care services.	
Seconded by L. Moriarty.	

Motion	Result
Motion: by L. Moriarty to recommend the	Approved – P. Brennan, Dr. Conway, S.
Department approve Professional Ambulance and	Gaughan, Dr. Geller, L. Moriarity, Dr. Old,
affiliate service's "Check and Inject MA" SPW,	Dr. Tennyson, and Dr. Tollefsen.
requiring needles included in kit to be non-	Abstentions-Dr. Walter, opposed-Dr. Dyer.
removable from syringes, and service to perform	
100% review of kits following use, as discussed.	
Seconded by S. Gaughan.	

Motion	Result
Motion: by L. Moriarty to recommend the	Approved - Dr. Conway, S. Gaughan, Dr.
Department allow additional ambulance service to	Geller, L. Moriarity, Dr. Old, and Dr.
participate in the "Check and Inject MA" SPW,	Tennyson. Abstentions-Dr. Dyer, P.
following Professional Ambulance's approved	Brennan, Dr. Walter, opposed-Dr. Tollefsen.
format, by simply sending a letter to OEMS and	
not being required to come before MSC.	
Seconded by Dr. Walter.	
Motion	Result
Motion: by Dr. Geller to recommend the	Approved – unanimous vote
Department approve TXA SPW as presented,	
noting that it is an accepted clinical therapy.	
Seconded by L. Moriarty	

Motion	Result
Motion: by L. Moriarty to recommend the	Approved – unanimous vote
Department allow additional ambulance service to	
participate in the TXA SPW, following St Luke's	
Hospital's approved format by simply sending a	
letter to OEMS and not being required to come	
before MSC. Seconded by Dr. Geller.	

4.0Action Items

The following table lists the action items identified during the meeting

Item	Responsibility

I. Minutes

- a. Motion: by Dr. Dyer to approve the June minutes. Seconded by L. Moriarity
 - i. Approved unanimous vote

II. Task Forces

a. Chairs to distribute written reports as needed—no reports

III. Old Business

- a. System CQI report—no report
- b. MATRIS—no report

IV. <u>New Business</u>

- a. Special Project Waivers
 - i. Sepsis
 - ii. How has it been going?

- 1. Roughly 100 patients/year, 30% of which resulted in a sepsis alert based on lactate, with no clear difference in outcome. Hospitals are moving away from goal directed therapy in sepsis, but it remains a CMS measure for hospitals. The major intervention in the waiver is field measurement of lactates, which is within the technical purview of paramedics.
- 2. Motion to continue waiver for existing services, by P. Brennan, seconded by Dr. Walter.
- 3. The services operating would like to continue, as they feel patients with alert get better attention at hospital upon arrival. Hospitals are being measured by CMS, and the field lactate does count for the sepsis bundle. Patients identified by project are receiving significantly more fluid prehospitally, but we cannot quantify.
- 4. Services are using a meter under CLIA waiver, manufactured by Nova biomedical.
- 5. Professional Ambulance has just begun tracking patient outcomes with Mount Auburn Hospital and Mass General Hospital, with mortality and ICU stays as major outcomes.
- 6. The value of this prehospital testing, especially when brought to a high-volume emergency department, is a flag for ED clinicians.
- iii. **Motion:** by Dr. Geller to recommend the Department continue existing Sepsis/Lactate monitoring Special Project Waiver for enrolled services. Seconded by Dr. Tennyson. Approved-unanimous vote.
- iv. Opening waiver to other services
 - 1. Historically, some projects have allowed other services to be added on, simply by sending a letter of intent to OEMS, while other projects have required new services to come to MSC to request the waiver. In either case, the regional director and medical director must be involved in process.
 - 2. The Department must ensure it continues to monitor all services, even those who begin a waiver project late, and track their data regularly.
- v. **Motion:** by L. Moriarty, to recommend the Department open Sepsis/Lactate Special Project to other services, simply by sending a letter to OEMS, and not returning to MSC for approval. New services applying must follow the exact same protocols as the existing waiver. If changes are made, must return to MSC for authorization.
 - 1. Approved-unanimous vote.
- b. Basic Life Support use of Supraglottic Airways for airway management during cardiac arrest (Mr. Aumann, Patriot Ambulance)
 - i. Historically, standard of care interventions in cardiac arrest have come in and out of favor, including Bretylium, isoproterenol, and intra-cardiac epinephrine.
 - ii. Cardiac arrest management is focused on elimination of problems an unmanaged problem includes gastric distention-and intended consequence of care.
 - Gastric distention may interfere with ventilation, decreasing lung volume by pushing up on diaphragm, and causes vomiting, which obstructs the airway and interferes with CPR.
 - 2. Preventing gastric distension from occurring should be a priority. Current practice is of OPA and BVM, which does not correct problem.
 - iii. Supraglottic airways are safe, effective, and as easy to place as an OPA by BLS in a cardiac arrest.
 - 1. Numerous studies support the use of SGAs by BLS personnel. All states authorize paramedics to insert, and several US states including New Hampshire and other countries, allow EMTs to do so as well.

- 2. SGA placement eliminates the need for pauses in compressions for ventilation, improves ventilation and oxygenation and reduces the risk of gastric distention and aspiration.
- 3. Patriot has considered using the LMA Supreme from Teleflex Medical, but any supraglottic airway could be considered under the project.
 - a. Considered primary airway during cardiac arrest (negating need for intubation), Class 2A evidence, same as ETT.
 - b. Able to use quantitative waveform capnography to monitor CPR quality, optimize chest compressions and detect ROSC during compressions. For the purpose of this SPW, BLS providers will use colormetric capnography, which may be converted to waveform upon ALS arrival.
 - c. This device has equal risk of gastric distention as ETT, with less risk of gastric regurgitation and pulmonary aspiration due to first attempt success rate, and 72% less likely to cause regurgitation than BVM and OPA alone.
- 4. Historically, Patriot sees ~40 cardiac arrests/year, although the rate may decrease in the coming year due to changes in contract.
 - a. Training Program—overseen by Dr. Joseph Tennyson. Curriculum will include a review of cardiac arrest cases and treatment including CPR review, inclusion/exclusion criteria, didactic anatomy review, practical-insertion procedures, with each EMT demonstrating competency, general management, and review of data collection procedure.
 - b. Quality assurance will be reviewed through analysis by medical director (all deployments). Any deviation from waiver will be reviewed with EMTs, including remediation and reeducation. Documentation requirements also noted.
- 5. Two slight changes from published SPW document:
 - a. Affiliate Hospital Medical Director Change, from Dr. Lightfoot to Dr. Leewood Lane.
 - b. Project only for use by patients >18 years, not 16 as reflected on application.
- 6. Discussion:
 - a. Dr. Geller—two concerns, interruptions in compressions for device placement and control over respiratory rates.
 - i. Reviewing Patriot's baseline cardiac arrest survival rate is key to examining the effect of the project. If these data are not collected, they should be before beginning project.
 - ii. Patriot also has a SPW for paramedic use of mechanical ventilator during cardiac arrest, so changes in results may be related to either project.
 - b. Dracut and Lowell contracts operating under CCR, so placement of LMA will wait for ~6-8 minutes of continuous compressions. Responding paramedics (either from Lowell General or Patriot) instructed to keep LMA in place, and not to attempt reintubation. Patriot paramedics under directive not to intubate cardiac arrests since Jan 1, 2015.
 - c. EMTs operating under waiver will undergo initial training, then retraining and competency measurement every 6 months thereafter.
 - i. Questions about format of training—online distributive vs.

in-person lecture and lab. Patriot will be holding majority of training in person.

- d. **Motion:** by Dr. Walter to recommend the Department approve "Utilization of a Supraglottic Airway by Basic Life Support personnel for airway management during adult cardiac arrest" Special Project Waiver by Patriot Ambulance, with changes as discussed. Motion seconded by L. Moriarity. Changes from submitted document to include
 - i. Reporting requirement to Department of all interruptions in compressions as part of data
 - ii. Reporting requirement to Department of survival/ROSC rate for all enrolled patients, including those with ROSC in the field, and subsequent pulse loss in field, and ROSC in field with hospital outcome.
 - iii. Reporting requirement to Department of time to deployment (from at-patient-side to SGA placement), with note that if operating under CCR, ideally that time should be >8 minutes.
 - iv. Requirement for retraining of EMTs at least every 6 months.
 - v. Reporting requirement to Department of any inappropriate device placements by EMTs.
- e. Changes also include AHMD change to Dr. Lane and age requirement of >18 years.
- f. Approved-P. Brennan, Dr. Conway, Dr. Dyer, S. Gaughan, Dr. Geller, L. Moriarty, Dr. Old, Dr. Tollefsen and Dr. Walter. Abstentions-Dr. Tennyson, opposed-none.
- 7. Opening waiver to other services
 - a. This project is complex—perhaps requiring services to return to MSC in order to participate is prudent.
 - b. Perhaps MSC should review project data from first six months before deciding to open to others.
 - c. Of note, this project waiver calls for any Supraglottic Airway, not the LMA specifically.
 - d. General committee agreement to review this question again in a year, after reviewing data. For now, the project should be limited to Patriot Ambulance. If services are interested in being added, they should present their proposal to MSC. We want the new services to be as compulsive in design as Patriot has been.

Motion: by Dr. Walter to recommend the Department allow additional ambulance services to participate in cardiac arrest SGA SPW following Patriot's approved format by sending letter to OEMS and not coming before MSC. Seconded by Dr. Dyer. P. Brennan, Dr. Conway, Dr. Dyer, S. Gaughan, Dr. Geller, L. Moriarty, Dr. Old, Dr. Tollefsen and Dr. Walter. Abstentions-Dr. Tennyson, Opposed-none. Rejected

- iv. Professional Ambulance—"Emergency Surgical Airway Protocol (Surgical Cricothyrotomy)" (W. Mergendahl and J. DiClemente)
 - 1. Professional Ambulance had an incident in the past year, where a patient could not be intubated or ventilated, and paramedics could not get

- a Quicktrach (needle cricothyrotomy device) in place. At the hospital, the receiving physician attempted with the device, and was not successful.
 - a. Professional Ambulance Paramedics perform "High Acuity Low Occurrence" (HALO) training quarterly, and review needle cricothyrotomy regularly.
 - b. Just by happenstance, a second incident occurred weeks after the first. The paramedics encountered significant struggle to place the device, but were ultimately successful.
- 2. Professional Ambulance's Center for Medics Paramedic students participate in cadaver lab, so the four paramedics involved in incidents joined students, and demonstrated the skill on cadavers, and encountered identical problems. In 8 tracheas, identical results, and video recorded (played for committee). On training materials from manufacturer, placement appears easy, but on real tracheas, significant force required to place. In some situations, two hands were required—leading to questions of what other structures could be damaged by the force.
 - a. Replicating the clinical scenario without the stress of an apneic patient, paramedics encountered identical results.
- 3. Informal discussions at Region IV Medical Services Committee revealed several ambulance services have had similar occurrences, in total more than 8 failed attempts in recent years.
 - a. Services have not had access to the devices attempted for patient care, so cannot report to FDA as adverse outcomes.
- 4. We know traditional needle cricothyrotomy is a poor choice—the narrow cannula provides little air flow.
 - a. North American Rescue has a Tactical Crich Kit, which is small, simple, compact. It is supplied as a complete kit with tracheal tube.
 - b. RSI/MAI services are using this—including BostonEMS, Lawrence General and Lowell General and UMass Worcester,
- 5. Professional Ambulance will hold 4 hour initial in-service training, including a refresher on airway management (and appropriate indications for cricothyrotomy, as a last resort), then move to low-fidelity simulation, and then practice on sheep tracheas, finally high-fidelity simulation with mannequin.
- 6. **Motion:** by Dr. Tollefsen to recommend the Department approve Professional Ambulance's Emergency Surgical Airway Protocol SPW, as submitted.
- 7. Seconded by L. Moriarty.

 Approved P. Brennan, Dr. Dyer, S. Gaughan, Dr. Geller, L. Moriarty,
 Dr. Old, Dr. Tennyson, and Dr. Tollefsen. Abstentions-Dr. Walter,
 opposed-Dr. Conway.
- v. Opening waiver to other services
 - 1. This project requires considerable training—and Professional Ambulance has a reputation for doing this well, will advocate waiting to consider opening waiver. If other services wish to participate, they should present directly to MSC.
 - 2. If this problem is statewide, and not new, do we have data on it? Not from MATRIS, not a compliance history.
 - 3. Could these situations be prevented with wider use of video laryngscopy? No—it is a "cannot intubate, cannot ventilate" intervention.

- 4. Of the physicians in the room they rarely perform surgical cricothyrotomy—but seem to maintain proficiency well.
 - a. These QuikTrach cases are very scarce, so it was easy to disregard the first event, but hearing from others, this appears to be a serious problem.
- 5. Consideration of sending query to all services, to ask about use and failures? Could regions send if not OEMS?
- 6. RSI/MAI committee meets regularly, and reviews all deployments of surgical cricothyrotomy and missed intubations. If other services are using surgical crichcothyrotomies, there won't be a central review of incidents. Perhaps all field cricothyrotomies should be reportable to the Department.
- 7. Are other services using different devices?
 - a. Several are using the Melker device, and physicians prefer the Seldinger technique.

Motion: by P. Brennan to recommend the Department allow additional ambulance services to participate in the Surgical Cricothyrotomy SPW following Professional Ambulance's approved format by sending letter to OEMS and not being required to come before MSC. Seconded by Dr. Geller.

Approved-P. Brennan and Dr. Geller Opposed- Dr. Conway, Dr. Dyer, S. Gaughan, L. Moriarty and Dr. Tollefsen. Abstentions-Dr. Tennyson, Dr. Old and Dr. Walter

Motion: by Dr. Walter to recommend the Department require all field cricothyrotomies be reported to the Department as serious reportable events, including those by Critical Care services. Seconded by L. Moriarity.

- b. Approved by unanimous vote.
- vi. Discussion over data regarding cricothyrotomy being sent to regional offices then passed on to state. Should services be encouraged to report adverse outcomes directly to FDA? Preference that AHMD include patient outcome in report to Department (through regional office).
 - 1. Data to be collected should include use, success, failure, number of attempts, specific device, etc.
 - 2. Note that data obtained will not be better than what was presented by Professional Ambulance today—they had two occurrences, analyzed them clinically, and demonstrated on 8 cadavers. Is this device dangerous? Why are we continuing to allow this to be used?
 - a. The Department cannot restrict a specific device from being used based entirely on empiric reports, unless they have been reported to the FDA. The device is currently FDA approved for use.
 - b. Request that services submit reports of device failures historically, so we can gather documentation.
 - 3. Discussion of how to get notice of this out to all AHMDs—regions maintain accurate lists.
- c. Professional Ambulance's SPW "Check and Inject Massachusetts: Deviated Epinephrine Delivery Protocol" on behalf of twelve ambulance services. (W. Mergendahl and
- d. J. DiClemente)
 - i. Brand name "Epi-Pens" are expensive, and price has risen consistently since 2010. This cost is a waste of funds—better directed to clinical improvements, and easily replaced. King County, WA identified the same, and by replacing the autoinjectors with IM kits, doubled their administrations of epinephrine, and reduced

missed administrations. \$150,000 savings across program in Washington.

- 1. Of note, generic (or non-brand) Epi-Pens do not have retractable needle—and pose a safety hazard to EMTs.
- ii. The prevailing cost is \$720/2 injectors. ALS vehicles carry a total of 8, BLS 4 doses. The "Check and Inject" kit costs \$15, for both pedi and adult doses.
- iii. Trends in cost identified by Professional Ambulance show \$1,060 total cost per adult administration, \$10,598 per pediatric administration.
 - 1. Case reports in literature of 25 children injured by auto-injectors. Reports of needles that hit bone and torque (so cannot be retracted safely), or damaged soft tissue near site, requiring surgical removal of needle.
- iv. King County project used a kit including educational material for EMT, vial with "NO IV" on tail, and all supplies required for administration, including alcohol swab, band aid and syringe.
 - 1. New York State having special syringe made up, with only two markings—at 0.3mL and 0.15mL (assuming 1:1000 1mg/mL).
 - 2. Service will take back every kit used, for quality assurance. When first released, King County found six incidents where air had been administered rather than medicine. Subsequently, changed education and no subsequent events.

v. Procedure

- 1. Kit to be used for all Epinephrine auto-injector administrations under protocol. All providers (EMT and Paramedic) will utilize.
- 2. Needles on supplied syringes cannot be removed, and Professional Ambulance's IV tubing has all needleless ports—no potential for IV administration.
- 3. Professional Ambulance will undergo training at least twice a year (and incorporate in HALO, 4x/year).
- vi. Training to occur for EMTs and Paramedics (Professional Ambulance has experience training EMTs to administer IM injections, in conjunction with initial paramedic training)
 - 1. Including didactic classroom, skills lab, simulation practice (including scenarios where epinephrine administration not indicated), and signoff by medical director or designee.
- vii. QA will include 100% review of PCRs (as standard at Professional Ambulance), and QI of used kits, measuring medication remaining in vial, etc.
- viii. King County program staff helpful and supportive of implementation in MA, hoping to learn/grow using our experience.

ix. Comments

- 1. Dr. Geller, on behalf of Dr. Schoenfeld from BIDMC, "We all see the rising costs of Epi-Pens, but this Special Project Waiver could put patients at risk of needlestick injury where not previously present, as this is not a covered needle. What is different now than in previous years, where we saw mistakes emanate from injected Epinephrine? Why are we allowing cost to drive clinical care? Perhaps a better solution would be to consider contacting the Attorney General and examining price gouging by the manufacturers. We want to prevent the errors of the past."
 - a. Perhaps including in the kit a needle that cannot detach, in conjunction with needleless ports on IV sets.
 - b. Also worth noting, the Attorney General has been trying to affect the cost of naloxone for some time, with limited success.
- 2. Dr. Conway—we have done similar, when hospital could not restock

Epi-Pens, by including this in a zip-top bag.

- 3. The goal should be to design out the possibility of IV administration.
 - a. As services move towards the generic Epinephrine auto-injector, they are actually increasing the risk of needlestick injuries. The training in this project is designed to prevent the errors of the past. In this case, we are solving problems with equipment as well as training.
 - b. The problems of the past have been training issues (14 episodes of inappropriate administration in a year); this is an equipment (or hardware) solution.
- 4. Note about needle length—the same needle used for adults may not be appropriate for small children.
 - a. Boston Children's Hospital uses Epi-Pens because of these concerns. Training should include discussion of modulation of needle insertion.
- 5. Emergency Departments have seen their share of thumb injuries from Epi-Pens and starting to see obese patients who do not benefit from auto-injector administrations—there are significant discrepancies in how often this is administered in the state, which is a training issue.
- 6. **Motion:** by L. Moriarty to recommend the Department approve Professional Ambulance and affiliate service's "Check and Inject MA" SPW, requiring needles included in kit to be non-removable from syringes, and service to perform 100% review of kits following use, as discussed. Seconded by S. Gaughan.
 - a. Approved Dr. Conway, S. Gaughan, Dr. Geller, L. Moriarty, Dr. Old, Dr. Tennyson, Dr. Tollefsen and Dr. Walter. Abstentions-P. Brennan, opposed-Dr. Dyer.
- x. Opening waiver to additional services
 - 1. Dr. Dyer—BostonEMS spends a lot of money on Epi-Pens, but rather than consider this, they would prefer the Department decrease the par levels for ambulances.
 - 2. If this waiver is not opened to others, the committee will be inundated with requests.
 - 3. There is considerable training required for services using for EMTs. If opened for others, perhaps OEMS or MSC should set standards or objectives for training.
 - 4. Should services be required to use the King County kit, with modifications from Professional Ambulance? Require a specific manufacturer/supplier?
 - 5. **Motion:** by L. Moriarty to recommend the Department allow additional ambulance service to participate in the "Check and Inject MA" SPW, following Professional Ambulance's approved format, by simply sending a letter to OEMS and not being required to come before MSC. Seconded by Dr. Walter.
 - a. Approved by unanimous vote.
- e. Tranexamic acid (TXA) in trauma
 - i. Dr. Burstein: There is a larger issue than simply approval of this SPW; consideration of IRB approval. DPH's legal department has asked whether there is sufficient weight of clinical evidence and experience that this project would not require IRB approval. If not sure, IRB may be required. This committee's review is also on clinical equipoise.

- ii. Dr. Bivens (St. Like's Hospital Emergency Department)
 - 1. TXA has been used for decades, safely, and is very inexpensive as a generic medication.
 - 2. In trauma, TXA inactivates plasmin, slowing the body's response to breaking down clots.
 - 3. Three large studies (CRASH-2 alone had 20,000 patients) showed administration of 1gm in the field over 10 minutes, with 1gm in hospital saved lives, reduced mortality.
 - a. The Number-needed-to treat is 67, equivalent to that of aspirin in ACS.
 - b. US Military has been using in Afghanistan, after seeing British and Japanese, who have been using for trauma for 20+ years. In the UK, it is over the counter for menstrual bleeding. Several studies, initially observational, then randomized-control-trials have shown similar results, with no safety issues.
 - 4. A similar intervention, factor 7a costs several thousand dollars/dose. TXA is \$20-\$100/dose (depending on distributor).
 - 5. It has been extrapolated from data that if EMS used, it could save 4,000 lives per year in the US. Based on MA population, 85 lives/year.
 - 6. WHO has classified TXA as an essential drug for all hospital formularies. ITLS calls for EMS to use, and ACEP supports for out-of-hospital hemorrhage control. A recent New York Times article expressed outrage we are not using this safe, cheap medication.
 - a. Used by EMS in Ohio for two years, without safety concerns.
 - b. Rhode Island Hospital, the destination for most Region V trauma patients is in support of receiving patients, and will continue administration if EMS begins.

iii. Suggested implementation

- 1. Doses stocked on ALS ambulances, 1 gram to be administered to select trauma patients (if within 3 hours of trauma)
 - a. Blunt/Penetrating trauma, with signs of significant hemorrhage (low BP, tachycardia), or paramedic judgement for risk of significant hemorrhage.
- 2. Implement for 1 year, track data (QA). At this times, no plan for academic publication.

iv. Comments

- 1. This medication has been deployed by Boston MedFlight (BMF); they've had five administrations in recent years, with no adverse incidents, and positive feedback from trauma surgeons.
- 2. Is this medication compatible with BMF, for transports to Boston?
 - a. BMF's inclusion criterion uses a shock index, and contraindication for patients who may be pregnant.
- 3. Per FDA, medication contraindicated for subarachnoid hemorrhage
 - a. Notably, the med is not FDA approved for trauma, so this is off-label to start with.
 - b. EMS cannot know if a patient is suffering SAH, so operate based on assumptions.
- 4. **Motion:** by Dr. Geller to recommend the Department approve TXA SPW as presented, noting it is a standard intervention. Seconded by L. Moriarity
- 5. a. Approved by unanimous vote.

- v. Opening waiver to additional services
 - 1. **Motion:** by L. Moriarty to recommend the Department allow additional ambulance service to participate in the TXA SPW, following St Luke's Hospital's approved format by simply sending a letter to OEMS and not being required to come before MSC. Seconded by Dr. Geller.
 - 2. **Approved** Dr. Conway, S. Gaughan, Dr. Geller, L. Moriarity, Dr. Old, and Dr. Tennyson. Abstentions-Dr. Dyer, P. Brennan, Dr. Walter, opposed-Dr. Tollefsen.

V. Closing

- a. Additional matters tabled until next meeting, including neonatal transport, D5 mixing for amiodarone, neonatal masks, pump characteristics and proposed USAR protocol.
- b. Meeting adjourned at 12:01.
- VI. Next Meeting: Friday December 11, 2015 10 a.m. 12 Noon at MEMA, Framingham.