

Medical Direction Committee (MDC)

Medical Direction Committee (MDC)

October 1, 2026 | 10:30 AM

Old Dominion EMS Alliance
7818 East Parham Road, Suite 911
Henrico, VA 23294

- 1. Call to Order and Welcome**
- 2. Remote Participation Approvals**
- 3. Approval of Agenda and Prior Minutes**
- 4. Special Reports**
 - Quarterly Data Report – Daisy Banta
 - Emergency Custody Orders (ECO) – Dr. Joran Sequeria, VACEP
- 5. DEA and Board of Pharmacy Compliance**
- 6. MDC Membership and Representation**
 - Governance/Executive Committee Update
 - Regional Medical Directors/Representatives
 - Ex Officio Membership
- 7. Old Business**
 - **Research Projects**
 1. Davin Combs, Carilion Clinic
 - **Workgroup Reports**
 1. Pediatric Pain Management
 2. MIH Toolkit
 3. Air Medical
 4. REVLS
 - **Trauma Care Committee Report**
- 8. New Business**
 - EMT-Intermediate – Established Chest Tube Maintenance
 - Liquid Plasma – AEMT/EMT-Intermediate
 - EMS Scope of Practice Review

Medical Direction Committee (MDC)

12. OEMS Director's Report – Dr. Beermann-Foat

13. State Operational Medical Director Report

14. OEMS Questions/Discussion

15. Public Comment

16. Future Meetings

- January 7, 2027
- July 2027 Meeting Date
- NAEMSP Dinner – January 14, 2027

17. Adjournment



Virginia Office of Emergency Medical Services Scope of Practice - Formulary for EMS Personnel

This SOP represents *practice maximums*.

CATEGORY		EMR	EMT	AEMT	I	P
Analgesics						
	Oral analgesics					
	Acetaminophen		●	●	●	●
	Nonsteroidal anti-inflammatory		●	●	●	●
	Parenteral non-opioid analgesics					
	Acetaminophen, ketorolac			●	●	●
	Opiates			●	●	●
	Dissociative analgesics					
	Ketamine 0.5 mg/kg or less IV/IN/IM				●	●
Anesthetics/Sedatives						
	Topical/Otic/Occular		●	●	●	●
	Inhaled-self administered		●	●	●	●
	Local (infiltration, intraosseus)			●	●	●
	General - initiate					●
	General - maintain infusion intubated patient				●	●
	Sedation for the violent/aggressive patient					●
	Benzodiazepine/antipsychotic combination				●	●
	Ketamine greater than 0.5 mg/kg IV/IM					●
	Antipsychotics				●	●
	Benzodiazepines (for sedation)				●	●
Anticonvulsants	Includes benzodiazepines and anti-epileptic drugs			●	●	●
Glucose Altering Agents						
	Glucose elevating agents		●	●	●	●
	Glucose lowering agents					
	Insulin SQ/IV/infusion				●	●
Antidotes						
	Anticholinergic Antagonists				●	●
	Anticholinesterase Antagonists	●	●	●	●	●
	Benzodiazepine Antagonists					
	Narcotic Antagonists	●	●	●	●	●
	Nondepolarizing Muscle Relaxant Antagonist					
	Beta/Calcium Channel Blocker Antidote				●	●
	Tricyclic Antidepressant Overdose				●	●

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Revised June 30, 2024

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	Cyanide Antidote - hydroxycobalamin			●	●	●	Added per MDC 4/2023
	Cholinesterase Reactivator	●	●	●	●	●	
	Combination antidotes, e.g. DuoDote	●	●	●	●	●	
Antihistamines & Combinations			●	●	●	●	
Biologicals							
	Vaccines						
	Vaccines all ages			●	●	●	
	Vaccines to age < 18 years				●	●	
	Antibiotics		●	●	●	●	
Blood/Blood products							
	Initiate					●	
	Maintain				●	●	
Blood Modifiers							
	Anticoagulants				●	●	
	Antiplatelet agents		●	●	●	●	
	Hemostatic agents		●	●	●	●	
	Thrombolytics					●	
	Anti-fibrinolytics (eg tranexamic acid)			●	●	●	
Cardiovascular Agents							
	Alpha adrenergic blockers				●	●	
	Adrenergic stimulants				●	●	
	Antiarrhythmics				●	●	
	Beta adrenergic blockers				●	●	
	Calcium channel blockers				●	●	
	Diuretics				●	●	
	Inotropic agents				●	●	

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	Vasodilatory Agents		●	●	●	●	
	Vasopressors						
	Includes infusions and push dose pressors				●	●	
	Epinephrine IV/IO for cardiac arrest			●	●	●	Epinephrine at the AEMT level added by MDC 7/7/2022
	Epinephrine IM for allergic reaction		●	●	●	●	
	Epinephrine administration systems for allergic reaction (See note below)		●	●	●	●	
Central Nervous System							
	Antipsychotic				●	●	
Dietary Supplements/Electrolytes							
	Antipsychotic						
	Minerals - start at a health care facility	See section: Intravenous Fluids					
	Salts - start at a health care facility						
	Electrolytes Solutions - started at a health care facility						
	Hypertonic Saline				●	●	
Gas							
	Oxygen	●	●	●	●	●	
	Heliox				●	●	
Gastrointestinal							
	Antacids						
	OTC			●	●	●	
	Antidiarrheals		●	●	●	●	
	Antiemetics		●	●	●	●	
	EMT SL/PO route only						
	H2 blockers						
	PO		●	●	●	●	
	IV				●	●	
Hormones							
	Corticosteroids, Mineralocorticoids			●	●	●	
	Other Hormones						
	pitocin, octreotide, prostaglandins					●	
Intravenous Fluids							
	isotonic		●	●	●	●	EMT may transport patient with IV fluids not requiring titration or adjustment, and without additives including electrolytes (e.g. potassium, magnesium)
	hypotonic		●	●	●	●	

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	hypertonic				●	●
	M = Maintenance I = Initiate					
	Crystalloid, +/- Dextrose/Lactate		M	I/M	I/M	I/M
	with Multi=vitamins		M	M	M	M
	with Thiamine		M	M	M	M
Neuromuscular Blockers						●
Respiratory	Anticholinergics		●	●	●	●
	Sympathomimetics					
	Beta agonists		●	●	●	●
	Epinephrine (nebulized)			●	●	●
Dosage and Concentration Calculation				●	●	●
M = Maintenance						
I = Initiate						
	Note: EMT's may administer medications within their scope of practice in addition to providing assistance in administration of those medications. EMT's may access a drug kit to access those medications.					
	Note: Med-Math skills including dosage calculations and measurement of medication to be administered are outside EMT scope of practice. EMT's may draw epinephrine from vials or ampules for the treatment of acute allergic reactions using devices/systems using syringes with mechanical limiters or color-coded or other clearly marked indicators to facilitate accurate dose measurement.					
	EMT's may transport patients with IV fluids not requiring titration or adjustment, and without additives including electrolytes (e.g. potassium, magnesium)					

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	Nonsteroidal anti-inflammatory		●	●	●	●
	Parenteral non-opioid analgesics					
	Acetaminophen, ketorolac			●	●	●
	Opiates			●	●	●
	Dissociative analgesics					
	Ketamine 0.5 mg/kg or less IV/IN/IM				●	●
Anesthetics/Sedatives						
	Topical/Otic/Occular		●	●	●	●
	Inhaled-self administered		●	●	●	●
	Local (infiltration, intraosseus)			●	●	●
	General - initiate					●
	General - maintain infusion intubated patient				●	●
	Sedation for the violent/aggressive patient					●
	Benzodiazepine/antipsychotic combination				●	●
	Ketamine greater than 0.5 mg/kg IV/IM					●
	Antipsychotics				●	●
	Benzodiazepines (for sedation)				●	●
Anticonvulsants	Includes benzodiazepines and anti-epileptic drugs			●	●	●
Glucose Altering Agents						
	Glucose elevating agents		●	●	●	●
	Glucose lowering agents					
	Insulin SQ/IV/infusion				●	●
Antidotes						
	Anticholinergic Antagonists				●	●
	Anticholinesterase Antagonists	●	●	●	●	●
	Benzodiazepine Antagonists					
	Narcotic Antagonists	●	●	●	●	●
	Nondepolarizing Muscle Relaxant Antagonist					
	Beta/Calcium Channel Blocker Antidote				●	●
	Tricyclic Antidepressant Overdose				●	●

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	Combination antidotes, e.g. DuoDote	●	●	●	●	●	
Antihistamines & Combinations			●	●	●	●	
Biologicals							
	Vaccines						
	Vaccines all ages			●	●	●	
	Vaccines to age < 18 years				●	●	
	Antibiotics		●	●	●	●	
Blood/Blood products							
	Initiate					●	
	Maintain				●	●	
Blood Modifiers							
	Anticoagulants				●	●	
	Antiplatelet agents		●	●	●	●	
	Hemostatic agents		●	●	●	●	
	Thrombolytics					●	
	Anti-fibrinolytics (eg tranexamic acid)			●	●	●	
Cardiovascular Agents							
	Alpha adrenergic blockers				●	●	
	Adrenergic stimulants				●	●	
	Antiarrhythmics				●	●	
	Beta adrenergic blockers				●	●	
	Calcium channel blockers				●	●	
	Diuretics				●	●	
	Inotropic agents				●	●	

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	Epinephrine administration systems for allergic reaction (See note below)		●	●	●	●	
Central Nervous System	Antipsychotic				●	●	
Dietary Supplements/Electrolyte	Vitamins						
	Minerals - start at a health care facility	See section: Intravenous Fluids					
	Salts - start at a health care facility						
	Electrolytes Solutions - started at a health care facility						
	Hypertonic Saline				●	●	
Gas							
	Oxygen	●	●	●	●	●	
	Heliox				●	●	
Gastrointestinal							
	Antacids						
	OTC			●	●	●	
	Antidiarrheals		●	●	●	●	
	Antiemetics		●	●	●	●	
	EMT SL/PO route only						
	H2 blockers						
	PO		●	●	●	●	
	IV				●	●	
Hormones	Corticosteroids, Mineralocorticoids			●	●	●	
	Other Hormones						
	pitocin, octreotide, prostaglandins					●	
Intravenous Fluids	isotonic		●	●	●	●	EMT may transport patient with IV fluids not requiring titration or adjustment, and without additives including electrolytes (e.g. potassium, magnesium)
* See note below)	hypotonic		●	●	●	●	

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	M = Maintenance I = Initiate						
	Crystalloid, +/- Dextrose/Lactate		M	I/M	I/M	I/M	
	with Multi=vitamins		M	M	M	M	
	with Thiamine		M	M	M	M	
Neuromuscular Blockers						●	
Respiratory	Anticholinergics		●	●	●	●	
	Sympathomimetics						
	Beta agonists		●	●	●	●	
	Epinephrine (nebulized)			●	●	●	
Dosage and Concentration Calculation				●	●	●	
M = Maintenance							
I = Initiate							
	Note: EMT's may administer medications within their scope of practice in addition to providing assistance in administration of those medications. EMT's may access a drug kit to access those medications.						
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Plasma Administration by Advanced EMTs and EMT-Intermediates

Concept Paper for Committee Discussion, with Draft Protocol and Competency Standard

To: Medical Direction Committee, Virginia State EMS Advisory Board

From: Sudershan Gupta, MD, Regional Operational Medical Director, Region 7, and David Long, MA, NRP, Executive Director, Tidewater EMS Council, Inc.

Date: [Insert date]

Requested action: Discussion and direction. No vote is requested at this meeting.

PART 1 — CONCEPT PAPER FOR DISCUSSION

1. The Question Before the Committee

Should credentialed Advanced EMTs and EMT-Intermediates be permitted to initiate plasma transfusion for hemorrhagic shock, under algorithmic activation criteria and OMD credentialing?

That is the whole of the request. Everything else in this packet exists to answer objections to it.

Virginia's Scope of Practice — Procedures for EMS Personnel currently authorizes initiation of blood and component therapy at the Paramedic level only. We are not asking the Committee to change that today. We are asking whether the question merits development, what evidence the Committee would need in order to evaluate it, and who should be at the table while it is developed.

[Verify against the current published Scope of Practice document before submission. The version reviewed in preparing this packet was revised June 30, 2024.]

2. Why the Question Arises

Region 7 spans deep geographic contrasts. The urban tier runs mature, paramedic-staffed low-titer O whole blood programs. The Eastern Shore, Middle Peninsula, and outer rural corridors do not, and the reason is not clinical judgment about whether those patients need blood. It is staffing and money.

- Transport intervals to a Level I or Level II trauma center in these corridors routinely exceed 45 to 60 minutes.
- Immediate response in these corridors rests largely on volunteer agencies staffed at the EMT and Advanced EMT levels. A paramedic is frequently not on the first unit, and sometimes not on any unit.
- Cold chain and cost together make current programs impractical for low-volume rural agencies.

The evidence makes this uncomfortable, because the benefit of prehospital plasma concentrates in exactly the systems currently excluded. In the combined post hoc analysis of PAMPer and COMBAT, mortality roughly doubled in the standard-care group when transport exceeded 20 minutes, while no

comparable increase appeared among patients who received plasma; the authors reported no serious adverse events attributable to prehospital plasma.

The patients who stand to benefit most are the ones least likely to be attended by the only credential currently permitted to help them.

3. What Would Actually Change

Advanced EMTs in Virginia already establish and maintain peripheral intravenous access and administer medications under protocol. EMT-Intermediates already maintain blood and component therapy in progress. [Confirm both against the current Scope of Practice table.]

The question is therefore not whether these clinicians can perform the physical task. It is whether the decision-making surrounding transfusion initiation exceeds their preparation.

We would argue it does not, and the reason is structural. Under an algorithmic protocol, transfusion initiation is a verification and monitoring task rather than a titration or differential diagnosis task. The clinician does not select a product, calculate a dose, or choose an ABO group. A single universal product is carried. Activation is governed by objective criteria — shock index at or above 1.0 or systolic blood pressure below 90 mmHg, paired with an identified hemorrhagic source. The clinician verifies, administers, monitors, and stops.

That profile differs materially from the judgment-intensive skills that properly distinguish the Paramedic level. It is also the reason the indication set in this packet is deliberately narrow: every indication added that requires the clinician to reason toward a diagnosis weakens the argument that the task does not require diagnostic reasoning.

4. Product Selection Is an Agency Decision, Not a Committee Decision

This request is product-neutral. It concerns the authority to administer plasma, not which plasma an agency carries.

Two products are viable, and they trade against each other on cost and logistics. Liquid plasma is inexpensive but requires validated refrigeration. Freeze-dried plasma removes the cold chain entirely but costs roughly eight to twenty times more per unit and requires field reconstitution.

Product	Published cost per unit	Storage	Shelf life	Field preparation
Liquid plasma	US\$40–100 (Johns Hopkins 2025). Region 7 supplier quote: \$60–70.	Refrigerated, 1–6°C	26 days	None — spike and run
Freeze-dried plasma	US\$500–800 (Canadian Armed Forces review 2025); US\$700–1,500 (Johns Hopkins 2025). No public US price for the newly licensed product. [Obtain manufacturer quote.]	Room temperature	Approx. 2 years	Reconstitution per manufacturer IFU

Which trade is correct depends on the agency. A squad with a validated refrigerator and reliable turnover should carry liquid plasma. A remote volunteer unit that cannot maintain and monitor a refrigerator may find freeze-dried plasma the only workable option despite the price, particularly where a rotation agreement with a regional health system limits wastage exposure.

We would ask the Committee to authorize the skill and let each agency and its OMD select the product. Tying a scope authority to a specific product would require the Committee to revisit it every time the market moves — and the market is moving, with the first freeze-dried plasma product licensed for civilian use in the United States approved in July 2026.

5. Risk Profile and Where Each Risk Is Controlled

Plasma is the higher-risk component category and we want to be direct about that. TRALI remains among the leading causes of transfusion-associated death in the United States, and plasma-containing components historically drove those fatalities. ABO compatibility for plasma is inverted relative to red cells, which is a genuine cognitive hazard for clinicians whose mental model was built around whole blood.

The argument is not that these risks are small. It is that nearly all of them are controlled upstream of the ambulance — at donor selection, product specification, and transfusion service level — rather than by clinician judgment at the bedside.

Risk	Primary point of control	Residual field responsibility
TRALI	Blood center donor policy. AABB requires plasma-containing components from male, never-pregnant female, or HLA-antibody-tested donors. Post-mitigation incidence fell from roughly 1:51,000–65,000 to 1:250,000–317,000 units.	Recognize acute hypoxemia within 6 hours, stop the infusion, support oxygenation and ventilation, notify the receiving facility.
ABO-incompatible plasma	Product specification. Group A with low anti-B titer, or group AB. A single universal product is carried; the clinician never selects an ABO group.	Two-person verification that the unit issued matches the unit hung. No compatibility decision is made in the field.
TACO	Protocol-fixed volume and defined infusion approach.	Monitor for dyspnea and rising work of breathing; stop and reassess.
Allergic / anaphylactic reaction	Not preventable at product level; low incidence.	Already within the AEMT scope — stop the infusion, administer epinephrine and adjuncts per existing protocol.
TA-GVHD (theoretical; never-frozen LP only)	Blood center irradiation policy where indicated. Not considered clinically relevant in the massively bleeding population.	None. Delayed phenomenon; no field action.
Storage failure / product integrity	Regional transfusion service: validated refrigeration and monitoring for LP; seal and cake integrity checks for FDP; unit rotation and recall.	Confirm temperature indicator or vial integrity before administration, per checklist.

Product specification

Plasma carried under this protocol shall be group A with a low anti-B titer, or group AB, sourced from low-TRALI-risk donors — male, never-pregnant female, or HLA-antibody tested. This is not a local preference: it reflects the specification used in PAMPer and the labeling of the FDA-licensed freeze-dried product. Rh type is not applicable to plasma.

Note on Rh policy for whole blood

Where an agency carries low-titer O whole blood alongside or instead of plasma, Region 7 practice is O-positive for all patients, including females of childbearing potential. This is consistent with prevailing prehospital and trauma practice nationally. The rationale is that the intervention is triggered by recognition of life-threatening hemorrhage, that D-alloimmunization risk in this population is low, and that Rh-negative supply cannot support prehospital programs at scale. We state the policy explicitly rather than leave it implied, because the Committee should be able to see that it was decided rather than defaulted.

6. Indications

Included

Activation requires a hemodynamic trigger — shock index ≥ 1.0 or SBP < 90 mmHg — paired with an identified hemorrhagic source:

1. Traumatic hemorrhage: blunt or penetrating injury with suspected internal bleeding or massive external hemorrhage.
2. Non-traumatic hemorrhage: witnessed massive hematemesis or frank melena, suspected ruptured abdominal aortic aneurysm, or severe obstetric or postpartum hemorrhage.

Traumatic brain injury is captured where the patient independently meets the activation criteria. It is not a separate indication.

One point we would flag for the Committee's judgment rather than argue: witnessed hematemesis and postpartum hemorrhage are observable findings, but suspected ruptured aortic aneurysm requires the clinician to reason toward a diagnosis. The Committee may reasonably conclude that indication belongs at the Paramedic level even if the others do not.

Expressly excluded

Plasma has been discussed in connection with burns, sepsis, and endothelial glycocalyx protection. Those mechanisms are of genuine scientific interest and are not part of this request — now or as a staged expansion.

AABB's Choosing Wisely guidance states that plasma should not be transfused to correct coagulopathy in non-bleeding patients. AABB's plasma guidelines could not recommend plasma outside massive transfusion and warfarin-related intracranial hemorrhage. Surviving Sepsis guidance advises against plasma to correct laboratory coagulation abnormalities absent active bleeding or a planned procedure. We do not propose a non-hemorrhagic indication.

7. Evidence Base

- PAMPer (NEJM 2018): prehospital thawed plasma during air medical transport was safe and produced lower 30-day mortality than standard care (23.2% vs 33.0%).
- COMBAT (Lancet 2018): no mortality benefit in a short-transport urban ground system, with a comparable safety profile.
- Pusateri et al. (JAMA Surgery 2020), combined post hoc analysis of 626 patients: benefit concentrated at transport times exceeding 20 minutes; no serious adverse events associated with prehospital plasma.
- Gruen et al. (JAMA Network Open 2020): among severely injured patients with TBI at risk for hemorrhagic shock, prehospital plasma was associated with 45% lower adjusted mortality risk.
- J Trauma Acute Care Surg (online April 20, 2026), ACS-TQIP analysis of 6,183 patients with traumatic intracranial hemorrhage: 45% lower hazard of 30-day death for patients transfused versus not yet transfused at the same time point (aHR 0.55; 95% CI 0.33–0.92; $p = 0.02$), with an inflection at approximately 10 minutes from ED arrival beyond which predicted survival fell with each additional minute. Cited for the time gradient, not as a TBI indication.
- Prehospital Evidence-Based Practice Program rapid review (Air Medical Journal 2025): across 22 studies reporting mortality, none reported a negative mortality impact from prehospital plasma.
- Rajesh et al. (Transfusion 2025): advocates EMS adoption of liquid plasma where whole blood is not feasible, on shelf life, availability, and cost.
- Feuerstein et al. (Vox Sanguinis 2020) and subsequent reviews: freeze-dried plasma demonstrates coagulation performance comparable to fresh frozen plasma, with more than 25 years of European military and civilian EMS use.

Limitations we would state plainly in any full proposal: no randomized trial has evaluated liquid plasma specifically as the prehospital product; no trial has evaluated administration by non-paramedic clinicians; the 2026 timing analysis is retrospective and measures from ED arrival rather than EMS contact; and a 2024 TQIP analysis of 63,918 patients with moderate-to-severe TBI found no adjusted mortality effect of plasma overall, with benefit apparent only where hemorrhage was present — a finding consistent with the activation gate proposed here.

8. A Proposed Path

The Scope of Practice document already contains a suitable mechanism: sponsors of pilot projects, demonstration projects, or non-IRB research are asked to present proposals to the Medical Direction Committee for review and approval prior to implementation. We believe that pathway, rather than an immediate permanent scope change, is the right vehicle.

We would also note that the Scope of Practice document represents practice maximums. Any change of this type would permit and never require, and each Operational Medical Director would retain full authority to decline to authorize the skill.

Phase	Objective	Indicative timing	Decision gate
Phase 1	Committee discussion and framing. MDC identifies the questions it needs answered and the specialties it wants at the table.	This meeting and the next	MDC direction on scope of the question and composition of a work group.
Phase 2	Work group refines the attached protocol and competency standard, and develops the training curriculum, QA package, 50-state scope survey, and supplier letter of commitment.	[6–12 months]	Work group product returned to MDC.
Phase 3	Time-limited demonstration project under the MDC pilot pathway at a defined number of agencies, with 100% case review and reporting at set intervals.	[24 months]	Interim and final reports; MDC decision to extend, modify, or terminate.
Phase 4	If supported, MDC considers a permanent line-item addition to the Scope of Practice — Procedures for EMS Personnel.	Following Phase 3	MDC vote on permanent scope change.

9. Questions for the Committee

We would value the Committee’s direction on the following, and expect it will raise questions we have not anticipated.

1. Is the Committee willing to consider an indication-specific exception at the AEMT and Intermediate levels, or does it view initiation of any blood product as categorically a Paramedic-level function?
2. Should the EMT-Intermediate question (maintain to initiate) be separated from the AEMT question (no current authority to initiate), given that they are materially different increments?
3. Should authorization be by standing order, or should online medical control contact be required? We have drafted it as notification rather than authorization, on the grounds that the rural corridors in question have unreliable radio and cellular coverage and that the evidence base is a time gradient. We recognize the Committee may see this differently.
4. What weight would the Committee place on the absence of any other state authorizing initiation below the Paramedic level?
5. What training and credentialing standard would be adequate, and should it be uniform statewide or delegated to OMD credentialing with a defined minimum?
6. Does the Committee agree that product selection should rest with the agency and its OMD rather than being fixed in the scope authority?

7. Who should the Committee designate to a work group? We would suggest transfusion medicine, trauma surgery, rural and volunteer EMS operations, OEMS staff, the paramedic community, and a participating blood supplier.
8. Are there conditions under which the Committee would consider this question closed, so that we do not consume Committee time on a proposal that cannot succeed?

10. What Region 7 Brings

- A regional prehospital blood program in its fourth year, with [insert count] transfusions performed across [insert number] jurisdictions.
- An operational document set in daily use: regional transfusion SOG, administration protocols and checklists, cooler packing and conditioning procedures, and a triplicate transfusion record.
- Every transfusion reviewed within 72 hours through a three-tier structure — agency, regional, and Regional Trauma Advisory Committee.
- An in-progress AABB Transfusion Administration Service accreditation build under POHTA standards, including validated refrigeration, continuous temperature monitoring, cooler validation, unit recall and rotation, and supplier and receiving-hospital agreements.
- Peer-reviewed output, including a 96-patient study showing 75% 24-hour survival with no difference between Level I and Level III receiving centers, and a calcium study that drove regional adoption of a TXA and calcium bundle.
- **A centralized regional transfusion service.** This is the practical answer to the objection that rural agencies cannot individually become blood banks. Under this model they do not need to — the Council holds the transfusion service function and the agency holds the cooler.

11. Known Gaps

We would rather surface these ourselves than have them surface later.

1. No precedent. We have been unable to identify a state authorizing initiation of blood or blood products below the Paramedic level. Virginia would be first. A formal 50-state survey should be part of any work group product.
2. No trial evidence for administration by non-paramedic clinicians, and none for liquid plasma specifically as the prehospital product.
3. Supply is unconfirmed in writing. A letter of commitment from a blood supplier should precede any demonstration project. [Status of discussions: insert.]
4. Funding is unresolved. Neither product is reimbursed reliably, and freeze-dried plasma in particular will require an identified funding source before a rural agency can carry it.
5. Professional concerns from the paramedic community are legitimate and should be heard directly rather than managed around.

PART 2 — DRAFT REGIONAL PROTOCOL 7-401

Draft for Committee review. Not in effect. Applicable to Paramedic and, pending approval, credentialed AEMT and EMT-Intermediate under demonstration status.

I. Activation Criteria

Both a hemodynamic trigger and an identified hemorrhagic source are required.

- **Hemodynamic trigger:** shock index ($HR \div SBP$) ≥ 1.0 , or SBP < 90 mmHg.
- **Hemorrhagic source:** traumatic hemorrhage; or witnessed massive hematemesis or frank melena; or suspected ruptured abdominal aortic aneurysm; or severe obstetric or postpartum hemorrhage.

II. Contraindications

- Shock clearly attributable to a non-hemorrhagic cause — cardiogenic, septic, or obstructive — without concurrent hemorrhage.
- Findings indicating volume overload or pump failure: bilateral rales, jugular venous distension, or pink frothy sputum, in the absence of identified hemorrhage.
- Documented patient refusal, or a valid objection to transfusion on record.

Note: an allergic reaction in progress is not an absolute bar to transfusing an exsanguinating patient. Treat the reaction, contact medical control, and document. It is listed here as a caution rather than an exclusion.

III. Operational Sequence

3. Initiate transport. Product preparation occurs en route. Never delay scene departure to prepare product.
4. Request paramedic intercept if one can be obtained without slowing transport. An intercept is not a precondition for transfusion — if waiting for a paramedic would delay the transfusion, transfuse.
5. Notify online medical control or the receiving facility of intent to transfuse. This is notification, not authorization. Transfusion is not delayed pending successful contact.
6. Verify the unit against the transfusion record: product identity, ABO group, expiration, integrity. Second-person verification where a second provider is available.
7. Prepare the product. Liquid plasma: confirm the temperature indicator and spike. Freeze-dried plasma: reconstitute strictly in accordance with the manufacturer instructions for use, including agitation technique, reconstitution time, acceptance criteria for the reconstituted solution, and maximum hold time after reconstitution.
8. Administer through an administration set with an integrated 170 to 260 micron blood filter, primed so the filter mesh is fully submerged. Use a fluid warmer where available.

9. Maintain a dedicated line. Region 7 practice is 0.9% normal saline as the companion fluid, for consistency and simplicity rather than on the basis that other crystalloids are demonstrably unsafe.

IV. Monitoring, Reaction Response, and Documentation

- Record vitals and shock index immediately prior to spike, every 5 minutes during infusion, and at handoff.
- On any sign of transfusion reaction — urticaria, bronchospasm, fever, rigors, unexplained hypotension, or acute hypoxemia — stop the infusion immediately, maintain the line with normal saline, treat symptomatically per existing protocol, and notify the receiving facility.
- **Retain the unit, the administration set, and the transfusion record and deliver them to the receiving facility.** These are required for reaction investigation and cannot be discarded.
- Submit the ePCR and the Region 7 Transfusion Deployment Form within 24 hours. All cases undergo OMD review within 72 hours.

PART 3 — AEMT COMPETENCY CHECK-OFF

Draft standard for Committee review.

Provider: _____ Certification #: _____

Agency: _____ Date: _____

#	Skill and operational action	Critical guardrail
1	Verifies activation criteria: calculates shock index ≥ 1.0 or confirms SBP < 90 mmHg, and identifies a hemorrhagic source consistent with protocol inclusion.	Both a hemodynamic trigger and a hemorrhagic source are required. Neither alone activates.
2	Screens exclusions: confirms the patient does not meet any listed contraindication.	CRITICAL: an unscreened exclusion is an automatic fail.
3	Initiates transport without delay; requests paramedic intercept if one can be obtained without slowing transport.	Product preparation occurs en route. Never delay scene departure.
4	Notifies online medical control or the receiving facility of intent to transfuse.	Notification, not authorization. Transfusion is not delayed pending contact.
5	Inspects the unit: verifies product identity, ABO group, expiration, and integrity against the transfusion record.	CRITICAL: any discrepancy between record and unit stops the process.
6	Second-person verification of unit against record and patient, where a second provider is present.	Verbalizes the check aloud.
7	Prepares the product. Liquid plasma: confirm temperature indicator. FDP: reconstitute strictly per the manufacturer instructions for use.	CRITICAL: reconstitution technique, timing, and post-reconstitution hold time follow the package insert, not local practice.
8	Visual quality check of the product against light for discoloration, clumping, or particulate.	CRITICAL: an abnormal-appearing unit is discarded, not administered.
9	Assembles administration set with an integrated 170–260 micron filter; primes so the filter mesh is fully submerged.	CRITICAL: standard IV tubing without a blood filter is an automatic fail.
10	Initiates infusion through an established IV ($\geq 18G$ preferred) or IO line; uses a fluid warmer where available.	Monitors the site for infiltration throughout.
11	Monitors and documents vitals and shock index before spike, every 5 minutes during infusion, and at handoff.	Verbalizes the recognition and response sequence for a transfusion reaction.
12	States the reaction response: stop the infusion, maintain the line with normal saline, treat symptomatically, notify the receiving facility, and retain the unit and tubing.	CRITICAL: the unit and set must be retained and delivered for investigation.

Evaluator notes / remediation:

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☐ PASSED ☐ REQUIRES RE-TEST

Candidate signature: _____ Evaluator signature:

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