



The Pentagon Papers: The Most Important EMS Trauma Publications of 2025- 2026

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Corey Slovis, MD



5 Topics

- Whole blood
- TXA
- Traumatic brain injury
- Clinical volume
- Cervical collars



Prehospital Whole Blood

- Prehospital resuscitation with type O whole blood for trauma and hemorrhage
 - Sperry et al (TOWAR study group)
 - N Engl J Med, May 18, 2026
 - Pragmatic, multicenter, phase 3, cluster-randomized trial
 - 1020 patients
 - 715 whole blood
 - 305 components
 - Whole blood did not result in lower 30-day mortality



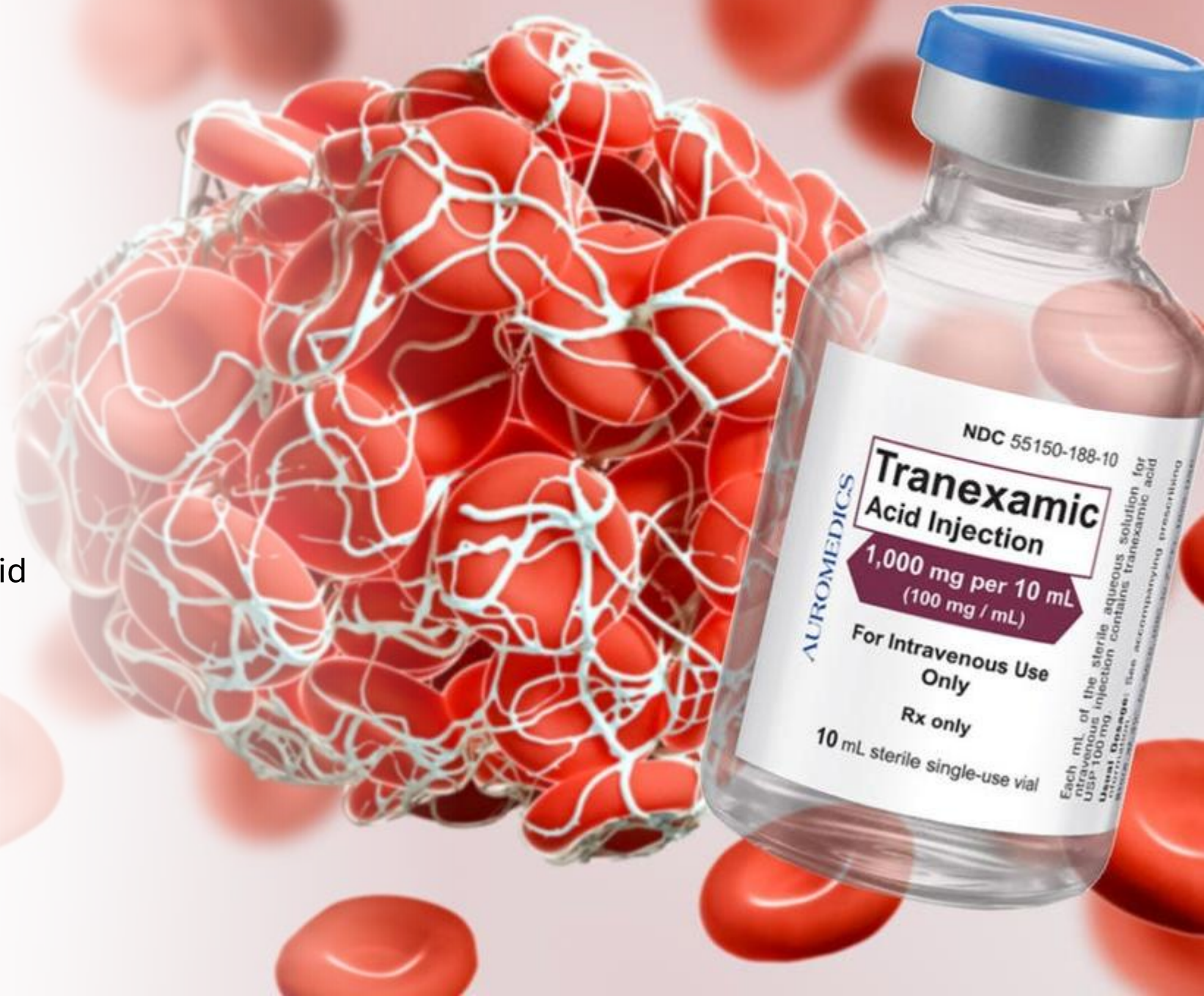
Prehospital Whole Blood

- Take aways
 - Results are not surprising
 - Primary outcome was mortality
 - Influenced by many factors beyond transfusion strategy alone
 - Intervention dose was relatively small
 - Most patients received 1-2 units
 - Crossover contamination between arms
 - Operationally superior?
 - Better than crystalloids!



TXA

- Tranexamic acid timing and mortality impact after trauma
 - Ali et al
 - Ann Emerg Med, 2026
 - Exploratory analysis of the Prehospital Tranexamic Acid for Severe Trauma (PATCH-Trauma) trial
 - 1287 patients
 - 635 placebo, 652 TXA
 - Optimal window may be within 90 minutes



TXA in Trauma

- Tranexamic acid in trauma: a joint position statement and resource document with NAEMSP, ACEP, and ACS-COT
 - Barrett et al
 - Ann Emerg Med, 2025
 - May reduce mortality and improve outcomes in patients with hemorrhagic shock
 - Safe, with low risk for adverse events
 - Can be given as 1 gram and 1 gram, or a 2-gram slow push



Traumatic Brain Injury

- Prehospital postintubation hypotension and survival in severe traumatic brain injury
 - Price et al
 - JAMA Open Network, 2025
 - Multicenter, retrospective, observational cohort study
 - 555 patients
 - When adjusted for confounders, prehospital postintubation hypotension was associated with increased 30-day mortality and significantly higher odds of death



Clinical Volume

- Emergency medical individual clinician volume and mortality in trauma patients
 - Beiriger et al
 - JAMA Surg, 2026
 - Secondary subset analysis of the Linking Investigation in Trauma and Emergency Services (LITES) study
 - Prospective observational cohort
 - 6769 patient-clinician interactions



Clinical Volume

- For every increase of 5 adult trauma patients annually per crew there was a 10% decrease in 6-hour mortality
 - 2.6% decrease in in-hospital mortality
- Conclusions
 - Higher patient volumes per EMS clinician were associated with lower early mortality rates after trauma



Spinal Motion Restriction

- Prehospital management of spinal cord injuries – A NAEMSP comprehensive review and analysis of the literature
 - Millin et al
 - Prehosp Emerg Care, 2025
 - 3944 manuscripts screened
 - 115 analyzed
 - 55 studies showed harm
 - 0 showed a benefit to spinal immobilization



Geriatric Trauma

- Designing prehospital care that is optimized for older adult patients: A critical opportunity to reduce harm
 - Haussner et al
 - Prehosp Emerg Care, 2025
 - EMS systems are designed in ways that may harm older adult patients
 - Assessment, interventions, and transport by EMS can substantially impact outcomes



Five Take Homes

- Whole blood is great
 - Components are great too
- TXA early
 - Best by EMS
 - Consider 2 grams
- We must avoid hypotension in TBI patients
- We do well what we do often
- Ditch the C-collar whenever you can
- We need to be better at caring for older patients



Thank You!

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