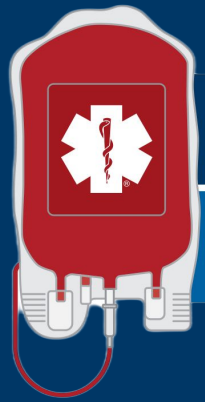


EMS Focus

PREHOSPITAL BLOOD TRANSFUSION IN PRACTICE

Establishing a Prehospital Blood Transfusion Program

NHTSA's Office of EMS

Tuesday, August 18, 2026

EMS Focus

PREHOSPITAL BLOOD TRANSFUSION IN PRACTICE

VARIETY OF TOPICS

Provides the EMS community with a unique opportunity to learn more about prehospital blood transfusion best practices.

EXPERIENCE

Brings federal, state and local leaders to you!

REGISTER

With opportunity for Q&A. Closed captioning is available.

FEEDBACK & QUESTIONS

nhtsa.ems@dot.gov

Upcoming Prehospital Blood Series Topics

SEP
22

Working with a Blood Supplier in Your Prehospital Blood Program
@ 1:00pm EST

Register →

OCT
28

Paying for Your Prehospital Blood Program
@ 1:00pm EST

Register →

NOV
17

Prehospital Blood Transfusion Policies, Protocols Guidelines & Training
@ 1:00pm EST

Register →

DEC
15

Prehospital Blood Transfusion: Tracking Success & Improvement
@ 1:00pm EST

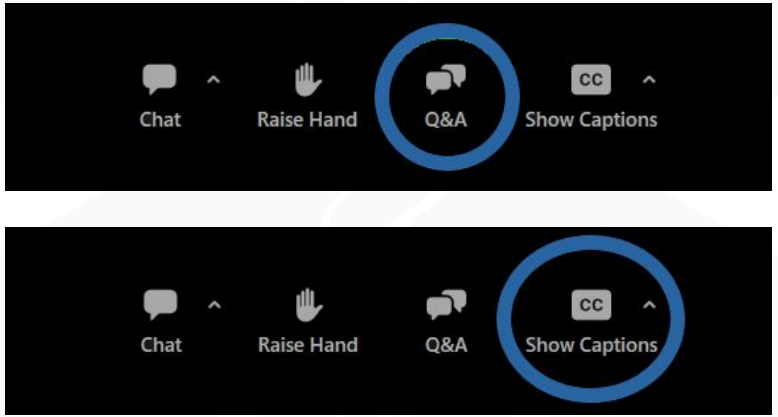
Register →

Scan to Register for Each Session in Series

Zoom Functions

This webinar will utilize two features in the Zoom Meeting controls.

- “Q&A” - Use this feature to submit your question virtually in a pop-up window/chat box
- “Show Captions” - Use this feature to turn on closed captions at any point during the webinar



NHTSA Office of EMS

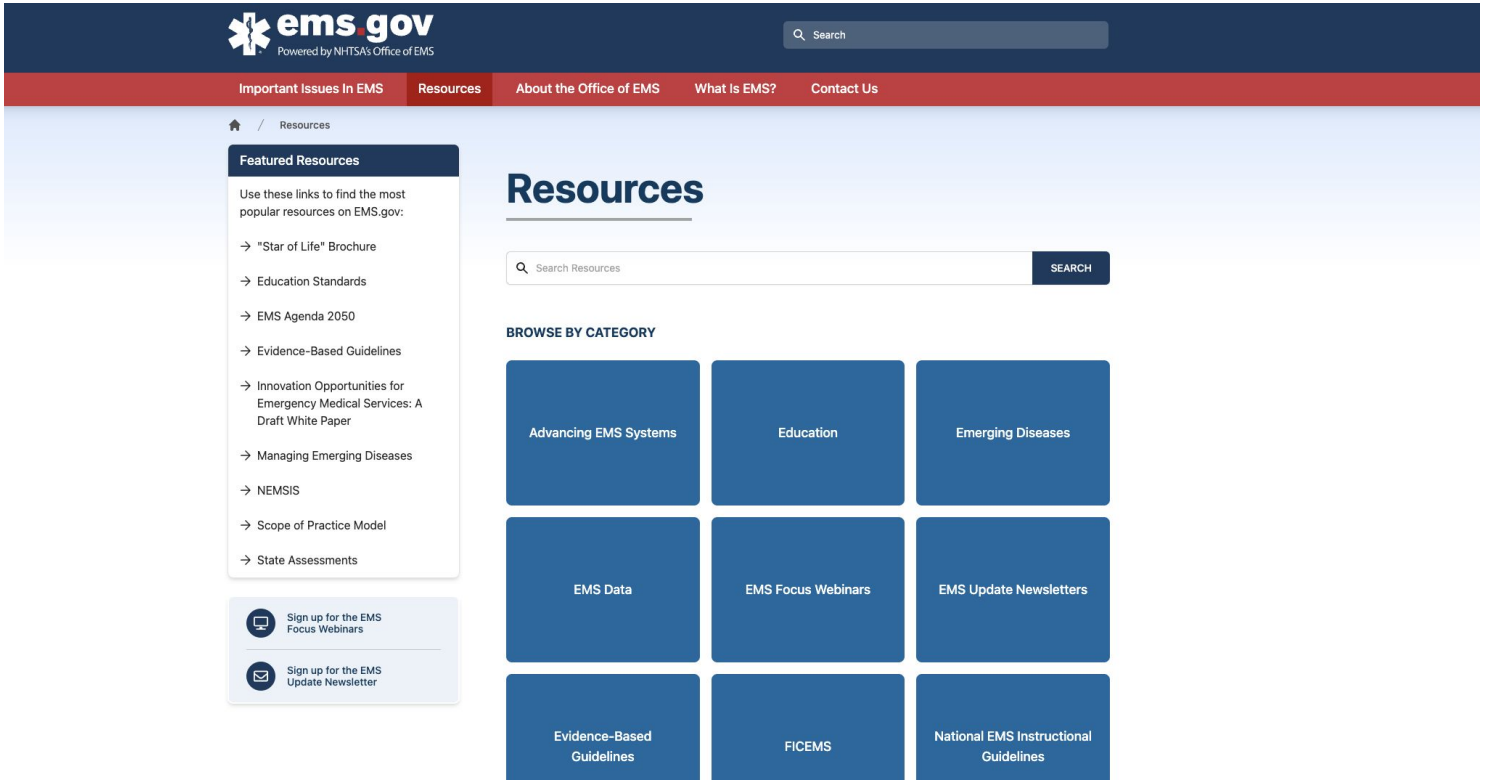
Mission

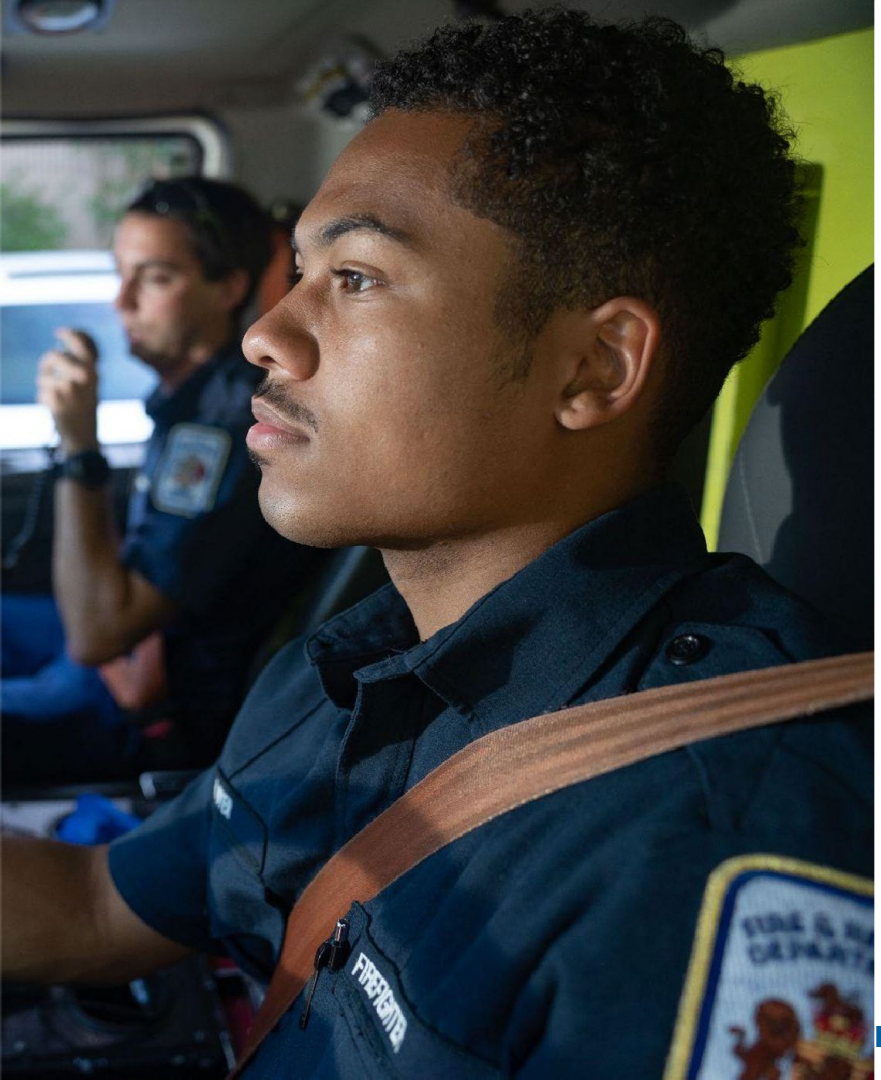
Reduce death & disability

Provide leadership & coordination to the EMS community

Assess, plan, develop & promote comprehensive, evidence-based emergency medical services & 911 systems

EMS.gov Resources





NATIONAL ROADWAY SAFETY STRATEGY 2026

"Prehospital blood transfusion programs coupled with 911 call-taking protocols are promising tools that support faster, more informed responses….DOT will improve public safety infrastructure and expand post-crash care to save lives."

- National Roadway Safety Strategy (NRSS)

EMS Focus: Establishing a Prehospital Blood Transfusion Program

Panelists

Randi Schaefer, DNP, RN, ACNS-BC
Army Lt. Col. (Ret.) | CEO
Schaefer Consulting

John Holcomb, MD
Army Col. (Ret.) | Professor
Division of Trauma and Acute Care Surgery
Department of Surgery, Heersink School of Medicine
University of Alabama Medical Center

Moderator

Gamunu Wijetunge
Director
Office of EMS, NHTSA

PREHOSPITAL BLOOD TRANSFUSION

A Lifesaving Solution for Trauma Patients

Severe bleeding is the primary cause of preventable fatalities in trauma patients.[1]

Time is critical. Death can occur in as little as five minutes when someone is bleeding.[2]

For every minute of delay in administering blood, the risk of death increases by 11%.[3]

PREHOSPITAL BLOOD COULD **SAVE**

37%

OF TRAUMA PATIENTS WITH SEVERE BLEEDING.[4]

THREE GOOD REASONS TO BUILD A PREHOSPITAL BLOOD TRANSFUSION PROGRAM

IMPROVED PATIENT OUTCOMES

Trauma patients who got whole blood were **four times more likely to survive** and required 60% less blood in overall transfusion.[5]

ENHANCED EMS CAPABILITIES

A prehospital blood transfusion program allows clinicians to more quickly and efficiently **meet the needs of complex trauma patients**.

FASTER PROGRESS TOWARD REDUCING ROADWAY FATALITIES

From 2013 to 2022, the number of traffic crashes in which someone died increased by 30%.[6] **A prehospital blood transfusion program can reduce deaths.**[7]

PREHOSPITAL BLOOD TRANSFUSION DATA & RESEARCH

Position Statements

Prehospital Hemorrhage Control and Treatment by Clinicians: A Joint Position Statement

Cherisse Berry, John M. Gallagher, Jeffrey M. Goodloe, Warren C. Dorlac, Jimm Dodd & Peter E. Fischer

Pages 544-551 | Received 22 Mar 2023, Accepted 22 Mar 2023, Published online: 20 Jun 2023

Cite this article | https://doi.org/10.1080/10903127.2023.2195487 | Check for updates

Open access — World Trauma Congress article

Trauma Surgery & Acute Care Open

Preferential whole blood transfusion during the early resuscitation period is associated with decreased mortality and transfusion requirements in traumatically injured patients

Daniel Lammers, Parker Hu, Omar Rokayak, Emily W Baird, Richard D Betzold, Zain Hashmi, Jeffrey David Kerby, Jan O Jansen, John B Holcomb

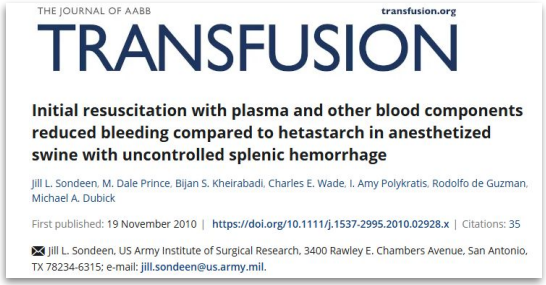
The University of Alabama at Birmingham, Birmingham, Alabama, USA

ABSTRACT

Introduction Whole blood (WB) transfusion represents a promising resuscitation strategy for trauma patients. However, a paucity of data surrounding the optimal

WHAT IS ALREADY KNOWN ON THIS TOPIC

⇒ The incorporation of whole blood into massive transfusion protocols has demonstrated



THE JOURNAL OF AABB — transfusion.org

TRANSFUSION

Initial resuscitation with plasma and other blood components reduced bleeding compared to hetastarch in anesthetized swine with uncontrolled splenic hemorrhage

Jill L. Sondeen, M. Dale Prince, Bijan S. Kheirabadi, Charles E. Wade, I. Amy Polykratis, Rodolfo de Guzman, Michael A. Dubick

First published: 19 November 2010 | https://doi.org/10.1111/j.1537-2995.2010.02928.x | Citations: 35

Jill L. Sondeen, US Army Institute of Surgical Research, 3400 Rawley E. Chambers Avenue, San Antonio, TX 78234-6315; e-mail: jill.sondeen@us.army.mil.

Open access — Original research

Trauma Surgery & Acute Care Open

Balanced resuscitation and earlier mortality end points: bayesian post hoc analysis of the PROPPR trial

Daniel Lammers,[1] Omar Rokayak,[1] Rindi Uhlich,[1] Thomas Sensing,[1] Emily Baird,[2] Joshua Richman,[2] John B Holcomb,[1] Jan Jansen[1]

[1]Division of Trauma and Acute Care Surgery, The University of Alabama at Birmingham Hospital, Birmingham, Alabama, USA; [2]Department of Surgery, University of Alabama at Birmingham, Birmingham, Alabama, USA

Correspondence to Dr Daniel Lammers; dllammer@gmail.com

Received 16 January 2023; Accepted 23 July 2023

ABSTRACT

Introduction The Pragmatic Randomized Optimal Platelet and Plasma Ratios (PROPPR) trial failed to demonstrate a mortality difference for hemorrhaging patients receiving a balanced (1:1:1) vs a 1:1:2 resuscitation at 24 hours and 30 days. Recent guidelines recommend earlier mortality end points for hemorrhage-control trials, and the use of contemporary statistical methods. The aim of this post hoc analysis of the PROPPR trial was to evaluate the impact of a balanced resuscitation strategy at early resuscitation time points using a Bayesian analytical framework.

Methods Bayesian hierarchical models were created to assess mortality differences at the 1, 3, 6, 12, 18, and 24 hours time points between study cohorts. Posterior probabilities and Bayes factors were calculated for each time point.

Results A 1:1:1 resuscitation displayed a 96%, 99%, 94%, 93%, 96%, and 94% probability for mortality

WHAT IS ALREADY KNOWN ON THIS TOPIC

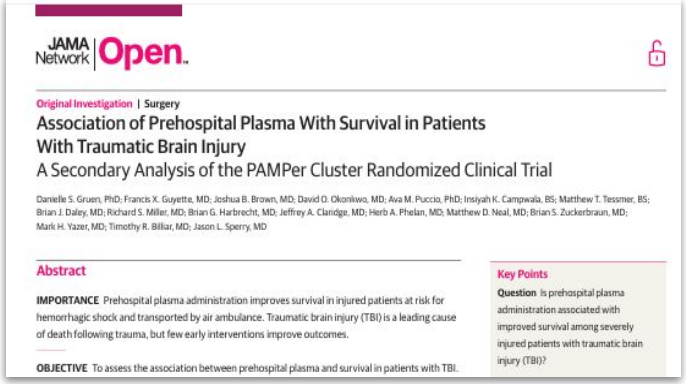
⇒ Despite the trial being the driving impetus for the adoption of a balanced transfusion strategy for trauma patients during the acute resuscitative period, the original trial failed to demonstrate a statistically significant mortality benefit at 24 hours and 30 days, the studies co-primary end points.

WHAT THIS STUDY ADDS

⇒ Subsequent guidelines suggest that earlier mortality end points should be used when assessing for death secondary to hemorrhage.

HOW THIS STUDY MIGHT AFFECT RESEARCH, PRACTICE OR POLICY

⇒ This study, which used a Bayesian approach, demonstrated that there was a high probability of mortality benefit associated with a 1:1:1 vs



JAMA Network Open.

Original Investigation | Surgery

Association of Prehospital Plasma With Survival in Patients With Traumatic Brain Injury

A Secondary Analysis of the PAMPer Cluster Randomized Clinical Trial

Danielle S. Gruen, PhD; Francis X. Guyette, MD; Joshua B. Brown, MD; David O. Okonkwo, MD; Ava M. Puccio, PhD; Insiyah K. Campwala, BS; Matthew T. Tessmer, BS; Brian J. Daley, MD; Richard S. Miller, MD; Brian G. Harbrecht, MD; Jeffrey A. Claridge, MD; Herb A. Phelan, MD; Matthew D. Neal, MD; Brian S. Zuckerbraun, MD; Mark H. Yazer, MD; Timothy R. Billiar, MD; Jason L. Sperry, MD

Abstract

IMPORTANCE Prehospital plasma administration improves survival in injured patients at risk for hemorrhagic shock and transported by air ambulance. Traumatic brain injury (TBI) is a leading cause of death following trauma, but few early interventions improve outcomes.

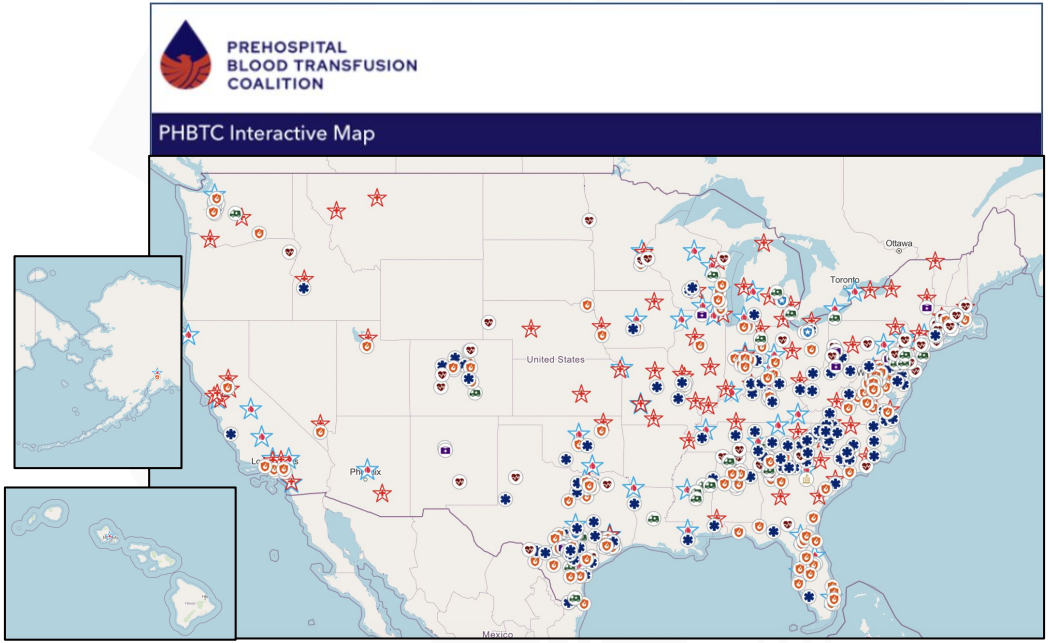
OBJECTIVE To assess the association between prehospital plasma and survival in patients with TBI.

Key Points

Question Is prehospital plasma administration associated with improved survival among severely injured patients with traumatic brain injury (TBI)?

TRACKING PREHOSPITAL BLOOD TRANSFUSION PROGRAMS

- More than 400 prehospital blood programs to-date
- Prehospital Blood Transfusion Coalition tracks programs nationally
- Visit prehospitaltransfusion.org to learn more



Prehospital Blood Coalition Map, July 2026

SIX ELEMENTS OF A PREHOSPITAL BLOOD TRANSFUSION PROGRAM

STAKEHOLDER COMMITTEE

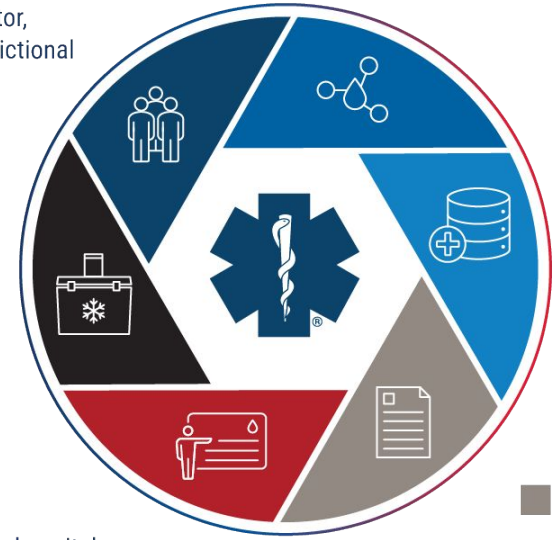
Community, regional and hospital blood banks, hospital administrators, EMS, state/local EMS medical director, trauma/ER personnel and state agencies with jurisdictional authority provide initial and ongoing input and feedback. They can assist in overcoming regulatory, administrative and logistical barriers.

EQUIPMENT

Vehicles carrying blood products must have blood-administration equipment and software for monitoring temperature-controlled coolers to maintain appropriate storage conditions.

EDUCATION & TRAINING

Sharing scientific literature regarding the value of prehospital blood transfusion in motor-vehicle crash patients and other trauma patients is critical, as is securing support for initial and ongoing competency-based training and program management.



BLOOD-SHARING NETWORK

Across the country, blood is often in short supply, and one crash patient can require many units of blood.[2] Working with hospitals and blood suppliers ensures adequate blood products are available to EMS, and agency-based blood drives can also increase supply.

DATA/CQI

Initial and ongoing data analysis on blood usage patterns, patient safety and outcomes, system efficiency, local/state gaps in blood availability, inventory levels, and transportation infrastructure tracks a program's effectiveness.

GUIDELINES

These include documented, locally compliant processes and criteria for clinician (paramedic) transfusion of prehospital blood; storage, packaging, transport, and resupply of blood; disposition of unused blood; billing and reimbursement; and patient handover from EMS to hospital staff.

HOW TO GET STARTED TODAY

Check with your regulatory agency about **EMS licensure requirements and scope of practice** to determine any changes that may be needed to allow paramedics and other EMS personnel to administer blood in the field.

Create a **list of stakeholders** who should be on your committee and reach out to each member to start a conversation.

Learn from EMS organizations with a prehospital blood transfusion program to find out how they did it.

SRFTAC State Resources

Browse state advocacy resources in one place.

Search by state name, abbreviation, or document type to open the latest advocacy packets, state sheets, and supporting resources available in the library.

FIND A STATE

Document Explorer

Search by state name or abbreviation

STATE	ABBREVIATION	AVAILABLE DOCUMENTS
Alabama	AL	2 documents
Advocacy Packet	PDF	Open
State Sheets	PDF	Open
Alaska	AK	2 documents
Arizona	AZ	2 documents

Visit SRFTAC.org

STUDENTS, RESIDENTS FELLOWS TRAUMA ADVOCACY COALITION

PREHOSPITAL BLOOD: A NATIONAL SAFETY PRIORITY IN ACTION

Pathways to Safer Streets (P2SS)

- Prehospital blood is named one of eight federal priorities in the Administrator's action plan—with new tools and resources to strengthen SHSO partnerships

HOW NHTSA IS SUPPORTING PREHOSPITAL BLOOD

Increasing national visibility of prehospital blood transfusion with public safety, highway safety and elected officials

Releasing resources (infographics, informational videos, use cases, etc.) communicating impact and best practices

Advancing **education, collaboration and best practice sharing across** EMS and 911

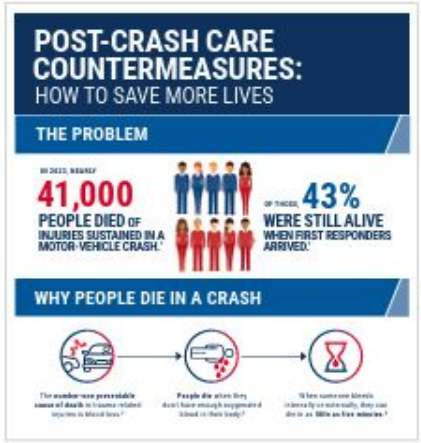
Providing **federal funding to support scalable** programs

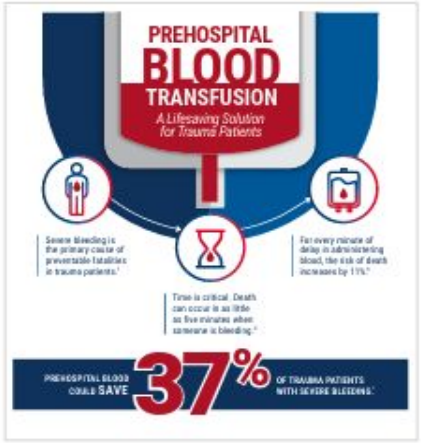
Partnering with national and regional stakeholders across the care continuum

Accelerating adoption over the next 3 years to advance one of the most transformative EMS interventions in a generation

ACCESS NEW RESOURCES TO:

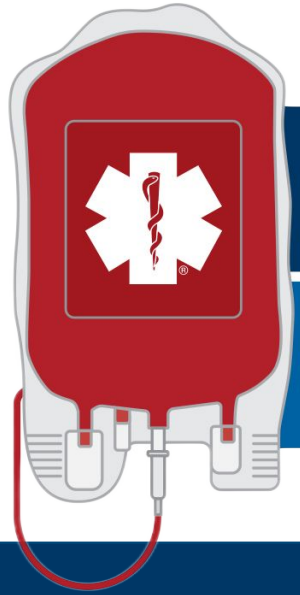
- Learn how 911 and public safety are improving highway safety and enhancing post-crash care to save more lives
- Explore ways these efforts are helping save lives





Q&A

Watch Previous Webinars:



EMS Focus

PREHOSPITAL BLOOD TRANSFUSION IN PRACTICE

ems.gov | NHTSA | 911.gov

THANK YOU!

Feedback & Questions

nhtsa.ems@dot.gov