EMS Focus A Collaborative Federal Webinar Series

NHTSA's Office of EMS Wednesday, March 19, 2025 at 2pm ET

Additional Grant Funding Available to EMS Agencies

EMS FOCUS WEBINAR



VARIETY OF TOPICS

Provides the EMS community with a unique opportunity to learn more about Federal EMS efforts and programs.



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





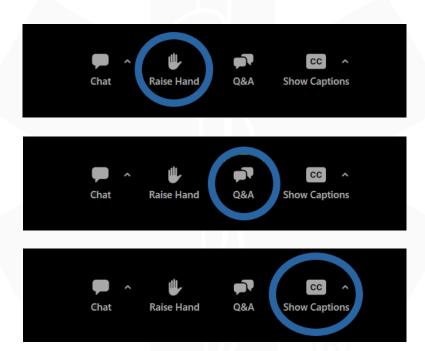




Zoom Functions

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

- "Raise Hand" Use this feature to ask your question live. You will be called upon and unmuted
- "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

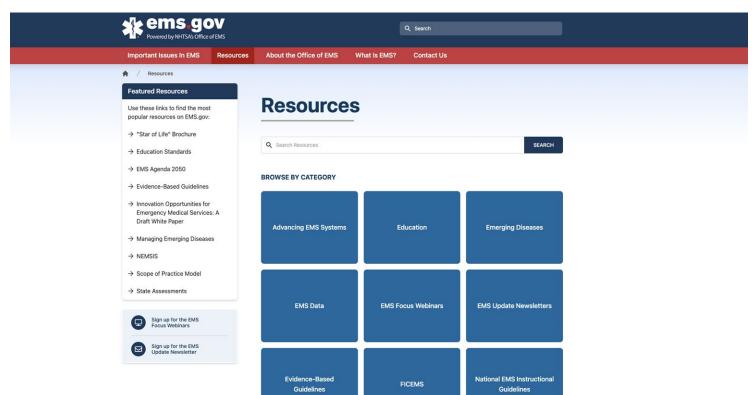


Provide leadership & coordination to the EMS community



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

EMS.gov Resources







Today's Agenda

Moderator

Max Sevareid, Emergency Medical Services Specialist, Office of EMS, NHTSA

Speakers

- Gam Wijetunge, Director, Office of EMS, National Highway Traffic Safety Administration
- Andrew Emanuele, Program Manager Safe Streets for All & the Reconnecting Communities Pilot Program, U.S. Department of Transportation
- Angie Byrne, Program Analyst, VOLPE Center, U.S. Department of Transportation
- Joshua Gaither, MD, FACEP, FAEMS, Chief, Division of EMS, Medical Director, Tucson Fire Department, Program Director, EMS Fellowship & Degree Programs, Professor of Emergency Medicine, University of Arizona College of Medicine

Safe System Approach





Seamless Care Improves Survival



911, Emergency Medical Dispatch, & Bystander Care

Timely On-Scene Care

Triage & Transport

Definitive Care at a Trauma Center

The Problem

40%
WERE ALIVE
WHEN FIRST RESPONDERS
ARRIVED, BUT LATER DIED³

FARS



42,939
PEOPLE DIED
IN TRAFFIC CRASHES
IN 2021²

Fatality Analysis Reporting System (FARS)



Why Prehospital Blood Transfusion is Important

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

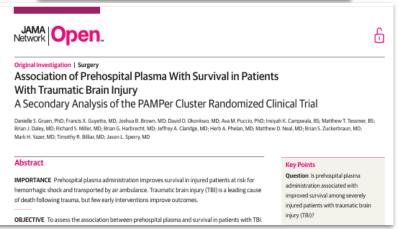


Prehospital Blood Transfusion Data & Research

Open access Original research Balanced resuscitation and earlier mortality end Trauma Surgery & Acute Care Open points: bayesian post hoc analysis of the PROPPR trial Daniel Lammers . 1 Omar Rokavak, 1 Rindi Uhlich, 1 Thomas Sensing, 1 Emily Baird, 2 Joshua Richman.2 John B Holcomb.1 Jan Jansen 001 ¹Division of Trauma and Acute WHAT IS ALREADY KNOWN ON THIS TOPIC Care Surgery, The University Introduction The Pragmatic Randomized Optimal of Alabama at Birmingham . ⇒ Despite the trial being the driving impetus Platelet and Plasma Ratios (PROPPR) trial failed to Hospital, Birmingham, Alabama, demonstrate a mortality difference for hemorrhaging for the adoption of a balanced transfusion patients receiving a balanced (1:1:1) vs a 1:1:2 strategy for trauma patients during the acute ³Department of Surgery, University of Alabama at resuscitation at 24 hours and 30 days. Recent guidelines resuscitative period, the original trial failed to Birmingham, Birmingham, recommend earlier mortality end points for hemorrhagedemonstrate a statistically significant mortality Alabama, USA benefit at 24 hours and 30 days, the studies control trials, and the use of contemporary statistical co-primary end points. methods. The aim of this post hoc analysis of the Correspondence to WHAT THIS STUDY ADDS PROPPR trial was to evaluate the impact of a balanced Dr Daniel Lammers: dtlammer@ resuscitation strategy at early resuscitation time points gmail.com → Subsequent guidelines suggest that earlier using a Bayesian analytical framework. mortality end points should be used when Received 16 January 2023 Methods Bayesian hierarchical models were created assessing for death secondary to hemorrhage. Accepted 23 July 2023 to assess mortality differences at the 1, 3, 6, 12, 18, and HOW THIS STUDY MIGHT AFFECT RESEARCH. 24 hours time points between study cohorts. Posterior PRACTICE OR POLICY probabilities and Bayes factors were calculated for each This study, which used a Bayesian approach. demonstrated that there was a high probability Results A 1:1:1 resuscitation displayed a 96%, 99%, of mortality benefit associated with a 1:1:1 vs 94% 97% 96% and 94% renhability for mortality

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 O, Parker Hu, Omar Rokayak, Emily W Baird O, Richard D Betzold, Zain Hashmi , Jeffrey David Kerby , Jan O Jansen , John B Holcomb The University of Alabama WHAT IS ALREADY KNOWN ON THIS TOPIC at Birmingham, Birmingham, Introduction Whole blood (WB) transfusion represents Alabama, USA → The incorporation of whole blood into massive a promising resuscitation strategy for trauma patients. However, a paucity of data surrounding the optimal transfusion protocols has demonstrated







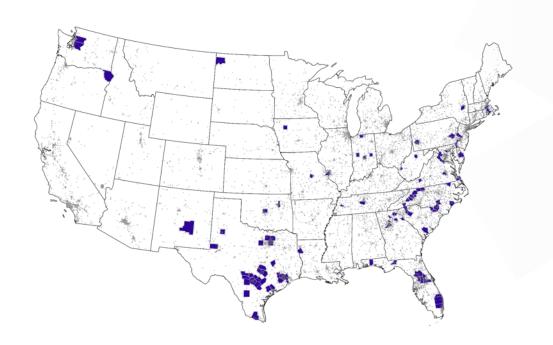


A Lifesaving Impact on Survival Rate





Fatalities Alive at Crash Scene (2022)

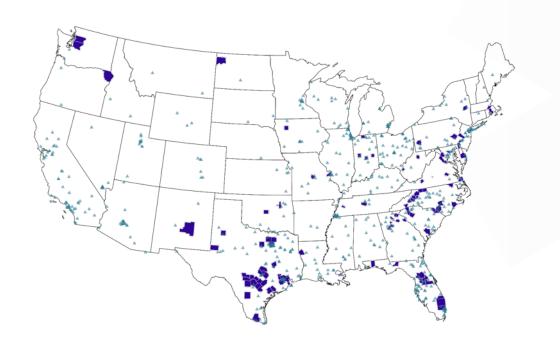


FARS Data

US Counties with EMS Blood Transfusion (2024)



Pediatric Fatalities Alive at Crash Scene (2022)



FARS Data

US Counties with EMS Blood Transfusion (2024)



Three 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

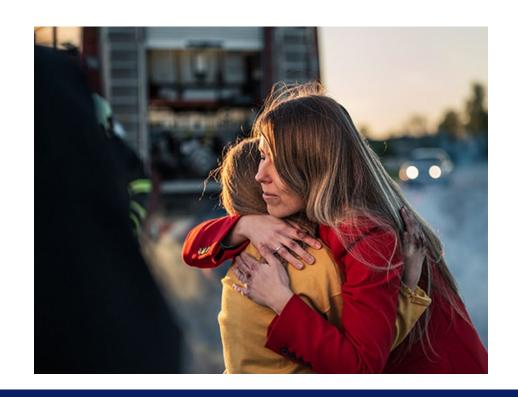
From 2013 to 2022, the number of traffic crashes in which someone died increased by 30%. A prehospital blood transfusion program can reduce deaths.⁶

Safe Streets and Roads for All (SS4A)



Safe Streets and Roads for All

- \$5 billion discretionary grant program, with -\$1 billion/year over 5 years
- Purpose: prevent deaths and serious injuries on our roadways
- Focus on comprehensive safety action planning and implementing those plans
- Inclusive of all types of roadway safety interventions across the Safe System Approach
- http://www.transportation.gov/S
 S4A



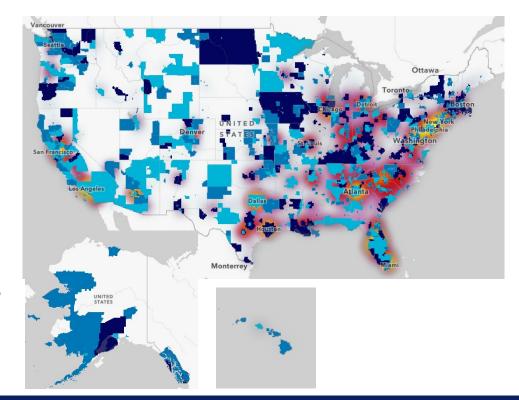
Safe Streets and Roads for All Funding to Date

FY24 Awards

- Over \$1.2 billion funding awarded for the FY24 cycle.
- 710 regional, local, and Tribal communities received awards.

FY22-24

- Over 1,800 awards made totaling \$3 billion.
- Awards made to date will improve roadway safety planning for over 75% of the nation's population.







About SS4A Grants

SS4A Overview: Applicant Eligibility

Eligible Recipients

- Regional organizations (e.g., MPO, COG)
- Political subdivision of a State
- Federally recognized Tribal government
- Multijurisdictional groups comprised of the above

Multijurisdictional Groups

- Metropolitan Planning Organization (MPO) or Regional Council of Governments (COG) are regional organizations, typically with federal grant experience, that support regional transportation planning efforts
- Many have been awarded SS4A grants to develop Action Plans, in coordination with the communities they represent
- They are often advocates for applying Safe System Approaches, including post-crash care

SS4A Overview: Eligible Activities

Eligible Activities

- Develop a Comprehensive Safety Action Plan
 - o Develop or complete an Action Plan
 - Conduct supplemental planning
 - o Carry out demonstration activities
- Planning, design, and development activities for projects and strategies identified in an Action Plan
- Implement projects and strategies identified in an Action Plan

Opportunities with Planning and Demonstration

- 40% of SS4A funding is required to be for Planning and Demonstration
- Developing Action Plans can help with getting non-SS4A funding at the local, state, regional, and federal level
 - Also helps guide local decision making
- Applications can include combinations of developing action plans, with assorted supplemental planning and/or demonstration activities

Any department/agency, or combination of departments/agencies, in a community can submit a single, consolidated grant application

Engineering, Planning, Public Health, Housing, Emergency Medical Services have all received grants to develop comprehensive, multi-modal Action Plans and conduct associated supplemental planning and demonstration activities for their communities



Planning and Demonstration Activities

Action Plan

- Develop, update, or complete a Comprehensive Safety Action Plan
- 8 components to an Action Plan

Supplemental Planning

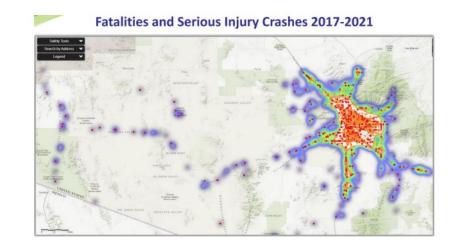
- Topical safety plans
- Road safety audits
- Additional safety analysis and data collection
- Follow-up stakeholder engagement
- Safe Routes to School plans

Demonstration Activities

- Feasibility studies using quick-build strategies
- Pilot programs for behavioral or operational activities
- Pilot programs for new technology
- Manual on Uniform Traffic Control Device (MUTCD) engineering studies

FY 2024 University of Arizona-\$7,483,382 (Urban)

- Demonstration program to pilot the "Physician 1" program, whose scope includes:
 - Whole Blood Transfusions
 - Advanced Airway Management
 - Emergency Anesthesia
 - Delivery of Advanced Medications
- Use a continuous quality improvement (CQI) process to monitor impact and inform updates to the Action Plan



FY 24 Charter Township of Long Lake (MI) and Wheeler County (OR)-\$2,400,000 each (Rural)

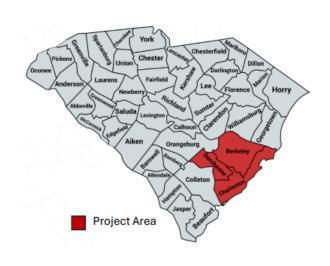
- Develop an Action Plan that includes Safer People, Safer Roads, Safer Speeds, Safer Vehicles, and Post-Crash Care
- Develop two supplemental plans: responder safety and additional postcrash care data analysis
- Three technology driven demonstration pilots





FY 24 Charleston County 911-\$1,292,615 (Urban)

- Full CAD-to-CAD (Computer Aided Dispatch) to address overlapping jurisdictional areas between the City of Charleston and the City of North Charleston and Berkeley and Dorchester Counties to improve emergency response times
- Update the Berkely, Charleston, Dorchester Council of Government (BCDCOG) Safety Action Plan



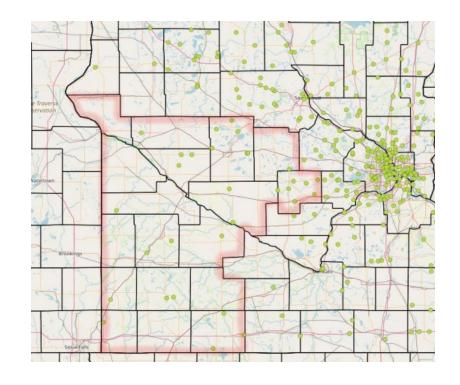
Implementation Grants

- Implementation Grants applications must fund projects and strategies identified in an Action Plan that address a roadway safety problem.
- Infrastructure, behavioral, and operational safety activities are all eligible.
- Applicants must have a qualifying Action Plan in place to apply for Implementation Grants.
- Implementation applications may also include supplemental planning and demonstration activities.



FY 24 Southwest MN EMS Corp-\$9,997,062 (Rural)

- Implement a regional tele-EMS system to expedite access to definitive trauma care after an injury causing crash
- Supports volunteer EMS
 agencies across 18 counties; 54
 agencies receive access to Avel
 eCare services to an area with
 no Level I or Level II Trauma
 Centers





Physician One Program

U.S. Department of Transportation (US DOT) & National Highway Traffic & Safety Administration (NHTSA) Demonstration Project





U.S. Department of Transportation SS4A Demonstration Grant

Question: Can a EMS physician resource improve outcomes for victims of highway traffic accidents?

Aim 1: Implement a physician staffed EMS resources available during peak call hours to respond to 911 calls.

Aim 2: Evaluate the impact of that resource on patients with major trauma sustained in roadway accidents.

Building on Existing Programs

- . Pima County:
 - . Existing Safety Action Plan highlighting:
 - . High rates of highway traffic injury and death
 - . Advances in medical care might be needed
- . EMS Physician One in operation since 2021
 - . Contracts between Banner-UA and EMS agencies
 - . More than 1000 field responses
 - . 911 responses



Special events: El Tour de Tucson, Starliner training, political rallies, etc.





Expansion of the Physician One Program

- . Improved capabilities
- Available during peak hours, 365 days a year.
- Deliver services across the Tucson Metropolitan Area







Who Are These Physicians

- . ABEM Certified in Emergency Medicine
- . ABEM Certified in Emergency Medical Services
- . Faculty at the University of Arizona
 - . Clinically active in a Level I Trauma Center
 - Teach in both and Emergency Medicine Residency and EMS Fellowship Program



Physician One: Program Structure

TFD

GRFD

NWFD

Program Evaluation Dr. Rice University of Arizona EMS Physician One MD001, MD002, MD003, MD004

Operational 0700-2100

Program Operations <u>D</u>r. Gaither

BUMG Physician

UofA - EMT & Paramedics



Emergency Response Partners

- . Oversight Board:
 - . TFD, NWFD, GRFD
 - . UA Public Safety
 - . UA Legal, UA Risk
- . Communications: City of Tucson & PCWIN contracted dispatch services
- . Banner Health: Physician Services & Blood Products
- . University EMS: EMS Provider Services





Initial Response Model

- Dispatched as a primary resource for high risk MVCs and other highway accidents (pedestrians struck)
- . Available on request of EMS crew
- . Self dispatch for select calls based on CAD notes





Initial Services - Medical Care

Advanced Assessment & Airway:

- · Video laryngoscopy, RSI
- . Ultrasound, EEG, iStat (VBG + lytes), invasive cardiac monitoring

Breathing:

- . Ventilator with advanced ventilation modes
- . Sedation to optimize ventilation or facilitate extrication

Circulation:

- . Blood Transfusion: whole blood or PRBCs + Plasma
- . Circulatory support with IV pressers (Norepi, Vaso)
- Advanced Procedures: thoracotomy (finger & open), amputation, a-line & central line placement

Disability

- . Antibiotics for open fractures and severe sepsis
- . Fracture mangement: sedation & reduction
- . Refrigerated storage: meds, fluids, etc.



Blood Product Management

- . 24 hr/day in vehicle
- . Hard wired cooler, likely APRU
- . Change out cooler every 3-5 days
- . Invoiced service





Timeline

- . Month 0-6: planning, equipment purchase and implementation
- . Month 6-12: Operational cycle 1
- . Year 1-5:
 - . 6 month operational cycles
 - . Program response model and resource revision each cycle
- . Year 5:
 - Reporting
 - . If successful seek to expand to an implementation project







Lessons Learned

Common Planning and Demonstration Grant Issues

- Action Plan proposed was not comprehensive in nature (e.g., it was just an engineering study)
- Action Plan proposed was limited to a specific area (e.g., corridor), audience (e.g., pedestrians), or it was an ineligible statewide plan (e.g., statewide EMS plan)
- Lack of connection between Action Plan and Supplemental Planning and/or Demonstration activities
- Scope went beyond a demonstration (pilot) in scale

Common Implementation Grant Issues

- Lack of connection made between the safety problems and proposed countermeasures.
 - Use FHWA, FTA, NHTSA and other resources for identifying effective countermeasures
- Lack of discussion of collaboration with other entities and lack of details about community engagement and outreach.
- Many Action Plans did not meet necessary SS4A requirements, such as being multi-modal and multi-disciplinary in nature



Webinars and Resources

SS4A NOFO Will Open Soon!



Action Plan Eligibility Review requests submitted by May 9, 2025 at 5:00 pm (EDT)

<u>Submit</u> technical questions by May 29, 2025 at 5:00 pm (EDT) to <u>ss4a@dot.gov</u>

Apply by June 26, 2025 at 5:00 pm (EDT)



Additional resources about SS4A and the NOFO can be found at

https://www.transportation.gov/grants/SS4A

Application Aids

 A series of checklists, planning worksheets, and fillable forms is available on the SS4A website and the Valid Eval application form to help guide applicants through the eligibility and application process.



. You can answer "YES" to at least four c

If both conditions are not met, an applicant is st creation of a new Action Plan or updates to an e

Please provide a hyperlink to any documents av uploaded in Valid Eval as part of your applicatio coverage must be broader than just a corridor,

Document Title

Applicant Information

Lead Applicant:

The Safe Streets and Roads for All (SS4A) discretionary grant program requires applicants to submit Standard Form (SF) 424 family forms to detail proposed funding, project, and lobbying information. The required forms are available via the application submission software platform, Valid Evaluation (Valid Eval). See Section D Application and Submission Information in the SS4A Notice of Funding Opportunity (NOFO) for complete application submission instructions. To assist in completing required SF forms, please consider these questions;

Standard Forms (SF)

Action Plan Documents please consider these questions: In the table below, list the relevant Action Plan

Overall Requirements

What Standard Forms (SF) are applicants required to submit?

Note that the OMB Number and Expiration Date for the correct form version are provided below. Please confirm that the forms that you use have the same information in the top right corner of the form

- Applications for Planning and Demonstration Grants must submit:
 - SF-424 Application for Federal Assistance
 - OMB Number: 4040-0004
 - Expiration Date: 11/30/2025
 - o SF-424A Budget Information for Non-Construction Programs
 - In FY 2024, Sections D and E on page 3 of this form are no longer required.

SS4A Website

www.transportation.gov/grants/SS4A



Q&A

Watch Previous Webinars:









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THANK YOU!

Feedback & Questions nhtsa.ems@dot.gov