

NATIONAL ACADEMIES *Sciences  
Engineering  
Medicine*

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# Prehospital Blood Programs Across The Nation



**PREHOSPITAL  
BLOOD TRANSFUSION  
COALITION**

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# Background

- I am a civilian prehospital blood advocate, so we don't forget the things we learned on the battlefield.
- Member: AABB Emergency Prehospital & Scheduled Out-of-Hospital Standards
- Member: NIDHC TEP



Deployment #1 (2005-2006)



Walking Blood Bank Donation (2005-2006)



Deployment #2 (2009-2010)



Deployment #3 (2016-2017)

# Prehospital Service Models

## Types of Prehospital Service Models in the US

### Fire-Based EMS



- Operated by Fire Department
- Firefighter/Paramedics
- Dual-role Response

### Third-Service EMS



- Municipal EMS Agency
- Dedicated EMTs/Paramedics
- Separate from fire and police

### Private EMS



- For-Profit or Nonprofit
- Contracted Services
- 911 & Transport

### Hospital-Based EMS



- Run by Hospital Systems
- Specialty Interfacility Transport
- 911 Response

### Volunteer EMS



- Community Volunteers
- Rural & Small Towns

### Air Medical Services



- Helicopter & Fixed-Wing
- Critical Care Transport
- Can be any combination of other servicemodels

### Key Differentiators



Public



Private



Career



911 vs Transport



Transport



Funding

Tax funding  
Billing/Donations



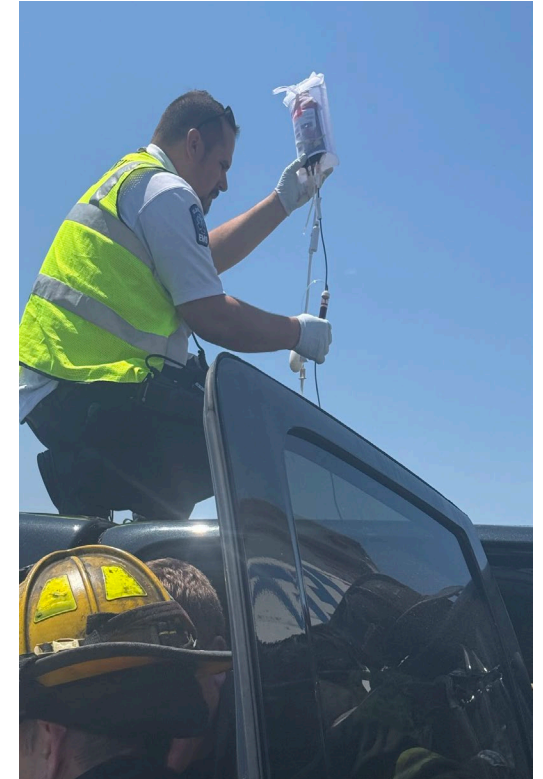
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# Other Types of Prehospital Models

- Other locations where blood may be used:
  - Law enforcement agencies
  - Tactical EMS teams
  - Wilderness medicine
  - Off-shore oil platforms
  - Massive gathering events
  - Urban Search and Rescue



Source: MSPAC Facebook



Source: Cleveland (OH) EMS

# Various Platforms

Depending on the operational setting, blood products may be carried on:

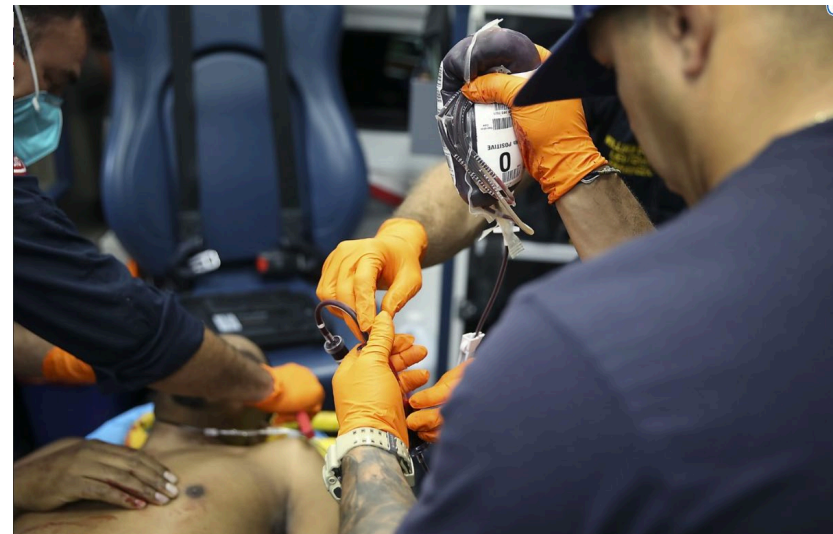
- Ambulances
- Supervisor Vehicles
- Helicopter or Fixed Wing EMS
- All terrain vehicles



Source: Mike Hayes, New Braunfels (TX) Fire Department



Source: Canton Fire Department, Massachusetts



Source: San Antonio Fire Department, Texas

# Who Can Transfuse Prehospital Blood?

**WHO IS AUTHORIZED TO PERFORM THE TRANSFUSION?**

**In ALL 50 STATES**  
**Physician or Registered Nurse**  
May "Initiate" and "Maintain" a Blood Transfusion

**Other Licensure Levels Vary by State**

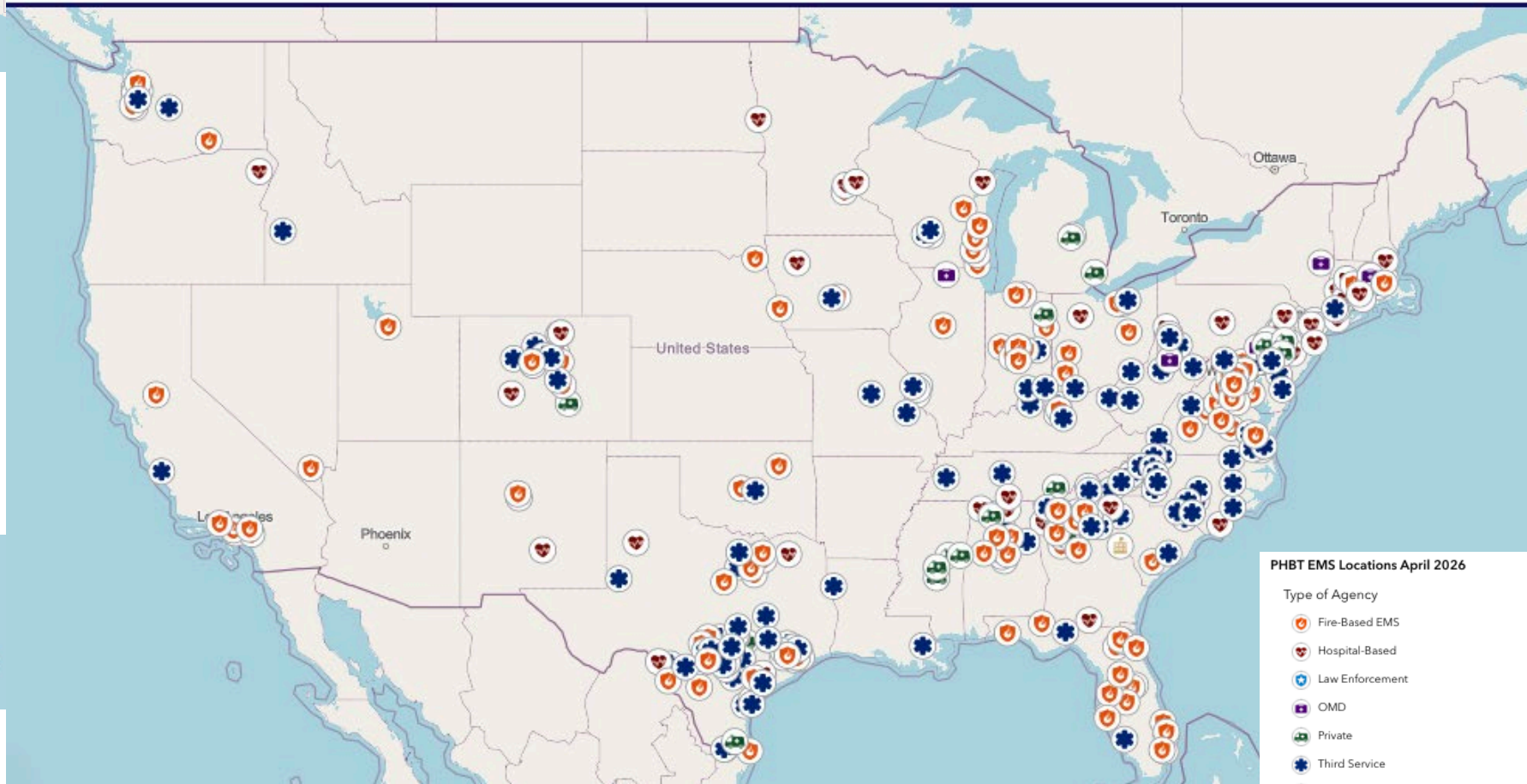
- Delegated Practice States EMS Medical Director Approval
- Waivers & Certifications in Other States
- May Require Legislative Changes

**REGULATIONS VARY**  
Check with Your Local & State Agencies

- Requirements Can Change
- Stay Up-to-Date

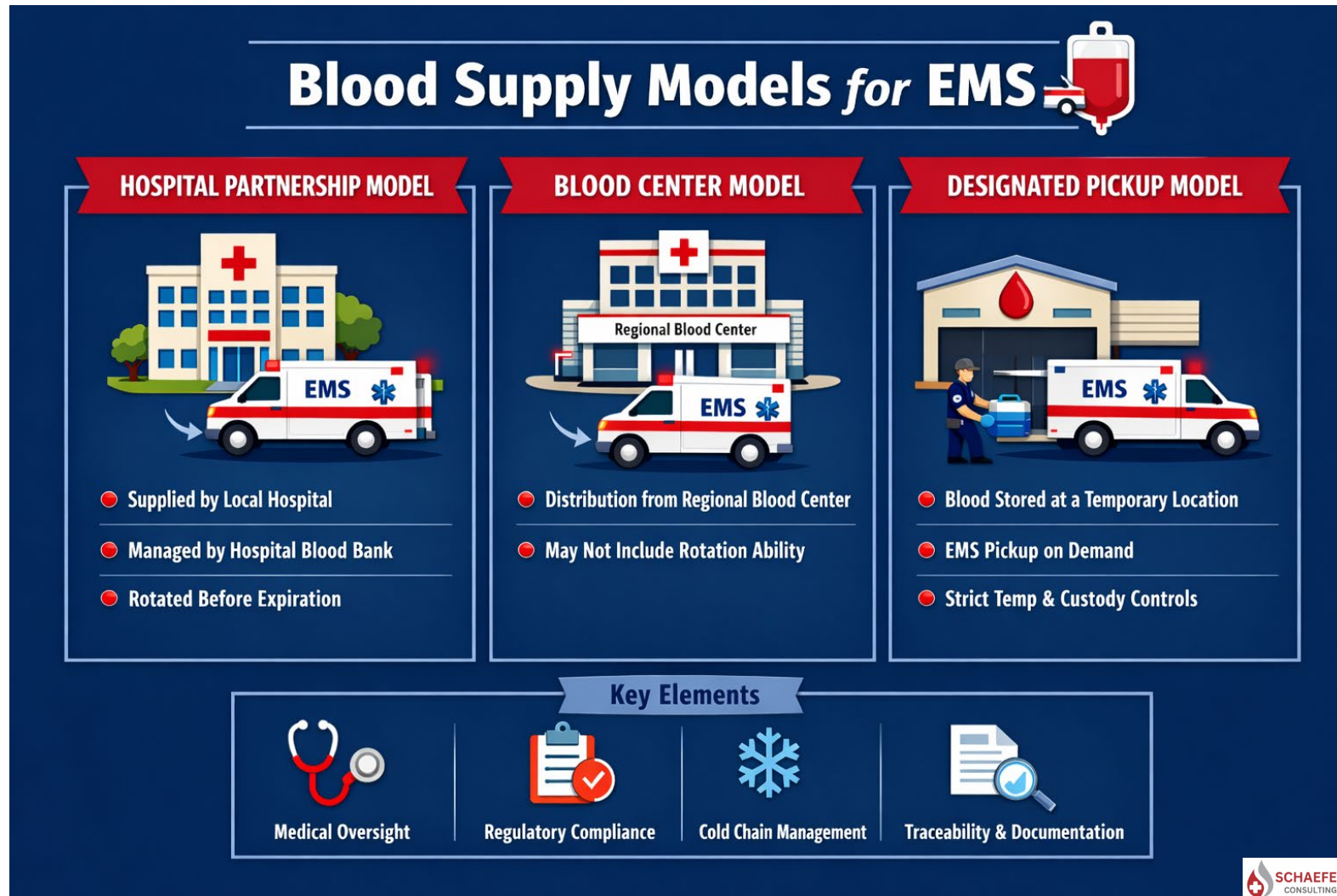
# Where Is It Being Done?

PHBTC Interactive EMS Map

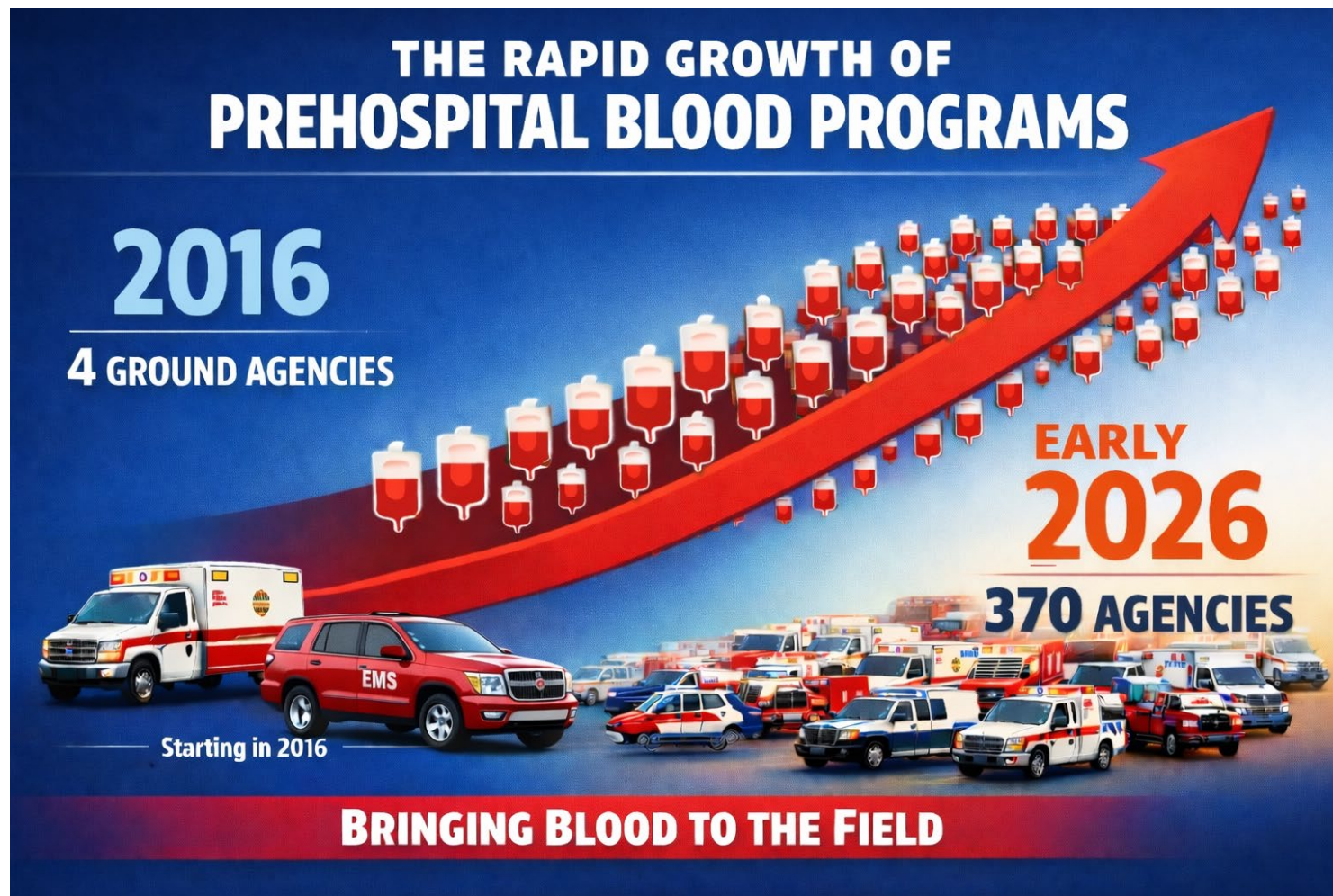


[Link to Map](#)

# Who Is Supplying The Blood Products?

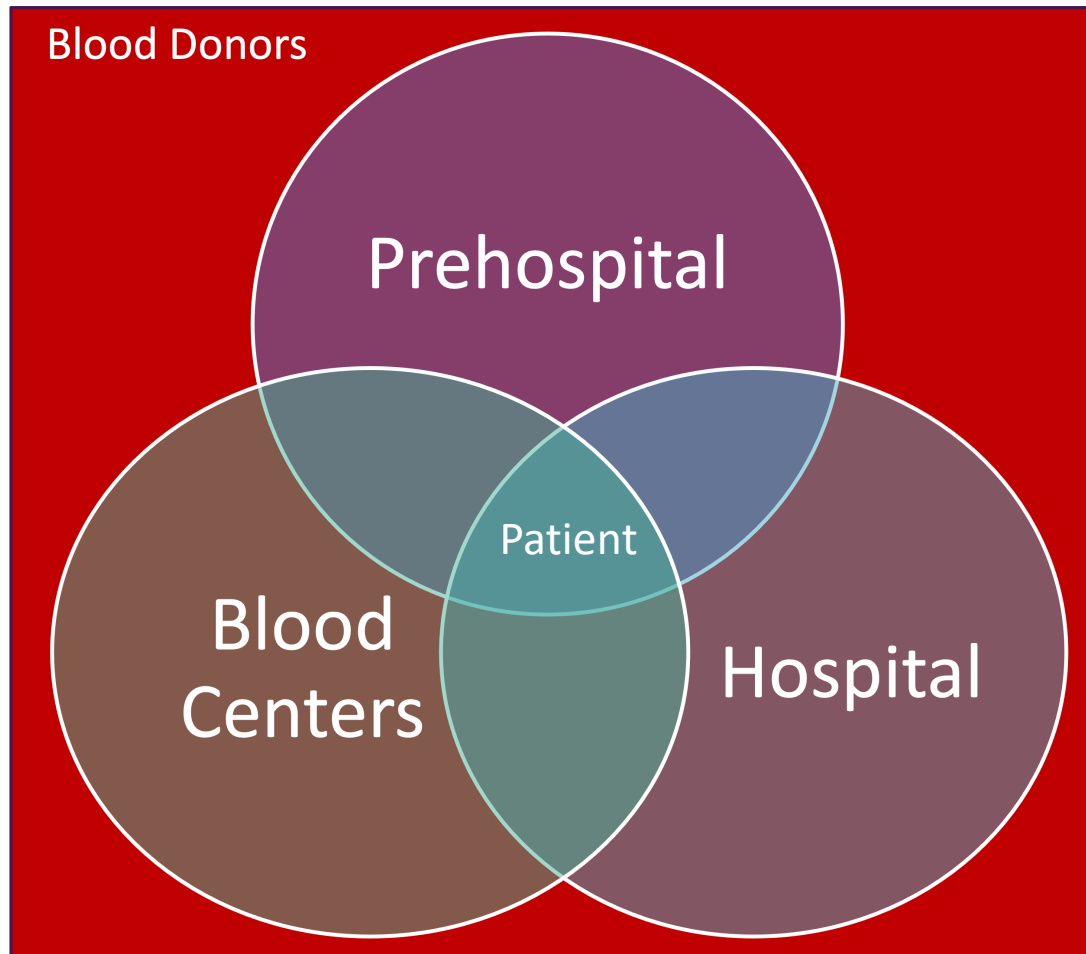


# We Are Just Getting Started!



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# Why This Can Be Challenging



Source: Schaefer Consulting, LLC 2026



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# Key Takeaways



## WE MUST UNDERSTAND AND MASTER DAILY OPERATIONS.



MAJOR RESPONSES ONLY WORK WHEN WE KNOW HOW TO SCALE **EVERYDAY** RESPONSES.



ROUTINE CALL



MULTIPLE UNITS



MASS CASUALTY



MAJOR RESPONSE

SMALL SCALE ←

→ LARGE SCALE



THE USE OF **DRONES** AS A WEAPONS SYSTEM WILL MAKE THIS A MUCH MORE COMPLICATED RESPONSE

WITH A LARGER RESPONSE AREA AND LIMITED ACCESS TO PATIENTS.



### LARGER RESPONSE AREA

Drones as weapons extend the threat area, requiring monitoring and security across a wider zone.



### LIMITED ACCESS

Patients and First Responders will be in unsafe or inaccessible locations.



### REAL-TIME INTELLIGENCE

Drones as weapons require real-time intelligence to assess threats, guide movement, and improve decision-making.



IF WE USE BLOOD PRODUCTS FOR **SEVERE BLEEDING**, WE WILL USE **LESS SALINE**.

### BLOOD PRODUCTS



- ✓ Restores oxygen-carrying capacity
- ✓ Supports clotting and hemostasis
- ✓ Reduces dilutional coagulopathy
- ✓ Improves patient outcomes

VS

### EXCESS SALINE



- ✗ Dilutes clotting factors
- ✗ Can worsen bleeding
- ✗ May lead to fluid overload
- ✗ Does not improve oxygen delivery



MASTER THE BASICS. **SCALE WITH CONFIDENCE.** SAVE MORE LIVES.



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# We Must Not Forget



**A Lifesaving Intervention Given Too Late Is Not A Lifesaving Intervention.**



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