

Bridgeport Hospital EMS Blood Transfusion Program

STANDARD OPERATING PROCEDURES V3.0 2026

GOODMAN, LEIGH

Table of Contents

1.0	DEFINITIONS/ACRONYMS	4
1.1	Acronyms:.....	4
1.2	Definitions:	4
1.3	Program Equipment and Monitoring Systems	4
1.4	Digital Systems and Inventory Oversight	5
1.5	Clinical and Regulatory Terms	5
2.0	Revision Summary	6
3.0	Program Overview	7
3.1	Authorized to Administer Blood	8
4.0	Authorization to Administer Blood.....	9
4.1	Initial Training & Credentialing	9
4.2	Annual Maintenance of Credentialing	9
5.0	Transfusion Procedure Paramedic Competency	11
6.0	Transfusion Procedure Paramedic Competency Checklist	12
7.0	BLOOD STORAGE & ADMINISTRATION EQUIPMENT	13
7.1	Handling, Storage, and Transportation	13
7.2	EMS Agency Dedicated Blood Cooler Freezer	15
8.0	EMS Portable Cold Storage	16
8.1	Delta ICE 2L	16
8.2	How to Clean Your Delta ICE 2L Components	16
9.0	Blood & Fluid Warming System	17
9.1	QinFlow Blood & Fluid Warmer	17
10.0	Approved Transfusion Administration Set	18
10.1	Approved Device	18
10.2	Pressure Infusion Device.....	19
11.0	Temperature Control and Monitoring System	20
11.1	Delta ICE 2L	20
12.0	Blood Product Allocation	21

Bridgeport Hospital EMS Prehospital Blood Transfusion Program

12.1 Blood Product Exchange/Rotation of Blood	22
12.2 Blood Product Restock after Administration	23
13.0 Instructions for EMS Blood/Blood Product Form Submission.....	25
13.1 Directions to the Bridgeport Hospital Blood Bank	26
13.2 Bridgeport Hospital Emergency Release of Uncrossmatched Blood for Prehospital EMS Use Form	27
13.3 Bridgeport Hospital Prehospital EMS Transfusion Record & Quality Review Form ..	28
14.0 EMS Daily Quality Control Checks.....	29
14.1 Temperature Excursion and Product Integrity Management	30
15.0 Temperature Monitoring and Exchange Procedures.....	31
15.1 Container Exchange and Conditioning	31
15.2 Temperature Excursion and System Event Documentation.....	31
15.3 Fisherbrand™ Hemo-Trac™ Blood Temperature Indicators.....	33
15.4 Bridgeport Hospital EMS Blood Product Incident Reporting.....	34
15.5 Blood Product Storage and Container Exchange- Delta ICE 2L	35
15.6 Delta ICE 2L QC Procedure	36
16.0 Prehospital Transfusion Authorization	37
16.1 Indications for Prehospital Whole Blood Administration.....	37
16.2 CT OEMS Protocol 4.3 Prehospital Blood Product Administration	38
16.3 BH MMC/SHCGB Medical Control Prehospital Transfusion Guidelines	39
17.0 Prehospital Whole Blood Administration Procedure	41
17.1 QinFlow Blood & Fluid Warmer – Operational Use.....	43
17.2 Prehospital Blood Product Transfusion Reactions	44
18.0 Prehospital Blood Inspection Pearls.....	45
18.1 Normal Red Blood Cells	46
18.2 Hemolysis	46
18.3 Particulate matter	48
18.4 Discoloration.....	49
18.5 Clots	49
18.6 Foreign Object	50

Bridgeport Hospital EMS Prehospital Blood Transfusion Program

19.0	Prehospital Blood Transfusion Hospital Notification	51
20.0	Quality Management, Data Surveillance, & Documentation	52
20.1	BH EMS Blood Product Administration Documentation.....	52
20.2	BH EMS Blood Product Administration CQA/CQI	54
20.3	Clinical Oversight	54
20.4	Equipment Controls.....	55
20.5	Quality Oversight & Monitoring	55
20.6	Process Planning	56
20.7	Process Validation	56
20.8	Process Implementation	57
21.0	References	58
22.0	Program Contact List.....	59
23.0	Gratitude	61
24.0	Addendum A.....	62
25.0	Addendum B.....	63
26.0	Addendum C	64
27.0	Addendum D	65
28.0	Addendum E	66
29.0	Addendum F	72
30.0	Addendum G	73
31.0	Addendum H	74

1.0 DEFINITIONS/ACRONYMS

1.1 Acronyms:

BH - Bridgeport Hospital

BB - Blood Bank

BH MMC - Bridgeport Hospital Milford Medical Control

CT OEMS - CT Office of Emergency Medical Services

EMS - Emergency Medical Services

SHCGB - Sponsor Hospital Council Greater Bridgeport

RBC - Red Blood Cells

1.2 Definitions:

Blood Product

Any blood component approved for storage, transport, and administration under this program, including Low-Titer Group O Whole Blood (LTOWB), Red Blood Cells (RBCs), plasma, and platelets.

LTOWB (Low-Titer Group O Whole Blood)

Unseparated whole blood containing red blood cells, plasma, and platelets with low anti-A and/or anti-B titers. LTOWB may be administered under approved protocol guidelines.

Transfusion Paramedic

A paramedic authorized under this program who has successfully completed the approved blood transfusion training program and is credentialed to administer, monitor, and document blood product transfusion.

Transfusion Reaction

An adverse clinical response occurring during or after blood product administration.

Subtypes may include:

- Hemolytic reaction
- Febrile non-hemolytic reaction
- Allergic reaction
- Anaphylaxis

1.3 Program Equipment and Monitoring Systems

Delta Ice 2L Cooler

A validated portable blood transport cooler approved for prehospital storage and transport of blood products. The Delta Ice 2L Cooler is designed to maintain required temperature parameters for blood products when used with approved inserts and temperature monitoring devices.

Cooler Inserts

Temperature-controlled phase-change inserts used within the approved blood transport cooler to maintain internal temperature within required storage parameters. Inserts must be conditioned, monitored, and exchanged according to program protocol and manufacturer validation standards.

TempWatch Mat

A temperature-monitoring device used to condition and verify cooler insert readiness prior to placement into the blood transport cooler. The TempWatch mat provides visual indicators confirming when inserts are within acceptable temperature range for safe blood product storage.

1.4 Digital Systems and Inventory Oversight**BloodComm Program**

The secure digital tracking and documentation system utilized by the blood program for inventory management, unit tracking, transfusion documentation, temperature monitoring records, and communication between participating agencies and the blood bank.

1.5 Clinical and Regulatory Terms**Validated Temperature Range**

The approved storage and transport temperature range for blood products within this program, defined as 2–6°C unless otherwise specified by the Blood Bank.

	Bridgeport Hospital Emergency Medical Services
	Prehospital Blood Product Administration Standard Operating Procedures
DOCUMENT REVISIONS SUMMARY	
Date effective: 05/19/2025	Date Revised: 02/19/2026

2.0 Revision Summary

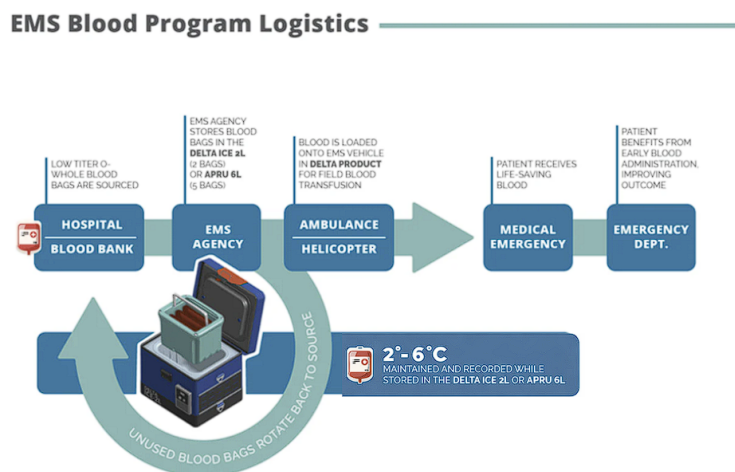
Date	Revision Type	Summary of Changes
02/19/2026	Comprehensive Program Revision	Full document modernization and structural reorganization; integration of Delta ICE 2L cooling system and QinFlow blood warming platform; removal of legacy Crêdo, TraceableLIVE, Hemo-Trac, and probe-based monitoring procedures; transition to BloodComm digital quality control and incident reporting workflow; updated temperature parameters to 2–6°C; revision of transfusion procedures, contraindications, reaction management, and storage protocols; formatting standardization and automated section numbering; alignment with current CT OEMS protocols and AABB standards.
06/12/2025	Program Update	Added and clarified HIPAA-compliant encrypted communication requirements (Sections 4.3, 4.4, 4.6, 4.7); updated temperature monitoring guidance including Hemo-Trac integration (Sections 5.3, 5.4, 5.5); added Prehospital Blood Transfusion Notification section (7.8).
05/30/2025	Program Update	Updated Competency Checklist (Section 2.3) to include cold storage procedure; revised to require printed names and signatures of paramedic and evaluator.

	Bridgeport Hospital Emergency Medical Services	
	Prehospital Blood Product Administration Standard Operating Procedures	
Program Overview		
Date effective: 05/19/2025		Date Revised: 02/19/2026

3.0 Program Overview

The Bridgeport Hospital Department of Emergency Medical Services, in partnership with the Bridgeport Hospital Trauma Center and Blood Bank, has established a regional prehospital blood transfusion program grounded in performance improvement, regulatory compliance, and clinical oversight. This program ensures the availability of blood products from the earliest point of injury or medical need through transition to definitive hospital care.

This multidisciplinary collaboration authorizes and supports regional EMS agencies in delivering evidence-based prehospital transfusion therapy to patients facing life-threatening emergencies. Through standardized protocols, temperature-controlled logistics, digital documentation, and continuous quality review, the program upholds the highest standards of patient safety and system integrity.



Adherence to the procedures outlined in this document is required to ensure patient safety, regulatory compliance, and the continued sustainability of the prehospital blood transfusion program. All authorized EMS agencies and credentialed transfusion clinicians shall strictly follow established protocols for the storage, handling, and administration of blood products.

	Bridgeport Hospital Emergency Medical Services	
	Prehospital Blood Product Administration Standard Operating Procedures	
AUTHORIZATION TO ADMINISTER BLOOD		
Date effective: 05/19/2025		Date Revised: 02/19/2026

3.1 Authorized to Administer Blood

The Prehospital Blood Product Transfusion Program authorizes specially trained paramedics to administer whole blood transfusions to patients experiencing life-threatening hemorrhage due to traumatic injury, suspected internal bleeding, or other approved clinical indications. This program ensures that blood products may be delivered at the earliest point of medical necessity to improve patient outcomes and continuity of care.

Participating EMS agencies must submit a roster of paramedic candidates for credentialing to the EMS Medical Control Team. Candidate eligibility will be reviewed and approved prior to enrollment in the authorized Blood Transfusion Training Program.

Paramedics who successfully complete all required training, competency validation, and program onboarding will be credentialed as authorized transfusion clinicians. Credentialed personnel may administer blood products in accordance with established protocols and under the sponsorship and oversight of their approved EMS agency and Medical Control.

	Bridgeport Hospital Emergency Medical Services	
	Prehospital Blood Product Administration Standard Operating Procedures	
Authorization to Administer Blood - Training & Credentialing		
Date effective: 05/19/2025		Date Revised: 02/19/2026

4.0 Authorization to Administer Blood

4.1 Initial Training & Credentialing

Paramedics who are approved by one of our sponsored agencies must take the Bridgeport Hospital/ BH MMC Initial Blood Transfusion Training Program, or other approved SHCGB Initial Transfusion Training Program.

Eligible paramedics must complete an in-person blood product storage and administration skills demonstration, with resuscitation simulation scenarios included.

Initial Training Program Learning objectives include:

- Review current evidence and data regarding prehospital blood and blood product transfusions
- Review the rationale for the use, and description, of blood products that can be transfused in the prehospital setting
- Review hemorrhagic shock and EMS best practices for management thereof
- Principles of and rationale for prehospital Damage Control Resuscitation (DCR)
- Overview the differences in fluid resuscitation vs blood products and what is optimal for EMS administration
- Review Bridgeport Hospital Regional Blood Transfusion Program
- Understand the requirements for documentation of prehospital transfusion and hand over to the hospital team.
- Review Bridgeport Hospital Regional Blood Transfusion Program Standard Operating Procedures
- Review of CT OEMS blood product transfusion protocol
- Recognize the importance of appropriate storage of blood products outside of the hospital blood bank and how to move them to the patient in the prehospital setting safely and effectively

4.2 Annual Maintenance of Credentialing

Authorized transfusion paramedics are required to maintain their transfusion authorization status by completing mandatory Bridgeport Hospital/BH MMC/SHCGB approved annual training which will include an in-person procedure competency check.

Bridgeport Hospital EMS Prehospital Blood Transfusion Program

Training compliance and authorized candidate rosters will be maintained by EMS agencies and the Bridgeport Hospital/BH MMC/SHCGB Medical Control teams. Updated rosters will be submitted annually, and as needed secondary to EMS staff turnover.

Yale NewHaven Health Bridgeport Hospital	Bridgeport Hospital Emergency Medical Services
	Prehospital Blood Product Administration Standard Operating Procedures
Transfusion Procedure Paramedic Competency	
Date effective: 05/19/2025	Date Revised: 2/19/2026

5.0 Transfusion Procedure Paramedic Competency

Transfusion paramedics will complete the Bridgeport Hospital Blood Administration Competency Procedure using the approved checklist (Addendum E) as part of their initial training and annually thereafter.

- Approved evaluators will provide a prehospital clinical scenario. Use the approved checklist (Addendum E) to evaluate competency in completing this skill.
- Approved evaluators will select Satisfactory (S) or Unsatisfactory (U) for each step and provide comments as needed.
- Approved evaluators will remediate any unsatisfactory issues and reevaluate the checklist.
- Save a copy in transfusion paramedic records and submit to BH EMS Medical Control Team annually.

If the transfusion paramedic is unsuccessful at competency after remediation, the transfusion paramedic authority to administer blood will be suspended.

- The transfusion paramedic must complete/retake the approved education program.
- Once complete, the transfusion paramedic must successfully complete the competency review check with a member of the EMS Medical Control Team to have their authorization reinstated.

	Bridgeport Hospital Emergency Medical Services	
	Prehospital Blood Product Administration Standard Operating Procedures	
Transfusion Procedure Paramedic Competency Checklist		
Date effective: 05/19/2025		Date Revised: 02/19/2026

6.0 Transfusion Procedure Paramedic Competency Checklist

SEE APPENDIX E

	Bridgeport Hospital Emergency Medical Services	
	Prehospital Blood Product Administration Standard Operating Procedures	
Blood Storage & Administration Equipment		
Date effective: 05/19/2025		Date Revised: 02/19/2026

7.0 BLOOD STORAGE & ADMINISTRATION EQUIPMENT

This policy outlines the equipment that will be utilized as part of the prehospital blood product administration program.

All equipment utilized must be approved by Bridgeport Hospital/BH MMC/SHCGB and Bridgeport Hospital Blood Bank.

Equipment quality control checks will be maintained by the individual EMS agencies, with direct oversight from the Bridgeport Hospital Blood Bank via the Bridgeport Hospital Medical Control Leadership Team.

Agencies who wish to utilize an alternate piece of equipment must submit a request for review and approval via the Bridgeport Hospital Blood Bank in collaboration with Bridgeport Hospital/BH MMC/SHCGB Medical Control Team.

EMS ground transport units with blood products and equipment on board should be parked in a temperature-controlled building whenever possible and locked to maintain security when left unattended.

7.1 Handling, Storage, and Transportation

The Bridgeport Hospital EMS Blood Transfusion Program shall ensure that all blood products and associated services are handled, stored, and transported in a manner that preserves product integrity, prevents damage or deterioration, and maintains full traceability throughout the chain of custody.

The Bridgeport Hospital Blood Bank is responsible for validating all approved transport containers and storage systems used within this program. All containers must be verified to maintain required temperature parameters for the anticipated duration of storage, transport, or deployment.

Bridgeport Hospital EMS Prehospital Blood Transfusion Program

The Bridgeport Hospital Blood Transfusion Team will collaborate with participating EMS agencies to ensure that blood products remain within validated temperature ranges during all phases of storage and transport. Shared oversight includes temperature monitoring, documentation review, and response to any identified deviations.

For stored blood and blood components, temperature shall be monitored continuously through approved monitoring devices and formally recorded at a minimum of every four (4) hours unless otherwise specified by program protocol. Any temperature excursion shall be addressed in accordance with established corrective action procedures.

	Bridgeport Hospital Emergency Medical Services	
	Prehospital Blood Product Administration Standard Operating Procedures	
EMS Agency Dedicated Blood Cooler Freezer		
Date effective: 05/19/2025		Date Revised: 02/19/2026

7.2 EMS Agency Dedicated Blood Cooler Freezer

Participating EMS agencies shall maintain an approved cold storage freezer for the conditioning and storage of blood program inserts and associated equipment as required by protocol.

All program-designated freezers must:

- Be connected to an electrical outlet supported by emergency generator power.
- Maintain a storage temperature of -18°C or colder at all times.
- Be equipped with a calibrated thermometer or continuous temperature monitoring device capable of validating and documenting internal temperature.

Temperature monitoring shall be reviewed routinely to ensure compliance with storage standards.

In the event a freezer fails to maintain required temperature parameters, the EMS agency shall immediately notify the EMS Medical Control Team and implement an alternate storage plan. An approved backup freezer is maintained at the Bridgeport Hospital Blood Bank to support continuity of operations until the issue is resolved.

	Bridgeport Hospital Emergency Medical Services	
	Prehospital Blood Product Administration Standard Operating Procedures	
EMS Portable Cold Storage		
Date effective: 05/19/2025		Date Revised: 02/19/2026

8.0 EMS Portable Cold Storage

Each participating EMS agency shall utilize only program-approved cold storage systems for the storage and transport of blood products. The systems currently authorized for use within this program are listed below.

8.1 Delta ICE 2L

All participating EMS agencies shall utilize the **Delta ICE 2L Cooler System** as the approved container for the storage and transport of blood products within this program.

Program requirements are as follows:

- Each EMS agency shall maintain an approved Delta ICE 2L Cooler for operational deployment.
- A secondary Delta ICE 2L insert set shall be maintained in a designated freezer for conditioning and scheduled exchange.
- Conditioned inserts shall be rotated at established intervals in accordance with program protocol and agency policy to ensure continuous temperature compliance.
- Prior to deployment, conditioned inserts must be verified as fully frozen and within acceptable temperature parameters using the approved temperature conditioning and monitoring process.
- Inserts that do not meet conditioning or temperature readiness requirements shall not be placed into service and must be returned for proper conditioning.

8.2 How to Clean Your Delta ICE 2L Components

Follow appropriate manufacturer guidance to clean cooling systems.

	Bridgeport Hospital Emergency Medical Services	
	Prehospital Blood Product Administration Standard Operating Procedures	
Blood & Fluid Warming System		
Date effective: 05/19/2025		Date Revised: 02/19/2026

9.0 Blood & Fluid Warming System

All participating EMS agencies are required to carry an approved blood and fluid warming system to support the safe administration of blood products and fluids. Devices currently authorized for use within this program are listed below.

9.1 QinFlow Blood & Fluid Warmer

The QinFlow blood and fluid warmer is a portable, battery-operated device capable of rapidly warming cold-stored blood products and IV fluids for safe administration in prehospital settings, providing consistent temperature output and ease of field use.

	Bridgeport Hospital Emergency Medical Services	
	Prehospital Blood Product Administration Standard Operating Procedures	
Approved Transfusion Administration Set		
Date effective: 05/19/2025		Date Revised: 02/19/2026

10.0 Approved Transfusion Administration Set

All participating EMS agencies are required to maintain and deploy an approved transfusion administration set compatible with the program-approved blood and fluid warming system. The devices currently authorized for use within this program are listed below.

10.1 Approved Device

QinFlow Disposable Administration Set (compatible with the authorized QinFlow warming platform)

- Approved for use with whole blood, blood components, colloids, and isotonic crystalloid solutions.
- Designed for rapid warming in prehospital and transport environments.
- Integrates controlled heating elements within the disposable set to maintain target temperature during administration.
- Preserves uninterrupted fluid flow without disruption to the administration pathway.
- Connects directly to the authorized QinFlow controller in accordance with manufacturer instructions.

	Bridgeport Hospital Emergency Medical Services	
	Prehospital Blood Product Administration Standard Operating Procedures	
Pressure Infusion Device		
Date effective: 05/19/2025		Date Revised: 02/19/2026

10.2 Pressure Infusion Device

Each participating EMS agency shall maintain and deploy an approved pressure infuser device for use during blood product administration and resuscitative efforts when clinically indicated.

	Bridgeport Hospital Emergency Medical Services	
	Prehospital Blood Product Administration Standard Operating Procedures	
Temperature Control and Monitoring System		
Date effective: 05/19/2025		Date Revised: 02/19/2026

11.0 Temperature Control and Monitoring System

Each participating EMS agency shall utilize the program-approved temperature control and monitoring system integrated within the authorized blood transport platform. Approved systems currently authorized for use within this program are listed below.

11.1 Delta ICE 2L

The Delta ICE 2L Cooler System utilizes a validated phase-change temperature stabilization platform designed to maintain required blood storage parameters during field deployment and transport.

Temperature control within this system is achieved through:

- Proper conditioning of Delta ICE inserts
- Verification of insert readiness using the approved conditioning and validation process
- Adherence to established rotation and exchange intervals
- Visual and procedural confirmation prior to deployment

Continuous temperature integrity is maintained through validated system performance when prepared and deployed in accordance with program protocol.

Any deviation from established temperature parameters shall be addressed in accordance with corrective action procedures.

	Bridgeport Hospital Emergency Medical Services	
	Prehospital Blood Product Administration Standard Operating Procedures	
Blood Product Allocation		
Date effective: 05/19/2025		Date Revised: 02/19/2026

12.0 Blood Product Allocation

Blood product allocation & exchange will occur at the Bridgeport Hospital Blood Bank. Paramedics may call the Bridgeport Hospital Blood Bank at 203-384-3062 before attempting to exchange or replace blood to ensure a unit(s) is available.

The Bridgeport Hospital Blood Bank is located at Bridgeport Hospital Main Campus Podium 2, Second Floor. (See 4.5 Directions to the Bridgeport Hospital Blood Bank)

LTOWB/Blood product will be provided by Bridgeport Hospital's Blood Bank.

1. Approved transfusion paramedics will follow Bridgeport Hospital guidelines for obtaining blood and blood products.
2. The BH Blood Bank will provide EMS teams (as available) with one group O positive low-titer whole blood (WB) or O positive RBC unit for use in the field.
3. The EMS team will store the whole blood in an approved storage bag with monitored cold storage unit which can be moved from one location to another with no impact on blood temperature.
4. The red blood cell unit(s) are prepared following the same procedure as the whole blood unit.
5. The blood/blood product will be issued with the Bridgeport Hospital Emergency Release of Uncrossmatched Blood for Prehospital EMS (Addendum A)
6. Transfusion Paramedic will confirm the form has the Return Blood by Date label at the top of the form.
7. The Transfusion Paramedic will print their name and EMS Agency clearly and legibly at the bottom of the form, as indicated by the stamp.
8. The blood/blood product will be issued with the Bridgeport Hospital Prehospital EMS Transfusion Record and Quality Review Form (Addendum B)
9. The transfusion paramedic will confirm the information matches the blood and print their name legibly as indicated on part one of the transfusion record.
10. The Transfusion Medic will ensure both completed forms are placed in a sealed waterproof bag and attached to the unit per Bridgeport Hospital Blood Bank procedure.
11. The blood/blood product will be placed into Transfusion Paramedic's approved cold storage unit and transported per EMS agency procedure.
12. The blood/blood product unit must be returned as indicated on the return by label. The returned, unused whole blood unit is replaced with a fresher blood/blood product unit.

The Bridgeport Hospital Blood Bank recognizes that timely exchange is critical to ensure EMS units are available for critical 911 calls for service. The Bridgeport Hospital Blood Bank will make every effort to ensure the allocation/exchange process is efficient and streamlined to support a timely exchange.

	Bridgeport Hospital Emergency Medical Services
	Prehospital Blood Product Administration Standard Operating Procedures
Blood Product Exchange/Rotation of Blood	
Date effective: 05/19/2025	Date Revised: 02/19/2026

12.1 Blood Product Exchange/Rotation of Blood

Paramedics may call the Bridgeport Hospital Blood Bank at 203-384-3062 before attempting to exchange or replace blood to ensure a unit(s) is available.

1. Blood/blood products that have not been transfused will be exchanged as indicated by the return by label or sooner to reduce waste. The blood/blood product will be labeled by the BH Blood Bank with a RETURN BY date.
2. If crew members are at Bridgeport Hospital the day prior to the exchange date, paramedics are encouraged to call the Blood Bank to determine if a unit is available at that time. Early exchange is appreciated by Blood Bank.
3. There may be times when a unit of blood/blood product has a shorter than usual return-by date due to supply and demand internal and external to Bridgeport Hospital. EMS Agencies will accept units with shortened return by dates, and receiving crews will communicate this pertinent information to relief crews and EMS Agency leadership.
4. Exchange of unused blood prior to return by date, will follow standard local EMS Agency procedures when taking EMS unit out of local PSA for exchange process.
5. For blood/blood product exchange s/p administration, please refer to 4.3 Blood Product Restock after administration

Any blood product that fails required quality control parameters is strictly prohibited from transfusion and must be removed from service immediately. The unit shall be returned to the Blood Bank as soon as operationally feasible, and the receiving Blood Bank technician must be notified at the time of physical handoff that the product failed EMS quality control. All required quality control failure documentation and escalation procedures shall be completed in accordance with established program policy.

	Bridgeport Hospital Emergency Medical Services
	Prehospital Blood Product Administration Standard Operating Procedures
Blood Product Restock after administration	
Date effective: 05/19/2025	Date Revised: 02/19/2026

12.2 Blood Product Restock after Administration

Paramedics may call the Bridgeport Hospital Blood Bank at 203-384-3062 before attempting to exchange or replace blood to ensure a unit(s) is available.

1. Paramedics will complete the Bridgeport Hospital Emergency Release of Uncrossmatched Blood for Prehospital EMS Use Form after administration of unit. (See Addendum A)
2. Paramedics will complete the Bridgeport Hospital EMS Transfusion Record & Quality Review Form after administration of unit. (See Addendum B)

Patients transported to Bridgeport Hospital:

1. Complete and make a copy of the two required forms (Addendum A & B).
2. If possible, place the used transfusion set and blood unit bag into the blood bank provided bag and return to BH blood bank.
3. If the transfusion is stopped secondary to a transfusion reaction, the remaining unit and transfusion set, with blood sample sticks, **MUST** be placed in a biohazard bag, sealed and returned to the Bridgeport Hospital Blood Bank.
4. Transfer the original copy of the Bridgeport Hospital Emergency Release of Uncrossmatched Blood for Prehospital EMS Use Form to the BH Blood Bank Technician
5. Transfer the original copy of the Bridgeport Hospital Prehospital EMS Transfusion Record & Quality Review Form to the BH Blood Bank Technician.
6. Email copies of both forms to the sponsor hospital medical control team. **Forms must be emailed through an approved HIPAA compliant encryption portal using approved EMS Agency or Hospital System email accounts. NO FORMS may be submitted via personal email.**

Patients transported to other Receiving Hospitals:

1. Complete and make a copy of the two required forms (Addendum A & B).
2. If possible, place the used transfusion set and blood unit bag into the blood bank provided bag and transfer to receiving facility staff for return to DESTINATION blood bank.
3. If the transfusion is stopped secondary to a transfusion reaction, the remaining unit and transfusion set, with blood sample sticks, **MUST** be placed in a biohazard bag, sealed and returned to the DESTINATION Hospital Blood Bank via the receiving facility team.
4. Transfer the original copy of the Bridgeport Hospital Emergency Release of Uncrossmatched Blood for Prehospital EMS Use Form to the DESTINATION Blood Bank Technician via the receiving facility team.

Bridgeport Hospital EMS Prehospital Blood Transfusion Program

5. Transfer the original copy of the Bridgeport Hospital Prehospital EMS Transfusion Record & Quality Review Form to the DESTINATION Blood Bank Technician via the receiving facility team.
6. Email copies of both forms to the sponsor hospital medical control team. **Forms must be emailed through an approved HIPAA compliant encryption portal using approved EMS Agency or Hospital System email accounts. NO FORMS may be submitted via personal email.**

	Bridgeport Hospital Emergency Medical Services	
	Prehospital Blood Product Administration Standard Operating Procedures	
Instructions for EMS Blood/Blood Product Form Submission		
Date effective: 05/19/2025		Date Revised: 02/19/2026

13.0 Instructions for EMS Blood/Blood Product Form Submission

EMS Must complete the following forms:

- Bridgeport Hospital Emergency Release of Uncrossmatched Blood for Prehospital EMS Use Form
- Bridgeport Hospital Transfusion Record & Quality Review Form
- A copy of both forms must be made and emailed to the appropriate Bridgeport Hospital/BH MMC/SHCGB Medical Control team/s.

Forms must be emailed through an approved HIPAA compliant encryption portal using approved EMS Agency or Hospital System email accounts, and/or per your agency policy. NO FORMS may be submitted via personal email.

The original *Bridgeport Hospital Emergency Release of Uncrossmatched Blood for Prehospital EMS Use Form* and the *Bridgeport Hospital Prehospital EMS Transfusion Record & Quality Review Form* shall be completed in full and provided to the appropriate receiving facility Blood Bank at the time of patient transfer.

Bridgeport Hospital EMS shall maintain program-related documentation for a minimum of five (5) years in accordance with institutional policy and regulatory requirements.

All records shall be stored in a secure manner that preserves document integrity and legibility, prevents unauthorized access, alteration, loss, or destruction, and ensures timely accessibility and retrievability for clinical review, quality assurance, or regulatory audit purposes.

	Bridgeport Hospital Emergency Medical Services	
	Prehospital Blood Product Administration Standard Operating Procedures	
Directions to the Bridgeport Hospital Blood Bank		
Date effective: 05/19/2025		Date Revised: 05/07/2025

13.1 Directions to the Bridgeport Hospital Blood Bank

Blood product allocation & exchange will occur at the Bridgeport Hospital Blood Bank. Paramedics may call the Bridgeport Hospital Blood Bank at 203-384-3062 before attempting to exchange or replace blood to ensure a unit(s) is available.

The Bridgeport Hospital Blood Bank is located at Bridgeport Hospital Main Campus Podium 2, Second Floor.

1. EMS clinicians should walk through the ED to the main elevator lobby on floor 3.
2. Take the elevator to Floor 2. Turn left towards the cafeteria.
3. Turn right to enter the hallway marked Blood Bank/Pharmacy.
4. The doors require badge access.
5. Bridgeport Hospital issued ambulance fobs will work for access.
6. If they do not, please contact security for access, and notify the Bridgeport Hospital/BH MMC Medical Control Team so they can ensure you have access corrected for future exchange.
7. Walk down the hallway past the pharmacy to the end of the corridor.
8. You will see a sign for Blood Bank.
9. Turn left and walk to Blood Bank.
10. The Blood Bank Kiosk is clearly identified.
11. Ring the bell and wait for Blood Bank technician.

Bridgeport Hospital EMS Prehospital Blood Transfusion Program

	Bridgeport Hospital Emergency Medical Services
	Prehospital Blood Product Administration Standard Operating Procedures
Bridgeport Hospital Emergency Release of Uncrossmatched Blood for Prehospital EMS Use Form	
Date effective: 5/19/2025	Date Revised: 02/19/2026

13.2 Bridgeport Hospital Emergency Release of Uncrossmatched Blood for Prehospital EMS Use Form

Sample form below, see addendum A for actual form

BRIDGEPORT HOSPITAL EMERGENCY RELEASE OF UNCROSSMATCHED BLOOD FOR PREHOSPITAL EMS

Return to Bridgeport Hospital Blood Bank by:

BB TECH WILL COMPLETE

BRIDGEPORT HOSPITAL EMERGENCY RELEASE OF UNCROSSMATCHED BLOOD FOR PREHOSPITAL EMS

PLACE PATIENT ID STICKER HERE

IF PATIENT ID STICKER IS NOT AVAILABLE, UTILIZE FIELDS BELOW; COMPLETE ANY FIELDS NOT INCLUDED IN PATIENT ID STICKER BELOW.

PATIENT NAME:
PATIENT MRN:
INCIDENT DATE:
EMS IN:
PATIENT DISPOSITION:

PATIENT DATE OF BIRTH:
PATIENT GENDER:
INCIDENT TIME:
INCIDENT NATURE:
PATIENT DESTINATION:

EMS TO PLACE PATIENT ID STICKER

The above patient was transfused with the following units of uncrossmatched whole blood/RBCs.

DONOR UNIT NUMBER:

UNIT 1	(PLACE UNIT ID STICKER HERE)
UNIT 2	

EMS TO PLACE BLOOD UNIT STICKER

- A blood transfusion is needed urgently for emergency care of this patient.
- I understand the potential risks associated with transfusing blood before compatibility testing is completed.
- For this patient I believe that the benefits of an uncrossmatched transfusion outweigh the risks.
- I understand that the Blood Bank cannot assume responsibility for transfusion reactions that occur because of compatibility of the transfused blood with the recipient of the transfusion.


PHYSICIAN SIGNATURE
PHYSICIAN (PRINT NAME): DOUGLAS LATHAM, MD
PHYSICIAN TITLE: EMS MEDICAL DIRECTOR

Please notify the Blood Bank of any use of uncrossmatched blood ASAP. Return completed form to Blood Bank.

UNCROSSMATCHED
 PREHOSPITAL EMS TRANSFUSION
 EMS CLINICIAN NAME: _____
 EMS AGENCY: _____

PRINT CLEARLY

**PROVIDER NAME & EMS AGENCY OF
TRANSFUSION MEDIC COLLECTING**

BLOOD BANK PHONE: 203-384-3062

Date Revised: 05/01/2025

Bridgeport Hospital EMS Prehospital Blood Transfusion Program

	Bridgeport Hospital Emergency Medical Services
	Prehospital Blood Product Administration Standard Operating Procedures
Bridgeport Hospital Prehospital EMS Transfusion Record & Quality Review Form	
Date effective: 05/19/2025	Date Revised: 02/19/2026

13.3 Bridgeport Hospital Prehospital EMS Transfusion Record & Quality Review Form

Sample form below, see addendum B for actual form. Both Pages of Form Must Be Completed.

BRIDGEPORT HOSPITAL PREHOSPITAL EMS TRANSFUSION RECORD & QUALITY REVIEW FORM

TRANSFUSION RECORD PART ONE TO BE COMPLETED BY BRIDGEPORT HOSPITAL BLOOD BANK

Special Instructions: This unit has been released as uncrossmatched, to avoid delays in administration of life-saving intervention.

PRODUCT: _____
 DONOR UNIT: (SEE STICKER BELOW) _____
 DONOR BLOOD TYPE: _____
 PATIENT ANTIBODIES: _____
 NEG UNIT AGS: _____
 COMPATIBILITY TEST: _____ VOLUME: _____ ML: _____
 ATTRIBUTES: _____
 DATE & TIME EXPIRES: _____
 DATE PREPARED: _____ TIME: _____ TECH: _____
 VERIFIED BY TRANSFUSION MEDIC NAME: _____

TRANSFUSION RECORD PART TWO TO BE COMPLETED BY EMS TRANSFUSION PARAMEDIC - BOTH SIDES OF THIS FORM MUST BE COMPLETED

PLACE PATIENT ID STICKER HERE PLACE BLOOD UNIT STICKER HERE

PATIENT NAME: _____ PATIENT DATE OF BIRTH: _____
 PATIENT MRN: _____ PATIENT GENDER: _____
 INCIDENT DATE: _____ INCIDENT TIME: _____
 EMS IN: _____ INCIDENT NATURE: _____
 PATIENT DESTINATION: _____ TIME CASE TRANSFERRED: _____

TRANSFUSION MEDIC (PRINT NAME): _____ AGENCY: _____
 TRANSFUSION MEDIC SIGNATURE: _____ DATE SIGNATURE: _____
 RECEIVING FACILITY (PRINT NAME): _____ HOSPITAL: _____
 RECEIVING FACILITY SIGNATURE: _____ DATE SIGNED: _____

TRANSFUSED BLOOD TYPE	CH	CS	CSNB	RBC	OTHER
TRANSFUSED VIA	IV	IO		SIZE	LOCATION
TOTAL BLOOD TRANSFUSED		ML	OTHER FLUID	END	ML
TRANSFUSION TIMES	START				

TRANSFUSION RESPONSE

PATIENT CONDITION DIFFERENTIAL	UNCHANGED	IMPROVED	DETERIORATED
TRANSFUSION REACTION	YES	NO	UNKNOWN

If YES, OF COURSE, PLEASE DESCRIBE BELOW

A copy of the completed emergency release form must be attached to this quality review form and submitted to your designated EMS leadership team. The EMS Agency must submit a copy of these forms to the Bridgeport Hospital Medical Control team, or their designee as soon as possible but no later than 24 hours after call completion.

Date Effective 05/19/2025 Date Revised 05/01/2025

BRIDGEPORT HOSPITAL PREHOSPITAL EMS TRANSFUSION RECORD & QUALITY REVIEW FORM

QUALITY REVIEW FORM CLINICAL SUMMARY PART ONE TO BE COMPLETED BY EMS TRANSFUSION PARAMEDIC

CHIEF COMPLAINT/CLINICAL IMPRESSION	RR	HR	BP	RR & QUALITY	SKIN	TEMP
ADU	SCS					

POST TRANSFUSION VITAL SIGNS

RR	HR	BP	RR & QUALITY	SKIN	TEMP
ADU	SCS				

BLS CALCIUM TXA OTHER FLUID VOLUME INFUSED VIA OUTCOME

NA

QUALITY REVIEW PART TWO TO BE COMPLETED BY BRIDGEPORT HOSPITAL BLOOD TRANSFUSION PROGRAM TEAM

TEMP ON ARRIVAL	CONDITION IMPROVED	YES	NO
TEMP			

PATIENT CONDITION: _____
 DISPOSITION: _____
 DISCHARGE TO: _____
 APPROPRIATE UTILIZATION: _____ YES _____ NO

IF NO, PLEASE DOCUMENT WHY BELOW

ANY OTHER CONCERN, QUESTIONS OR ISSUES REQUIRING REVIEW OR FOLLOW UP

IF YES, PLEASE DOCUMENT BELOW

CASE REVIEWED BY

PRINT NAME: _____ DEPARTMENT: _____
 SIGNATURE: _____ DATE SIGNED: _____

PRINT NAME: _____ DEPARTMENT: _____
 SIGNATURE: _____ DATE SIGNED: _____

FOLLOW UP TRACKING IF APPLICABLE

ISSUE/QUESTION	ASSIGNED TO	DATE DUE	STATUS

GENERAL COMMENTS

Date Effective 05/19/2025 Date Revised 05/01/2025

1. Transfusion Record Part ONE to be completed by Bridgeport Hospital Blood Bank. The Transfusion Paramedic collecting the unit will verify the information and print their name as indicated at bottom of Part ONE.
2. Transfusion Record Part TWO to be completed by the Transfusion Paramedic who administers the unit of blood/blood product. The record must be signed by the receiving facility team who must print their name clearly, identify the destination and sign and date. The receiving facility signature must be a physician, registered nurse or other authorized licensed practitioner responsible for the patient's care of the receiving team at time of patient hand off. Example: MD, RN, PA-C.
3. Quality Review Form Part ONE to be completed by the Transfusion Paramedic who administers the unit of blood/blood product.
4. Quality Review Form Part TWO to be completed by the Bridgeport Hospital Blood Transfusion Program Team, and where applicable in collaboration with our SHCGB program partners.

	Bridgeport Hospital Emergency Medical Services	
	Prehospital Blood Product Administration Standard Operating Procedures	
EMS Daily Quality Control Checks		
Date effective: 05/19/2025		Date Revised: 02/19/2026

14.0 EMS Daily Quality Control Checks

Daily quality control verification of all blood products and associated equipment shall be completed using the approved BloodComm digital documentation platform.

Each participating EMS agency shall ensure that all deployed blood products and storage systems undergo routine verification at intervals not exceeding twelve (12) hours.

The on-duty transfusion paramedic or designated clinician shall complete all required quality control checks within the BloodComm application in accordance with program protocol.

Required verification includes:

- Confirmation of blood product presence within the approved cooling system
- Visual inspection of blood units for leakage, discoloration, or compromise
- Verification of required Blood Bank documentation and return-by date
- Confirmation of cooler integrity, seal status, and overall condition
- Verification that all required program equipment is present and operational
- Documentation of temperature status and system readiness within BloodComm
- Verification that all conditioning and deployment requirements remain compliant

All quality control entries shall be completed and submitted through BloodComm at the time of inspection. Electronic documentation within the platform serves as the official record of compliance.

Any discrepancy, temperature deviation, equipment concern, or documentation irregularity identified during inspection shall be immediately reported and managed in accordance with established corrective action procedures.

	Bridgeport Hospital Emergency Medical Services
	Prehospital Blood Product Administration Standard Operating Procedures
Temperature Excursion and Product Integrity Management	
Date effective: 05/19/2025	Date Revised: 02/19/2026

14.1 Temperature Excursion and Product Integrity Management

If temperature monitoring indicates that a blood product has remained outside the acceptable storage range of **2–6°C** for greater than thirty (30) minutes, the unit shall be considered **unsuitable for transfusion** and must be removed from service immediately.

The affected unit shall be returned to the Bridgeport Hospital Blood Bank as soon as operationally feasible. The Blood Bank will evaluate the unit and determine disposition in accordance with internal policy. Blood products shall only be discarded or reassigned by the Bridgeport Hospital Blood Bank.

Upon identification of a temperature excursion or monitoring alarm, the EMS clinician shall:

- Inspect the cooling system and associated equipment to identify and address the cause of the excursion.
- Document the event and all relevant details within the approved documentation system.
- Record the highest and/or lowest temperature observed.
- Document contributing factors that may have led to the excursion.
- Document corrective actions taken to restore appropriate storage conditions.

If a temperature deviation is confirmed, the EMS clinician shall notify their agency leadership in accordance with local policy and notify the Bridgeport Hospital/BH MMC Medical Control Team as soon as practicable.

A replacement unit will be issued in accordance with established blood allocation procedures following return of the compromised unit.

The sponsoring EMS agency shall conduct an initial review of the event in collaboration with the EMS Medical Control Team to determine contributing factors and prevent recurrence. If tampering, misuse, or unresolved deviation cannot be excluded, the review shall be escalated to the Bridgeport Hospital/BH MMC/SHCGB Medical Control leadership with support from the Bridgeport Hospital Blood Bank.

All temperature excursions and compromised units shall be documented using the Bridgeport Hospital EMS Blood Product Incident Reporting process.

	Bridgeport Hospital Emergency Medical Services
	Prehospital Blood Product Administration Standard Operating Procedures
Temperature Monitoring and Exchange Procedures	
Date effective: 05/19/2025	Date Revised: 02/19/2026

15.0 Temperature Monitoring and Exchange Procedures

Temperature control and monitoring for all blood products within this program are maintained through the approved Delta ICE cooling system and associated BloodComm documentation platform. Manual probe placement, external data logging devices, and standalone monitoring systems are no longer utilized.

All temperature verification, container exchange, and quality control checks shall be completed using the approved system workflow and documented within BloodComm as required.

15.1 Container Exchange and Conditioning

Conditioned inserts and cooling containers shall be exchanged at established intervals in accordance with program protocol and agency-specific scheduling to maintain validated storage conditions.

Prior to placement into service, all conditioned components must be verified as meeting acceptable temperature readiness standards. Blood products shall only be transferred into a newly conditioned container once readiness has been confirmed through the approved conditioning and verification process.

All exchanges and system readiness confirmations shall be documented within BloodComm at the time of completion.

15.2 Temperature Excursion and System Event Documentation

Any temperature deviation, system alert, equipment concern, or compromised storage condition shall be documented within BloodComm and managed in accordance with established corrective action procedures.

Documentation shall include:

- Description of the event or deviation
- Contributing factors, if known
- Corrective actions taken
- Notification of appropriate leadership or Medical Control, when applicable

Bridgeport Hospital EMS Prehospital Blood Transfusion Program

Electronic documentation within BloodComm serves as the official record of temperature monitoring, exchange verification, and corrective action for all program-related activities.

	Bridgeport Hospital Emergency Medical Services
	Prehospital Blood Product Administration Standard Operating Procedures
Fisherbrand™ Hemo-Trac™ Blood Temperature Indicators	
Date effective: 06/13/2025	Date Revised: 02/19/2026

15.3 Fisherbrand™ Hemo-Trac™ Blood Temperature Indicators

Fisherbrand™ Hemo-Trac™ Blood Temperature Indicators are no longer utilized within this program due to variability in the prehospital environment that may produce unreliable or inaccurate temperature breach indications. Temperature integrity is maintained through the approved cooling system and digital monitoring workflow in accordance with current program standards.

	Bridgeport Hospital Emergency Medical Services	
	Prehospital Blood Product Administration Standard Operating Procedures	
Bridgeport Hospital EMS Blood Product Incident Reporting Form		
Date effective: 05/19/2025	Date Revised: 02/19/2026	

15.4 Bridgeport Hospital EMS Blood Product Incident Reporting

If the temperature monitoring system indicates that a blood product has fallen outside the acceptable temperature range of 2–6°C for longer than thirty (30) minutes, the unit shall be considered unsuitable for transfusion and must be removed from service immediately. The affected unit shall be returned to the Bridgeport Hospital Blood Bank as soon as operationally feasible for evaluation and disposition in accordance with Blood Bank policy.

In the event of a confirmed temperature deviation, the EMS agency shall document a formal temperature excursion within the BloodComm application as an incident report. Documentation must include the temperature recorded, contributing factors, corrective actions taken, and all required notifications in accordance with program protocol.

	Bridgeport Hospital Emergency Medical Services
	Prehospital Blood Product Administration Standard Operating Procedures
Cold Storage & Cooler Exchange Procedure	
Date effective: 05/19/2025	Date Revised: 02/19/2026

15.5 Blood Product Storage and Container Exchange- Delta ICE 2L

Blood products shall be stored and transported using the approved Delta ICE 2L Cooler System in accordance with established program protocol.

1. The Delta ICE 2L Cooler and conditioned insert set shall be verified operational and documented within BloodComm at scheduled agency-designated quality control intervals.
2. Conditioned insert sets shall be rotated at intervals established by program protocol and agency standard operating procedures to maintain validated temperature control.
3. Inserts removed from the designated freezer must be confirmed fully frozen and conditioned in accordance with Delta ICE manufacturer specifications prior to deployment. Inserts that are not fully frozen or do not meet readiness criteria shall not be placed into service.
4. If a conditioned insert does not meet readiness requirements, the exchange shall not occur. The freezer and conditioning process shall be inspected, and EMS leadership shall be notified if concerns persist.
5. A backup conditioned insert set shall be maintained at the Bridgeport Hospital Blood Bank to support continuity of operations.
6. Prior to transferring blood products into a newly conditioned Delta ICE 2L Cooler, readiness must be verified using the approved conditioning and validation process.
7. If the conditioning process is interrupted due to operational response, the insert shall be returned to the freezer and reconditioned per protocol prior to future deployment.
8. Once readiness is confirmed, blood product units shall be transferred to the newly conditioned Delta ICE 2L Cooler, the lid secured, and system integrity verified.
9. The outgoing insert set shall be returned to the designated freezer and conditioned at -18°C or colder for the manufacturer-recommended duration prior to reuse.
10. All container exchanges and readiness confirmations shall be documented within BloodComm at the time of completion.

Important

Failure to rotate and condition Delta ICE inserts in accordance with program protocol may result in loss of validated temperature integrity and compromise of stored blood products.

	Bridgeport Hospital Emergency Medical Services	
	Prehospital Blood Product Administration Standard Operating Procedures	
Delta ICE 2L QC Procedure		
Date effective: 05/19/2025		Date Revised: 02/19/2026

15.6 Delta ICE 2L QC Procedure

All EMS cold storage systems utilized within this program, including the Delta ICE 2L Cooler System, shall be validated by the Bridgeport Hospital Blood Bank prior to initial deployment and at least annually thereafter.

The Bridgeport Hospital Blood Bank is responsible for conducting initial and annual validation of all approved EMS blood storage and transport systems to ensure maintenance of required temperature parameters and compliance with program standards.

The Bridgeport Hospital EMS Medical Control Team shall oversee the validation schedule and coordinate with participating EMS agencies to maintain operational readiness. Temporary cold storage solutions will be provided by Bridgeport Hospital, if necessary, to ensure uninterrupted program operations during validation or equipment servicing periods.

	Bridgeport Hospital Emergency Medical Services	
	Prehospital Blood Product Administration Standard Operating Procedures	
Prehospital Transfusion Authorization		
Date effective: 05/19/2025		Date Revised: 02/19/2026

16.0 Prehospital Transfusion Authorization

16.1 Indications for Prehospital Whole Blood Administration

Prehospital whole blood may be administered to patients who meet the clinical criteria outlined in current Connecticut OEMS Protocol 4.3 and associated regional medical control guidelines.

Low-titer group O whole blood is approved for prehospital use across a broad patient population when clinically indicated, including adult, pediatric, and obstetric patients, in accordance with established protocol and medical control authorization.

Per Connecticut OEMS protocol, prehospital blood product transfusion is authorized for patients five (5) years of age and older who meet defined clinical criteria for suspected life-threatening hemorrhage or shock.

All administration shall occur under the oversight of the EMS Medical Control system and in accordance with approved training, credentialing, and documentation requirements.

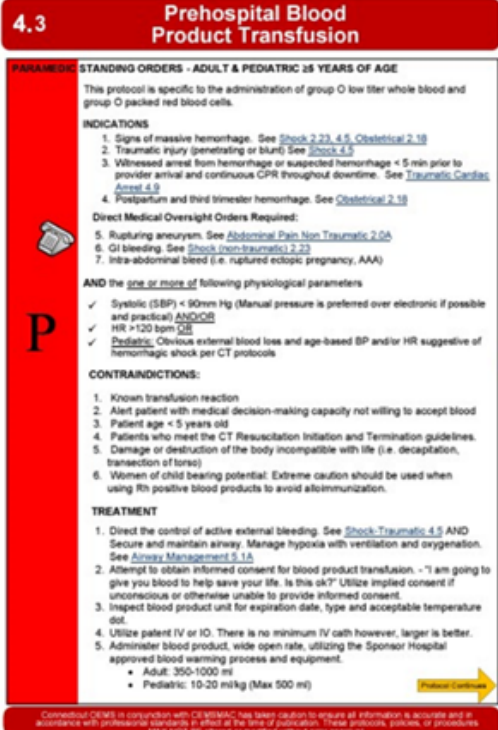
	Bridgeport Hospital Emergency Medical Services	
	Prehospital Blood Product Administration Standard Operating Procedures	
CT OEMS Protocol 4.3 Prehospital Blood Product Administration		
Date effective: 05/19/2025		Date Revised: 02/19/2026

16.2 CT OEMS Protocol 4.3 Prehospital Blood Product Administration

Prehospital whole blood may be administered to patients who meet the clinical criteria outlined in the current Connecticut OEMS Protocol 4.3 and associated regional medical control guidance.

It is the responsibility of the credentialed Transfusion Paramedic to ensure adherence to the most current version of the Connecticut OEMS protocol and to operate in accordance with Bridgeport Hospital/BH MMC/SHCGB Medical Control prehospital transfusion guidelines at all times.

<https://portal.ct.gov/dph/emergency-medical-services/ems/statewide-ems-protocols>





	Bridgeport Hospital Emergency Medical Services	
	Prehospital Blood Product Administration Standard Operating Procedures	
BH MMC/SHCGB Medical Control Prehospital Transfusion Guidelines		
Date effective: 05/19/2025		Date Revised: 02/19/2026

16.3 BH MMC/SHCGB Medical Control Prehospital Transfusion Guidelines

The Sponsor Hospital Council of Greater Bridgeport (SHCGB) authorizes paramedics who have successfully completed the approved Bridgeport Hospital/BH MMC/SHCGB prehospital transfusion training program, and who are sponsored by an EMS agency approved to participate in this program, to administer Low-Titer Group O Whole Blood (LTOWB) in accordance with Connecticut OEMS Protocol 4.3.

Authorized transfusion paramedics shall follow all clinical indications and operational guidance outlined within the current Connecticut OEMS protocol and associated Bridgeport Hospital/BH MMC/SHCGB Medical Control prehospital transfusion guidelines.

Paramedics may waive the requirement for Direct Medical Oversight (DMO) for indications five (5), six (6), and seven (7) as specified within CT OEMS Protocol 4.3 when the patient clearly meets the associated physiological criteria outlined therein.

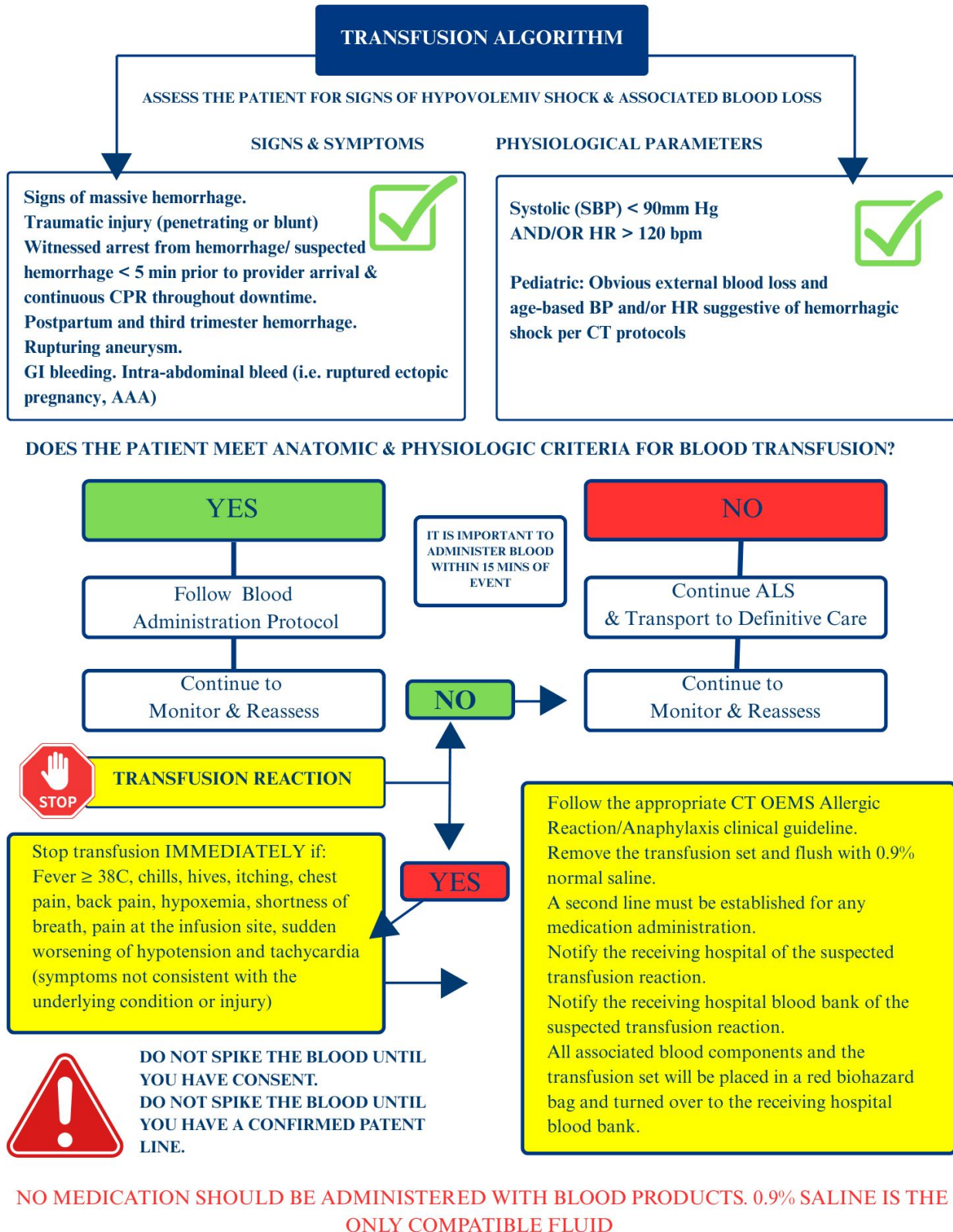
Transfusion of women of childbearing potential shall be performed with careful clinical consideration and in accordance with established protocol and medical control guidance.

Contraindications

Prehospital LTOWB transfusion shall not be initiated under the following conditions:

- Known prior severe transfusion reaction to blood products
- A patient with decision-making capacity who declines blood transfusion, or a parent/legal guardian with capacity who declines consent for a minor
- Patient age less than five (5) years
- Patients who meet Connecticut Resuscitation Initiation and Termination of Resuscitation guidelines
- Injuries incompatible with life (e.g., decapitation, hemicorporectomy, complete transection of the torso)
- Medical Control order directing that transfusion not be performed

Bridgeport Hospital EMS Prehospital Blood Transfusion Program



	Bridgeport Hospital Emergency Medical Services	
	Prehospital Blood Product Administration Standard Operating Procedures	
Prehospital Blood Product Administration Pearls		
Date effective: 05/19/2025		Date Revised: 02/19/2026

17.0 Prehospital Whole Blood Administration Procedure

If a patient meets clinical criteria for prehospital blood transfusion, the credentialed transfusion paramedic shall initiate transfusion in accordance with Connecticut OEMS Protocol 4.3 and Bridgeport Hospital/BH MMC/SHCGB Medical Control guidelines.

Preparation and Initiation

1. Control active hemorrhage using all appropriate hemorrhage control measures.
2. Position the patient supine when clinically feasible.
3. Establish peripheral intravenous access or intraosseous access (large bore preferred).
 - If intraosseous access is utilized, the humeral head is the preferred site when appropriate.
4. Confirm patency of the vascular access prior to initiating transfusion.
5. Obtain verbal consent when applicable and when patient condition allows.
6. Perform visual inspection of the blood product, confirming:
 - Correct unit and documentation
 - Expiration/return-by date
 - Acceptable temperature status
 - Absence of discoloration, clots, or leakage
7. Prepare and verify all transfusion equipment.
8. Spike the blood unit using an approved filtered transfusion administration set.
 - Blood shall not be spiked until consent is obtained when applicable and a patent line is confirmed.
9. Administer blood using the approved blood warming device.
10. Initiate transfusion and document the transfusion start time per agency policy.
11. Utilize an approved pressure infuser device when clinically indicated to support flow.

Monitoring During Transfusion

- Continuously monitor the patient for signs of transfusion reaction or clinical deterioration.
- Transfusion reactions most commonly occur within the first 10–15 minutes of administration and require close observation during this period.
- Document transfusion completion time in accordance with agency policy.

Clinical Monitoring and Considerations

All patients receiving prehospital blood shall be continuously monitored for transfusion reactions and hemodynamic response throughout administration and transport.

No medications shall be administered through the same line as blood products.

0.9% normal saline is the only compatible fluid permitted for concurrent use with blood products.

General Clinical Indications (Reference)

Common clinical presentations where transfusion may be indicated per protocol include:

- Suspected massive hemorrhage from traumatic injury (blunt or penetrating)
- Witnessed cardiac arrest secondary to suspected hemorrhage with minimal downtime
- Obstetric hemorrhage, including postpartum or late-term pregnancy
- Suspected ruptured aneurysm
- Severe gastrointestinal hemorrhage
- Suspected intra-abdominal hemorrhage (e.g., ruptured ectopic pregnancy, AAA)

All transfusions must meet Connecticut OEMS Protocol 4.3 criteria and medical control guidance.

	Bridgeport Hospital Emergency Medical Services	
	Prehospital Blood Product Administration Standard Operating Procedures	
QinFlow Blood & Fluid Warmer Operational use		
Date effective: 05/19/2025		Date Revised: 02/19/2026

17.1 QinFlow Blood & Fluid Warmer – Operational Use

The approved QinFlow blood and fluid warming system shall be utilized for all prehospital blood administration in accordance with manufacturer guidance and program protocol.

Preparation

1. Confirm battery charge status prior to deployment.
 - Ensure battery is adequately charged and securely connected to the controller.
2. Remove the QinFlow disposable administration set from packaging and inspect for integrity and sterility.
3. Close all roller clamps prior to spiking the blood product.
4. Spike the inspected blood unit using the approved administration set and prime the tubing in accordance with manufacturer instructions, ensuring all air is removed prior to patient connection.
5. Confirm patent vascular access prior to connection of blood administration tubing.

Device Activation

6. Connect the QinFlow controller to the power source to initiate system start-up and self-check sequence.
7. Once system readiness is confirmed, connect the disposable administration set to the controller per manufacturer instructions.
8. Ensure tubing is fully primed prior to connecting the warming system to prevent device alert or interruption in function.

Administration

9. Initiate transfusion and adjust flow rate in accordance with clinical need and device capability.
10. The warming system will maintain blood temperature within therapeutic range during active infusion when operated according to manufacturer specifications.
11. Continuously monitor device status indicators and patient response throughout administration.

Important Safety Considerations

- Blood must be actively flowing through the system for warming to occur.
- Do not administer medications through the same line as blood products.
- 0.9% normal saline is the only compatible fluid for concurrent use.
- If device malfunction or alarm occurs, troubleshoot per training and transition to contingency measures as needed.

	Bridgeport Hospital Emergency Medical Services	
	Prehospital Blood Product Administration Standard Operating Procedures	
Prehospital Blood Product Transfusion Reactions		
Date effective: 05/19/2025		Date Revised: 02/19/2026

17.2 Prehospital Blood Product Transfusion Reactions

If a transfusion reaction is suspected at any time during administration, the transfusion shall be discontinued immediately.

1. Stop the transfusion and maintain vascular access with 0.9% normal saline using new administration tubing.
2. Manage the patient in accordance with the current Connecticut OEMS Allergic Reaction/Anaphylaxis clinical guideline and local medical control direction.
3. Establish a secondary vascular access line for medication administration when clinically feasible.
4. Continuously monitor patient condition and provide supportive care as indicated.

Notification Requirements

5. Notify the receiving hospital as early as possible of the suspected transfusion reaction.
6. Ensure the receiving hospital Blood Bank is notified of the suspected reaction upon arrival or during pre-arrival communication when feasible.
7. Notify the Bridgeport Hospital EMS Blood Administration Program Manager as soon as practicable following patient transfer of care.

Blood Product and Equipment Handling

8. All blood components, administration tubing, and associated transfusion equipment shall be placed in a red biohazard bag and transferred to the receiving hospital Blood Bank for evaluation.
9. Do not discard any blood product or transfusion equipment in the field.

Documentation and Reporting

10. All suspected transfusion reactions shall be documented in accordance with program reporting requirements.
11. A formal adverse event report shall be submitted through the appropriate safety reporting system by the Bridgeport Hospital EMS Medical Control Team following notification of the event.

	Bridgeport Hospital Emergency Medical Services	
	Prehospital Blood Product Administration Standard Operating Procedures	
Prehospital Blood Inspection Pearls		
Date effective: 05/19/2025		Date Revised: 02/19/2026

18.0 Prehospital Blood Inspection Pearls

Whole blood (WB) consists of the cellular (red blood cells, white blood cells, and platelets) and plasma elements of blood suspended in an anticoagulant solution. The component is an even, liquid suspension of the cellular elements and plasma elements and ranges in color from bright cherry red to very dark burgundy.

Upon resting (or following centrifugation) the cellular elements, being heavier, will settle or layer to the lowest points of the storage bag. The component will then contain an upper layer of plasma (various shades of yellow) with a lower layer of cells in various shades of red. Depending on the method of separation, a narrow layer of white blood cells and platelets may appear between the red cell mass and plasma and will be white in color.

Numerous conditions may affect the safety, quality, identity, purity and potency of a final blood component, making it unsafe for transfusion.

Heat, cold, mishandling, contaminants, manufacturer defects, donor illness and other factors can cause a blood component to be unsuitable for transfusion.

Blood and blood components must be inspected immediately before use. If, upon visual inspection, the container is not intact or the appearance is abnormal (presence of excessive hemolysis, a significant color change in the blood bag as compared with the tubing segments, floccular material, cloudy appearance, or other problems), the blood or blood component must not be used for transfusion, and appropriate follow up with the blood bank must be performed.

Blood products shall not be administered if visual inspection or handling concerns suggest potential compromise of product integrity. Conditions that may render a blood component unsuitable for transfusion, or that may reasonably raise concern regarding safety, include but are not limited to:

- Hemolysis
- Lipemia
- Icterus
- Presence of particulate matter
- Abnormal discoloration
- Suspected bacterial contamination
- Presence of foreign material or objects within the unit

Any blood product demonstrating the above findings, or otherwise appearing compromised, shall be removed from service and managed in accordance with established quality control and return procedures.

18.1 Normal Red Blood Cells



Red Blood Cells (RBCs) consist of the concentrated red cellular component remaining after removal of most plasma and the original anticoagulant solution. Depending on the manufacturing and processing method, RBC units may contain small residual amounts of white blood cells and platelets.

Many RBC components include an additive or preservative solution introduced after plasma and cellular component reduction to support red cell viability during storage. The final product is a homogenous liquid suspension of red blood cells within the remaining plasma and additive solution.

Visual characteristics of RBC units may vary and can include:

- RBC components without additive solution may appear more viscous or “thicker” than those containing additive solution.
- Units may present in a range of red coloration.
- Brighter red or cherry-red coloration may be observed in units with lower hematocrit or those processed using filtration methods that incorporate sterile air-venting techniques.
- Darker red, burgundy, or deep burgundy coloration may be observed in units with higher red blood cell concentration or in non-additive RBC components.

Variation in color or viscosity alone does not necessarily indicate compromise of the blood product; however, any abnormal appearance or concern for product integrity shall be evaluated in accordance with established quality control and inspection procedures prior to administration.

18.2 Hemolysis

Hemolysis is the destruction of red blood cells resulting in the release of hemoglobin into the surrounding plasma. This process may cause discoloration of the plasma portion of the blood product. Hemolysis may be partial, involving destruction of some red blood cells, or complete, involving destruction of all red blood cells within the unit.

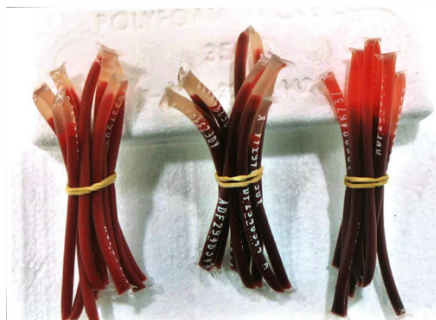
Hemolysis may occur due to a variety of factors, including but not limited to:

- Traumatic collection or handling of the blood product
- Exposure to incompatible solutions
- Use of small-bore, kinked, or obstructed tubing
- Exposure to excessive mechanical stress or pressure
- Temperature extremes outside validated storage parameters
- Bacterial contamination
- Improper storage or handling conditions
- Normal aging of the blood product during storage

Bridgeport Hospital EMS Prehospital Blood Transfusion Program

Blood suppliers utilize established quality standards to determine acceptable levels of hemolysis at the end of the storage period. Visual inspection is commonly used as part of routine quality assessment to evaluate product acceptability.

Any blood product demonstrating visible signs consistent with hemolysis or compromised integrity shall not be administered and must be managed in accordance with established quality control and return procedures.



NORMAL

NORMAL

NOT NORMAL



NORMAL RBC UNIT



RBC with 0.38% hemolysis

18.3 Particulate matter

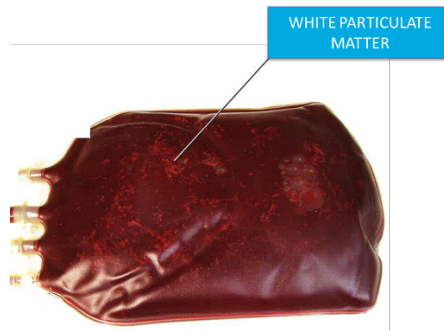
Particulate matter may be present in blood components as a result of routine collection, processing, and storage. These particulates can include cellular elements or proteinaceous material such as red blood cells, white blood cells, platelets, coagulation factors, tissue fragments, or lipid material. The quantity and size of particulate matter may increase over time during normal storage.

All blood components shall be administered through an approved transfusion filter designed to remove particulate material exceeding the filter's pore size.

Particulate matter may be further classified as:

- Clots
- Fibrin strands
- Cellular aggregates
- White particulate matter
- Flocculent material
- Cold agglutinins

Any blood product demonstrating excessive particulate matter, visible clots, or findings inconsistent with expected storage appearance shall not be administered and must be managed in accordance with established inspection, quality control, and return procedures.



18.4 Discoloration

Discoloration refers to an atypical appearance in the color of a blood component. While a range of red hues is expected and normal, unusual coloration may occur due to donor-related metabolic factors, processing variables, or, less commonly, contamination.

Potential causes of discoloration may include:

- Certain medications (e.g., hormonal contraceptives)
- Vitamin supplementation
- Metabolic or genetic conditions affecting pigment or copper metabolism
- Bacterial contamination
- Improper preparation, storage conditions, or equipment malfunction

Variation in color alone does not necessarily indicate that a blood component is unsafe for transfusion. However, any appearance inconsistent with expected product characteristics or raising concern for contamination or compromise shall prompt removal from service and management in accordance with established quality control and return procedures.

Appearance	Possible Cause
Pale green	Oral contraceptive
Dark greenish brown	Icterus
Bright or fluorescent green	Drug therapy or possible bacterial contamination
Bright yellow to orange	Vitamins
Reddish	The presence of red blood cells or hemoglobin

18.5 Clots

Clots may form within a blood component through activation of the coagulation cascade, which involves plasma coagulation factors and may incorporate platelets. Anticoagulant solutions are added during collection and processing to prevent or minimize clot formation; however, clotting may still occur under certain conditions.

Clots may develop as a result of:

- Traumatic collection or handling during venipuncture
- Inadequate mixing of blood with anticoagulant during collection or processing
- Insufficient anticoagulant volume
- Bacterial contamination

The presence of visible clots within a blood component is not considered acceptable for transfusion. Any unit demonstrating clot formation shall be removed from service and managed in accordance with established quality control and return procedures.



18.6 Foreign Object



PIECE OF DETACHED CANNULA IN
RED CELLS

	Bridgeport Hospital Emergency Medical Services	
	Prehospital Blood Product Administration Standard Operating Procedures	
Prehospital Blood Transfusion Hospital Notification		
Date effective: 05/19/2025		Date Revised: 02/19/2026

19.0 Prehospital Blood Transfusion Hospital Notification

All patients receiving a field blood transfusion must notify the destination facility via their prehospital notification system that a field blood/blood product transfusion has been initiated.

Notification must be relayed via a CMED or TigerConnect (Twiage)-recorded MED channel or over a recorded phone line.

If the patient is having a trauma alert, you must include field transfusion initiation in your patch, after confirming the patient is a trauma alert.

Field-to-hospital communications should take place before leaving the scene where possible.

In high-acuity or multi-patient incidents, early notification to the receiving facility with concise and accurate information is prioritized over a delayed, detailed report immediately prior to arrival. Early communication supports hospital readiness and facilitates timely coordination of definitive care.

Those using TigerConnect (Twiage) will note blood transfusion has been added to their intervention button.

	Bridgeport Hospital Emergency Medical Services
	Prehospital Blood Product Administration Standard Operating Procedures
Bridgeport Hospital EMS Blood Product Administration Documentation	
Date effective: 05/19/2025	Date Revised: 02/19/2026

20.0 Quality Management, Data Surveillance, & Documentation

20.1 BH EMS Blood Product Administration Documentation

The Transfusion Paramedic will complete the following 2 forms after the transfer of care of a patient who received prehospital blood/blood product.

- Bridgeport Hospital Emergency Release of Uncrossmatched Blood for Prehospital Use Form
- Bridgeport Hospital Transfusion Record & Quality Review Form

An Electronic Patient Care Record shall be completed as soon as possible after the transfer of care at a receiving facility. The ePCR must be submitted in a timely manner. A copy of the required Bridgeport Hospital forms must be emailed to the sponsor hospital medical control team, prior to the end of shift and no later than 24 hours of the call.

All ePCRs must include the following pertinent details:

- Date of Use
- Time of Use
- Service Name
- Patient Name
- MRN
- DOB
- Nature of Call
- Location of Incident
- EMS Care Team Providers & Roles
- Transfusion Lead Medic
- Chief complaint/primary impression
- Initial findings prior to and post blood administration:
- Manual BP, HR, RR, Resp quality, Skin color

Transfusion Details:

- Blood Type: O-Positive/O-Negative
- Other:(please describe)
- IV catheter size and location
- Transfusion start time and completion time
- Time bag turned over to ED staff
- Amount infused
- Other fluids: Type and volume administered
- Any signs of transfusion reaction? If yes, describe

Bridgeport Hospital EMS Prehospital Blood Transfusion Program

- Treatment provided for any transfusion reaction
- Patient hand off assessment/evaluation – no issues, issues, challenges, etc.
- Any comments, notes, tips, challenges

	Bridgeport Hospital Emergency Medical Services	
	Prehospital Blood Product Administration Standard Operating Procedures	
Bridgeport Hospital EMS Blood Product Administration CQA/CQI		
Date effective: 05/19/2025		Date Revised: 02/19/2026

20.2 BH EMS Blood Product Administration CQA/CQI

20.3 Clinical Oversight

The EMS Medical Control team responsible will review 100% of all EMS whole blood utilization calls.

Calls will be reviewed for appropriate utilization, patient response to treatment, temp on arrival, patient outcomes.

Standard CQA/CQI policies will apply. These policies have a process for corrective action that includes:

- Description of the event.
- Investigation of the root cause(s) of nonconformances relating to the product or service, the process, and the quality system.
- Determination of the corrective action needed to eliminate the cause of nonconformances, as applicable.
- Ensuring that corrective action is reviewed and found to be effective.
- Investigation and corrective action shall include consideration of deviations, nonconformances, and complaints

Blood Bank will also review calls as per Blood Bank procedures.

Records regarding the Prehospital Blood Administration Program including all forms and checklists will be maintained for a minimum of five (5) years.

The Bridgeport Hospital EMS Blood Transfusion Program has a process for preventive action that includes:

- Analysis of appropriate sources of information to detect, analyze, and eliminate potential causes of nonconformances.
- Determination of steps needed to address any problems requiring preventive action.
- Initiation of preventive action and application of controls to ensure that it is effective.

The Bridgeport Hospital EMS Blood Transfusion Program team will track and identify trends in information related to its operational and quality system performance to identify opportunities for improvement.

The Bridgeport Hospital EMS Blood Transfusion Program will monitor blood utilization and wastage.

20.4 Equipment Controls

The Bridgeport Hospital EMS Blood Transfusion Program team has comprehensive standard operating procedures to ensure that products, equipment, materials, and analytical functions perform as intended. Quality control results shall be reviewed and evaluated against appropriate acceptance criteria.

Participating EMS Agencies will review these procedures and create agency specific SOPs that align with the program's requirements.

Participating Agencies will submit their Agency specific blood administration SOPs to Bridgeport Hospital EMS Medical Control for review upon initial program roll out. Agency SOPs should be resubmitted at every medical control renewal cycle and anytime changes to SOPs are made.

20.5 Quality Oversight & Monitoring

The Bridgeport Hospital EMS Program Manager, or designee, shall conduct routine review of temperature management and quality control data on a monthly basis and as otherwise indicated.

Temperature management and associated documentation platforms shall be monitored by designated representatives from the Bridgeport Hospital EMS Department, Blood Bank, and participating EMS agency leadership to ensure ongoing compliance with program standards.

EMS personnel shall promptly report any operational issues, equipment concerns, or system challenges to the Bridgeport Hospital EMS Medical Control Team.

The EMS Medical Control Team will coordinate notification and follow-up with the Bridgeport Hospital Blood Bank for all reported operational concerns to support timely resolution and continuous program improvement.

20.6 Process Planning

Quality requirements shall be incorporated into new or changed processes, products, services, and novel methods. Planning and implementation activities shall include the following:

- Evaluation of accreditation, regulatory, and legal requirements related to the new or changed process, product, or service.
- Review of current available knowledge (e.g., review of medical practice and/or literature).
- Evaluation of risk.
- Identification of affected internal and external parties and mechanism to communicate relevant information.
- Identification of performance measures applicable to the new or changed process, product, or service.
- Evaluation of resource requirements.
- Evaluation of the impact of the new or changed process, product, or service on other organization (or program) processes.
- Evaluation of the need to create or revise documents for the new or changed process, product, or service.
- Review and approval of the output of process development and design activities (e.g., pilot or scale-up study results, process flow charts, procedures, data forms).
- Evaluation of the extent and scope of process validation or revalidation depending on the level of risk and impact of the new or changed products or services.

20.7 Process Validation

Before implementation, the new or changed processes and procedures shall be validated.

Validation activities shall include the following:

- Identification of objectives, individual(s) responsible, expected outcomes, and/or performance measures.
- Criteria for review of outcomes.
- Approval of validation plan.
- Review and approval of actual results.
- Actions to be taken if objectives are not met.

20.8 Process Implementation

The implementation of new or changed processes and procedures shall be planned and controlled. Postimplementation evaluations of new or changed processes and procedures shall be performed.

Use of Materials

All materials shall be stored and used in accordance with the manufacturer's written instructions and shall meet specified requirements.

Inspection

The Bridgeport Hospital EMS Blood Transfusion Program shall ensure that products or services are inspected at preapproved defined stages.

Identification and Traceability

The organization shall ensure that all products or services are identified and traceable.

Process or Procedure Steps

For each critical step in transportation, inspection, and administration of blood and blood components, there shall be a mechanism to identify who performed the step and when it was performed.

Traceability

The Bridgeport Hospital EMS Blood Transfusion Program shall ensure that all blood, blood components, and critical materials used are identified and traceable from source to final disposition.

Final Disposition

The Bridgeport Hospital Blood Bank shall be responsible for recording the final disposition of blood or blood components.

Receipt of Blood and Blood Components

The blood and blood components shall be inspected at the time of removal from the transport container and/or storage device, and it shall be verified that the following conditions are met:

- The unit has remained in a validated transport container or storage device within the specified period.
- The unit appearance meets visual inspection criteria.
- The unit has an attached label or tie tag indicating the donation identification number, and compatibility testing has not been performed.

	Bridgeport Hospital Emergency Medical Services
	Prehospital Blood Product Administration Standard Operating Procedures
REFERENCES	
Date effective: 05/19/2025	Date Revised: 02/19/2026

21.0 References

This program is developed and maintained in accordance with current Connecticut OEMS protocols, AABB standards, and evidence-based literature supporting prehospital transfusion practices.

- Connecticut Office of Emergency Medical Services (CT OEMS). *Statewide Emergency Medical Services Protocols*, Version 2024.1.
- Association for the Advancement of Blood and Biotherapies (AABB). *Technical Manual*, 21st Edition.
- Association for the Advancement of Blood and Biotherapies (AABB). *Standards for Emergency Prehospital and Scheduled Out-of-Hospital Transfusions*, 1st Edition. Effective July 1, 2025.
- American College of Surgeons Committee on Trauma; American College of Emergency Physicians; National Association of EMS Physicians; and others. *Prehospital Hemorrhage Control and Treatment by Clinicians: A Joint Position Statement*. Prehospital Emergency Care. 2023. <https://doi.org/10.1080/10903127.2023.2195487>
- Brown JB, et al. *Prehospital Whole Blood Reduces Early Mortality in Patients with Hemorrhagic Shock*. Transfusion. <https://doi.org/10.1111/trf.16528>
- [Author(s)]. *From Shortages to Solutions: Liquid Plasma as a Practical Alternative to Whole Blood for Prehospital Trauma Resuscitation*. Transfusion. <https://doi.org/10.1111/trf.18183>
- AABB. *Circular of Information for the Use of Human Blood and Blood Components*. Current Edition.

Bridgeport Hospital EMS Prehospital Blood Transfusion Program

	Bridgeport Hospital Emergency Medical Services
	Prehospital Blood Product Administration Standard Operating Procedures
Program Contact List	
Date effective: 05/19/2025	Date Revised: 02/19/2026

22.0 Program Contact List

Bridgeport Hospital Blood Bank 203-384-3062

Bridgeport Hospital Blood Bank Medical Director 203-214-1745

Bridgeport Hospital Off Shift Administrative Manager

Bridgeport Hospital EMS Medical Control Manager 203-260-9731

Bridgeport Hospital Blood Product Prehospital Transfusion Program

Name	Dept.	Email
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April Alfano, Director of Nursing ED/EM	ED	April.Alfano@YNHH.org
Douglas Latham, EMS Medical Director	ED	Douglas.Latham@bpthosp.org
Justin Cahill, Chair of Emergency Medicine	ED	Justin.Cahill@bpthosp.org
Daryn Brauner, ED Nurse Manager	ED	Daryn.Brauner@bpthosp.org
Edward Snyder, Blood Bank Director	BB	edward.snyder@yale.edu
Aziza Ezzaki, Laboratory Manager	BB	Aziza.Ezzaki@bpthosp.org
JR Teodorico Lee, Executive Director	BB	Teodorico.Lee@ynhh.org
Kevin Schuster,	TRAUMA	kevin.schuster@yale.edu
Ayodele Sangosanya	TRAUMA	ayodele.sangosanya@yale.edu

EMS SHCGB Partners

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Elizabeth Egan, EMS Coordinator	HHC SVMC	elizabeth.egan@hhchealth.org
Kelly Tenney, ED Nurse Manager	HHC SVMC	Kelly.tenney@hhchealth.org

Bridgeport Hospital EMS Prehospital Blood Transfusion Program

EMS Agency Partners

Name	Org	Email
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Erin Smith, Operations Supervisor	Stratford EMS	esmith@townofstratford.com
Jack Rodican, Paramedic Supervisor	Stratford EMS	jrodican@townofstratford.com
Colin Bassett, Chief	Trumbull EMS	cbassett@trumbull-ct.gov
Andrew Weber, Deputy Chief	Trumbull EMS	aweber@trumbull-ct.gov
Chris Calkins, Paramedic Captain	Trumbull EMS	ccalkins@trumbull-ct.gov
Steven Kennedy, Paramedic Captain	Trumbull EMS	skennedy@trumbull-ct.gov
William Schietinger, Executive Director	AMR BPT	wSchietinger@gmr.net
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	Bridgeport Hospital Emergency Medical Services	
	Prehospital Blood Product Administration Standard Operating Procedures	
GRATITUDE		
Date effective: 05/19/2025		Date Revised: 02/19/2026

23.0 Gratitude

AMR Bridgeport

Stratford Emergency Medical Services

Trumbull Emergency Medical Services

Sponsor Hospital Council of Greater Bridgeport

Saint Francis Hospital Medical Control Team

- John Pettini, DO, FACEP, EMS Medical Director
- Patrick Gauthier, EMS Manager
- Jenny Levesque, Blood Bank Director
- Saint Francis Hospital Blood Bank
- Saint Francis Hospital Department of EMS/ Office of Medical Direction

AMR Greater Hartford

- Brandon Bartell, Operations Manager, AMR Greater Hartford/Northeast Connecticut
- Jane Gordon, Clinical Education Supervisor, AMR Greater Hartford/Northeast Connecticut

All AMR Field Clinicians

- Granby Ambulance Association
- Kate Coupe, Chief of Service
- All GAA Field Clinicians

Yale NewHaven Health Bridgeport Hospital	Bridgeport Hospital Emergency Medical Services	
	ADDENDUM A	
Bridgeport Hospital Emergency Release of Uncrossmatched Blood for Prehospital EMS		
Date effective: 05/19/2025		Date Revised: 02/19/2026

24.0 Addendum A

	Bridgeport Hospital Emergency Medical Services
	ADDENDUM B
Bridgeport Hospital Prehospital EMS Transfusion & Quality Review Record	
Date effective: 05/19/2025	Date Revised: 02/19/2026

25.0 Addendum B

	Bridgeport Hospital Emergency Medical Services	
	ADDENDUM C	
Bridgeport Hospital EMS Blood Product Daily QC Form		
Date effective: 05/19/2025		Date Revised: 02/19/2026

26.0 Addendum C

	Bridgeport Hospital Emergency Medical Services
	ADDENDUM D
Bridgeport Hospital EMS Blood Product Incident Reporting Form	
Date effective: 05/19/2025	Date Revised: 02/19/2026

27.0 Addendum D

	Bridgeport Hospital Emergency Medical Services
	ADDENDUM E
Bridgeport Hospital Prehospital EMS Blood Transfusion Paramedic Competency Checklist	
Date effective: 05/19/2025	Date Revised: 02/19/2026

28.0 Addendum E

Transfusion Paramedic		Evaluator	
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Purpose:

This competency validates the paramedic's ability to safely prepare, administer, and manage blood products and associated cold storage equipment in accordance with EMS blood program standards.

Instructions to Evaluator:

- Each step must be performed **in listed order**.
- Mark:
 - ✓ = Competent
 - ✗ = Needs remediation
- Provide comments for any remediation.
- All sections must be completed successfully for authorization.

Clinical Preparation & Verification

Step	✓/✗	Comments
Reviews Indications for blood administration		
Determines if patient is appropriate candidate		
Obtains verbal or implied consent		
Verifies blood unit expiration date		
Performs visual inspection of unit integrity		
Confirms appropriate temperature		
Confirms correct blood type/product		

Bridgeport Hospital EMS Prehospital Blood Transfusion Program

Confirms no leaks, clots, or defects		
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Equipment & Setup

Step	✓/✗	Comments
Assembles all required access		
Verifies patent vascular access		
Performs hand hygiene & PPE		
Connects approved warmer/controller to battery		
Confirms battery/power status		
Selects approved transfusion tubing		
Primes tubing with normal saline		
Spikes blood using approved set		
Confirms Warmer operation & in range		

Administration & Monitoring

Step	✓/✗	Comments
Initiates transfusion via approved warmer		
Verbalizes start time documentation		
Verbalizes monitoring for reaction		
Identifies signs/symptoms of reaction		

Bridgeport Hospital EMS Prehospital Blood Transfusion Program

Verbalizes appropriate reaction management		
Verbalizes completion/end time documentation		

Communication & Documentation

Step	✓/✗	Comments
Provides required patient handoff info		
Notifies receiving facility of blood administration		
Notified receiving facility of any reaction		
Completes required blood administration forms		
Reviews submission requirements		
Completes ePCR documentation requirements		
Reviews EMS QC/Logistics documentation		
Reviews Current SOPs and protocol updates		

Part 2: Cold Storage & Cooler Exchange (Delta ICE 2L)

Bridgeport Hospital EMS Prehospital Blood Transfusion Program

Step	✓/✗	Comments
Reviews cold storage system and requirements		
Verifies completion of daily temperature check w/l BloodComm		
Removes cooler insert from freezer		
Confirms container is fully frozen (no liquid/slosh)		
States container cannot be used if not frozen		
Places new insert onto TempWatch mat		
Ensures proper placement on mat (Confirming White Logo)		
Allows insert to temper to a Blood safe range (TempWatch will glow green)		
Wipes exterior moisture/condensation after tempering		
Removes old insert and blood unit from Delta Device		
Places blood unit into new insert, and insert into cooler		
Ensure proper placement, and lid is secure		
Confirms temperature control is working		
Secures cooler appropriately for service		
Cleans outgoing insert		
Returns outgoing insert to freezer for conditioning (≥8 hrs at -18°C)		

Final Competency Determination

First Attempt:

- ☐ Competency Met
☐ Remediation Required

If remediation required:

Post Remediation:

- ☐ Competency Met
☐ Not Met — Authorization Pending Medical Director Review

- If the transfusion paramedic is unsuccessful at competency after remediation, the transfusion paramedic's authority to administer blood will be temporarily suspended.
- The transfusion paramedic must complete/retake the approved education program.
- Once complete, the transfusion paramedic must successfully complete the competency review check with a member of the EMS Medical Control Team to have their authorization reinstated.

Evaluator Signature: _____ **Date:** _____

Paramedic Signature: _____ **Date:** _____

Program Authorization:

Upon successful completion, the above paramedic is approved for participation in the BH EMS Prehospital Blood Administration Program

	Bridgeport Hospital Emergency Medical Services	
	ADDENDUM F	
CT OEMS Protocol 4.3 Version 2024.1		
Date effective: 05/19/2025		Date Revised: 02/19/2026

29.0 Addendum F

Yale NewHaven Health Bridgeport Hospital	Bridgeport Hospital Emergency Medical Services	
	ADDENDUM G	
Transfusion Algorithm		
Date effective: 05/19/2025		Date Revised: 02/19/2026

30.0 Addendum G

Yale NewHaven Health Bridgeport Hospital	Bridgeport Hospital Emergency Medical Services	
	ADDENDUM H	
Blood Bank Flow Chart		
Date effective: 05/19/2025		Date Revised: 02/19/2026

31.0 Addendum H