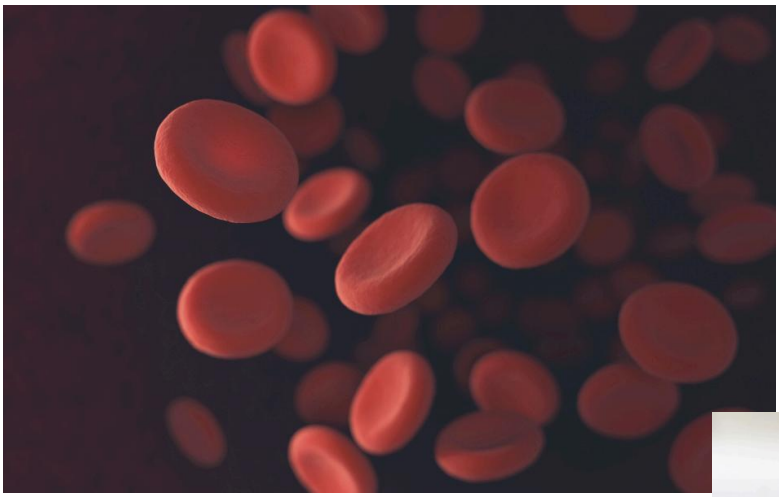
Whole Blood Use In MTP Activation



Whole blood provides physiologically balanced resuscitation for patients in hemorrhagic shock, delivering red blood cells, plasma, and platelets in near-native ratios that more closely approximate what the patient is losing. This approach avoids the dilutional coagulopathy and delayed hemostasis associated with crystalloid-heavy or component-based resuscitation. Evidence from military trauma care and over 70 civilian trauma centers demonstrates improved survival, faster achievement of hemostasis, and reduced transfusion-related complications. UCHealth has successfully used whole blood in trauma resuscitation since October 2019, and it is currently for MTP activations in multiple facilities throughout the UCHealth system.

Starting May 19th 2026 - Whole blood will be the first-line product distributed in ALL MTP activations (the Labor and Delivery Unit will be excluded from this change) when available.

This initiative expands whole blood use to **ALL** MTP activations throughout the hospital to ensure every patient in hemorrhagic shock receives optimal resuscitation. Component therapy will be used following whole blood administration or in the event that Whole blood is currently unavailable.

What's Changing

BEFORE	AFTER (May 18th, 2026)
Whole blood primarily for trauma MTPs	**Whole blood for ALL MTP activations**
Component therapy in first cooler	**4 units whole blood in first cooler**
Multiple products to verify separately	**Simplified verification process**
9.6% of MTP patients receive whole blood	**Target: 80% of MTP patients receive whole blood**

What stays the Same

- MTP activation process is unchanged—call Blood Bank, EPIC chat, EPIC Order and activate MTP as you always have
- The Labor and Delivery Unit will continue to receive component therapy for all MTP activations
- Component therapy remains available after the first cooler
- Blood Bank phone number and support are the same

Learn more about Whole Blood resuscitation

- Efficacy and Safety of Whole B in Non-Trauma Patients
- Hospital use of LTOWB and gr
- Malkin_2021_safety of WB vs c Review
- Br J Haematol - 2023 - Yazer - equality in transfusion medicir

- Return unused products to Blood Bank as you do now

Quick Reference: How Do I Do This?

Activating the MTP

The MTP activation process is unchanged. When you recognize hemorrhagic shock requiring massive transfusion, activate the MTP through your normal process. Whole blood will automatically be included in the first cooler—no additional orders required.

What's in the First Cooler

4 units of Low-Titer O Whole Blood (LTOWB) • Compatible with all patients regardless of blood type • Each unit provides RBCs, plasma, and platelets in physiologic ratios • Transfuse as you would any blood product

Verification Process

Standard two-person verification at bedside:
1. Verify patient identity (name, DOB, MRN)
2. Verify unit number matches paperwork
3. Check expiration date and inspect bag
4. Document as per standard transfusion protocol

What If I Don't Need All 4 Units?

Use what the patient needs. Return unused units to Blood Bank promptly—this is no different than current MTP practice. Whole blood can be returned to inventory if kept at appropriate temperature.

What Comes After the First Cooler?

Subsequent coolers will contain component therapy (packed RBCs, plasma, platelets) per standard MTP protocol.

Frequently Asked Questions

Why whole blood instead of components?

Whole blood delivers red cells, plasma, and platelets in the same ratios they exist in the body—approximately what the patient is losing during hemorrhage. This provides more physiologically balanced resuscitation than mixing separate components, which can result in dilutional coagulopathy. Studies show whole blood is associated with faster hemostasis, reduced overall transfusion requirements, and 30-50% mortality reduction in hemorrhagic shock.

What about Rh-negative patients or women of childbearing age?

We use Low-Titer O-positive whole blood (LTOWB). For Rh-negative patients, including women of childbearing potential, the priority in hemorrhagic shock is survival. The risk of hemolytic disease of the fetus/newborn (HDFN) from RhD sensitization is less than 0.3%, and modern management with RhIG (RhoGAM) post-transfusion effectively mitigates this risk. The benefit of immediate whole blood resuscitation outweighs the small theoretical future risk. If a known Rh-negative patient is stable enough to wait for type-specific blood, that option remains available.

Isn't whole blood just for trauma patients?

No. While most research originated in trauma, the physiology of hemorrhagic shock is the same regardless of cause. A patient bleeding from a GI ulcer, postpartum hemorrhage, or ruptured AAA has the same physiologic needs as a trauma patient: replace what they're losing with balanced resuscitation. At UCH, 85% of MTP activations are non-trauma—these patients deserve the same standard of care.

What if I prefer to use component therapy?

This initiative doesn't eliminate component therapy—it front-loads whole blood for initial resuscitation when seconds matter. After the first cooler, component therapy will be used for ongoing resuscitation based on lab values and clinical judgment. The goal is to provide the fastest, most physiologic resuscitation in the critical first minutes. If you anticipate that you are going to want component therapy you can order both the first and second cooler at the same time.

Is there evidence for using whole blood in non-trauma patients?

Most published literature focuses on trauma, but the physiologic rationale applies to all hemorrhagic shock. Military and civilian trauma centers have demonstrated improved outcomes with whole blood, and the underlying mechanism—balanced resuscitation avoiding dilutional coagulopathy—is relevant regardless of hemorrhage etiology. UCHealth has used whole blood successfully in trauma since 2019 and is expanding based on this experience.

What if my patient has antibodies or special transfusion needs?

In emergency hemorrhagic shock, the immediate need for resuscitation takes priority. Low-titer O whole blood is designed to be universally compatible for emergency use. If the patient has known antibodies or special requirements AND is stable enough to wait, contact Blood Bank to discuss options. In true hemorrhagic shock, don't delay—start whole blood and communicate with Blood Bank about patient history.

Will this slow down getting blood to my patient?

No—it should be faster. Whole blood simplifies the first cooler: 4 units of one product instead of multiple components that need to be pulled, verified, and matched separately. Blood Bank can prepare and release the first cooler more quickly with whole blood.