BloodTrack®
Software Solutions

Frequently Asked Questions

1. What is BloodTrack® Software solutions?

BloodTrack is a modular suite of blood management and bedside transfusion solutions that combines software with hardware components. The software provides the blood bank with the control, visibility and traceability it needs to safely and properly store and dispense blood products in clinical areas, and helps you verify that the *right* blood is transfused to the *right* patient at the bedside.
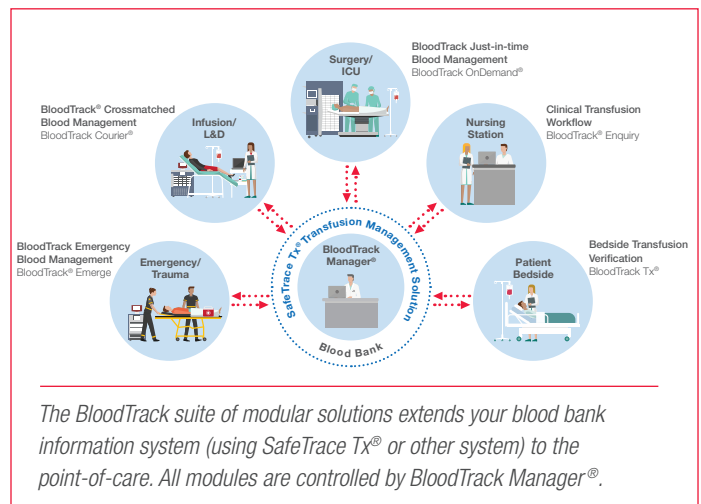
2. Why do I need BloodTrack Software solutions?

The BloodTrack suite of modular software solutions acts as an extension of your blood bank information system (BBIS). The software physically secures and electronically verifies and monitors your hospital's blood supply chain to ensure the *right* blood product is transfused to the *right* patient, at the *right* time, in the *right* condition.

BloodTrack solutions control, track and monitor blood products by securing existing storage units (e.g., refrigerators, room temperature cabinets or freezers) or HaemoBank® devices with software-controlled electromagnetic locks connected to a BloodTrack kiosk.

BloodTrack solutions electronically documents user access, blood product movements and out-of-storage times, helping you achieve compliance with your regulations, guidelines and standard operating procedures (SOPs) — in effect extending the walls of your blood bank to the point-of-care. This provides you with the visibility needed to make informed, real-time decisions to help ensure timely patient care, patient safety and regulatory compliance.

Plus, institutions that have implemented BloodTrack modules in strategic locations have seen an improvement in patient care efficiency, a decrease in blood inventory and a reduction in blood waste.[1]

3. What are the modules included in the BloodTrack suite of solutions and how are they used?

The BloodTrack suite of modular solutions extends your blood bank information system (using SafeTrace Tx® or other system) to the point-of-care. All modules are controlled by BloodTrack Manager®.

- The integrated modules within the BloodTrack suite of solutions help to ensure that each link in the blood supply chain is optimized to reduce blood bank workload, eliminate waste and provide better patient care.

- These modules fall under the following three categories:
  - Emergency Blood Management (BloodTrack Emerge)
  - Crossmatched Blood Management (BloodTrack Courier®)
  - Just-in-time Blood Management (BloodTrack OnDemand® in combination with the BloodTrack HaemoBank®)
  - Bedside Transfusion Verification (BloodTrack Tx®)

All of the modules are connected to a centralized control and management system called BloodTrack Manager. BloodTrack Manager is located in the blood bank and provides a centralized view of actionable, real-time hospital-wide blood product inventory, patient transfusion activity data and real-time alerts. It allows the blood bank to monitor and track blood products and access BloodTrack-controlled storage devices to help ensure compliance and patient safety.

[1]*Staves, J., et al.* Electronic remote blood issue: a combination of remote blood issue with a system for end-to-end electronic control of transfusion to provide a "total solution" for a safe and timely hospital blood transfusion service *Transfusion.* 2008 Mar;48(3):415-24. Epub 2007 Dec 7.

HAEMONETICS®

- **BloodTrack® Emergency Blood Management – BloodTrack Emerge**
  BloodTrack Emerge, our emergency blood management system, controls, tracks and monitors access to emergency blood products, including trauma packs, in the emergency department, trauma area or outpatient surgical center by securing new or existing storage devices with software-controlled electromagnetic locks. This provides your authorized caregivers with safe, fast access to life-saving blood products where and when they are needed most.

  The software works with any storage device and the BloodTrack HaemoBank®, creating an emergency blood management system.

  It also helps you meet the American College of Surgeons (ACS) Trauma Quality Improvement Program (TQIP) Guidelines for storing universally compatible RBC and thawed plasma in the emergency department (ED) or trauma area to support ratio-based transfusions.

  American College of Surgeons (ACS) Trauma Quality Improvement Program (TQIP) Massive Transfusion in Trauma Guidelines recommends 'Universally compatible RBC and thawed plasma should be immediately available and ideally stored in the emergency department (ED).'

- **BloodTrack Crossmatched Blood Management – BloodTrack Courier®**
  BloodTrack Courier, our crossmatched blood management system, controls, verifies and monitors emergency and crossmatched blood products (RBCs, plasma and platelets) in clinical areas such as labor and delivery, intensive care units and oncology by securing new or existing storage devices with software-controlled electromagnetic locks.

  The software works with any storage device and the BloodTrack HaemoBank, creating a crossmatch blood management system.

- **BloodTrack Just-in-Time Blood Management – BloodTrack OnDemand®**
  BloodTrack OnDemand, our just-in-time blood management system, quickly allocates the *right* blood product to the *right* patient where and when it's needed, eliminating the need to crossmatch and label blood products in advance and reducing blood bank and clinical staff workload. The software is designed to work with the BloodTrack HaemoBank, creating a virtual 24/7 automated transfusion service to help you allocate and dispense products "just-in-time" at the point-of-care.

- **BloodTrack Clinical Transfusion Workflow – BloodTrack Enquiry**
  BloodTrack Enquiry, our clinical transfusion workflow software, works with BloodTrack point-of-care blood management solutions to provide nurses and clinicians with a real-time view of blood inventory by location. The software has the ability to check crossmatch sample validity, view and query the location of blood units, determine the patient's transfusion status and monitor the status of transfusions from any workstation. BloodTrack Enquiry helps to improve clinical efficiency and reduce unnecessary calls to the blood bank.

- **BloodTrack Bedside Transfusion Verification – BloodTrack Tx®**
  BloodTrack Tx Software is an FDA 510(k)-cleared bedside transfusion verification solution that electronically verifies the *right* blood is transfused to the *right* patient at the bedside and records transfusions, patient vitals, reactions and staff IDs for Hemovigilance compliance. It can also generate and print blood bank specimen collection labels.

4. What is the BloodTrack HaemoBank?

The BloodTrack HaemoBank blood storage system (sometimes referred to as a "smart refrigerator" or "blood vending machine") is a just-in-time blood allocation solution developed through a strategic partnership with Helmer Scientific, the leading blood bank cold storage manufacturer. It secures, tracks, monitors and remotely allocates unassigned, crossmatched and emergency blood products just-in-time, at the point-of-care.

The HaemoBank device is available with 20 or 80 individual secure locking compartments:
- The HaemoBank 80 device includes an attached access console consisting of a kiosk with scanner, printer, rotating shelf and a locked consumable cabinet.
- The HaemoBank 20 is available with a wall mounted or standalone kiosk and printer.

Depending upon the software configuration, the HaemoBank device may be used as an Emergency Blood Management system, Crossmatched Blood Management system or Just-in-time Blood Management system.

5. How can BloodTrack Software solutions help my organization?

The BloodTrack suite of modular software solutions provides you with visibility, traceability and proactive monitoring of blood inventory stored outside of the blood bank, and also helps to ensure positive patient identification at the bedside for transfusion. From a caregiver perspective, BloodTrack solutions can help improve your access to routine and emergency blood products by storing and dispensing them at the point-of-care. The software can also eliminate or reduce the hassle of manually completing paperwork required by your blood bank since transactions and movements (staff, unit, patient, time), including transfusion documentation, are recorded electronically.

BloodTrack Software solutions have been designed to create efficiencies, help lower costs, reduce crossmatch to transfusion (C/T) ratios and provide an overall improvement in patient care by reducing the time to transfusion.[2]

By implementing BloodTrack® Software solutions you can help your organization:

- Improve patient safety by verifying "*right* blood product, *right* patient" at the bedside
- Provide more efficient and accountable patient care
- Safely and properly store and dispense blood products at the point-of-care
- Maintain complete traceability and chain-of-custody accountability
- Eliminate the need to crossmatch and label blood products in advance for electronic crossmatch eligible patients
- Reduce time to transfuse by decreasing transport time
- Decrease blood waste
- Manage your workflow more efficiently and reduce staff workload
- Eliminate the need for coolers or unsecured refrigerators.

6. Which BloodTrack Software solution(s) is best for my organization?

Haemonetics' Business Optimization team can help your organization determine the best combination of BloodTrack solutions to fit your needs. In some instances, we recommend an "onsite" baseline assessment to help us learn as much as possible about your current operations to ensure that we recommend the right solution, configure it properly for your needs and establish the baseline against which we will show progress once BloodTrack solutions are implemented.

7. How do BloodTrack Software solutions work when my patient needs a transfusion?

When a patient needs a transfusion, authorized personnel go to the BloodTrack kiosk or BloodTrack HaemoBank® device and identify themselves, as well as the patient. Depending upon the nature of the need, either an emergency release is activated, or known patient request is made at the kiosk, using a pick-up slip or manually entering the patient's medical record number (MRN). The blood product dispensing and labeling process proceeds according to the configuration of the BloodTrack software, the type of interface with the transfusion management software and the patient's requirements.

A complete audit trail of all events related to a blood product is recorded from the time the authorized user accesses the kiosk, to the verification of the *right* blood, *right* patient at the bedside.

Each time that a blood product is handled, the BloodTrack Software verifies the following:

- The person accessing the BloodTrack kiosk or HaemoBank device is authorized to do so
- The patient is known and has a history on file (except for emergency release)
- The crossmatch has not passed its specimen expiration date
- The special needs of the patient are those managed by the BloodTrack Software

- The blood product has not passed its expiration date
- The blood product is the oldest available for the specified patient
- The blood product has not been outside of storage longer than appropriate

8. Can anyone access a BloodTrack kiosk or BloodTrack HaemoBank device and remove units of blood?

No. Only trained and authorized users are able to access BloodTrack kiosks and HaemoBank devices. Users must present credentials (e.g., badge, pin number or other site-defined identification process) at the BloodTrack kiosk or HaemoBank device, which verifies that the person accessing it is authorized to do so.

9. How is the patient identified at a BloodTrack kiosk or HaemoBank device?

Patient identification at a BloodTrack software-controlled storage device (kiosk or HaemoBank) can occur in 4 ways:

1. The safest method is to deploy the BloodTrack Tx® bedside transfusion verification solution at the patient's bedside and print a barcoded pick-up slip label after scanning the patient's barcoded wristband. The pick-up slip containing the patient's information can then be used as a digital key in unlocking the blood at a BloodTrack kiosk or HaemoBank device.
2. Pick-up slips can be printed by entering the patient's information into the BloodTrack Enquiry Clinical Software application, which may be installed on clinical workstations.
3. At the BloodTrack kiosk or HaemoBank device, authorized users can scan a patient's paper record containing his/her barcoded hospital number (e.g., MRN) into the kiosk.
4. Alternatively, authorized users can enter the patient's hospital number (e.g., MRN) or last name into the kiosk using a touch screen keyboard.

10. How does the BloodTrack Just-in-time Blood Management system work?
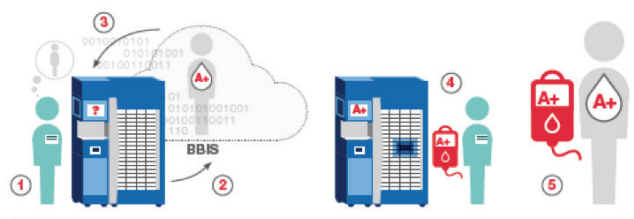
1. When a patient needs a transfusion, an authorized user goes to the HaemoBank device and identifies themself as well as the patient.
2. The BloodTrack Software communicates with the blood bank information system (BBIS) to determine ABO-Rh and eligibility of the patient.
3. The BloodTrack Software selects an appropriate unit and an electronic crossmatch is performed by the BBIS.
4. The blood is then automatically dispensed by the HaemoBank device, labeled and verified.
5. The unit is now ready to be delivered to the patient for transfusion.

[2]*Frank, Steven M. M.D.et.al*, Reducing Unnecessary Preoperative Blood Orders and Costs by Implementing an Updated Institution-specific Maximum Surgical Blood Order Schedule and a Remote Electronic Blood Release System. *Anesthesiology*. 2014 Sep;121(3):501-9.

11. In what types of storage devices are BloodTrack® Emergency Blood Management and BloodTrack Crossmatched Blood Management systems used or deployed?

The BloodTrack Emergency Blood Management (BloodTrack Emerge) and Crossmatched Blood Management (BloodTrack Courier®) systems can be deployed to control a wide variety of storage devices including refrigerators, room temperature cabinets, freezers and incubators/agitators. The software also works with the BloodTrack HaemoBank®, creating a crossmatch and/or emergency blood management system. The Project Manager can assess your specific storage device to ensure it can be secured with software-controlled electromagnetic locks connected to a BloodTrack kiosk.

12. Do I need an interface for the BloodTrack Emergency Blood Management system – BloodTrack Emerge?

No. The BloodTrack Emergency Blood Management system can be deployed without an interface to a BBIS. The BloodTrack Software connects to the BloodTrack kiosk and secures monitors and electronically records emergency blood product access, movements and out-of-storage times. This provides your authorized caregivers with safe, fast access to O Pos and O Neg RBCs, plasma and platelet products where and when they are needed. A barcoded report of dispensed units can then be printed from BloodTrack Manager® at the end of the day and scanned into your BBIS to reconcile the inventory.

13. Does our hospital need a wireless network to implement BloodTrack Tx® for blood verification at the bedside?

No. BloodTrack Tx can be deployed in non-wireless environments by leveraging 2D barcodes on the patient's wristband and blood unit compatibility label. Information on the mobile device can be uploaded to a central server via a cradle docking station.

14. What do the following terms mean: BloodTrack OnDemand®, remote allocation, remote assignment, "just-in-time" dispensing, and electronic remote blood issue (ERBI)?

BloodTrack OnDemand is the software configuration provided by Haemonetics that performs remote allocation using the HaemoBank devices, which are sometimes referred to as automated blood product dispensing refrigerators or blood vending machines.

- **Remote allocation** is also referred to as automating of the electronic crossmatch (EXM) and requires a bidirectional interface with the BBIS. Here the BloodTrack Software communicates with the BBIS to determine ABO-Rh and eligibility of the patient. If the patient is eligible, the BloodTrack Software selects an appropriate unit and an electronic crossmatch is performed by the BBIS. The unit is then automatically dispensed by the HaemoBank device, labeled and verified. Thus, allowing the process of allocating, dispensing and labeling blood products, just-in-time, at the point-of-care.
- **Remote assignment** is the process of assigning units to patients in the BBIS so that they can be dispensed and labeled at the point-of-care. This is the method used for unidirectional or print capture interface from the BBIS to a HaemoBank device.
- **Just-in-time dispensing** is the outcome of implementing BloodTrack — controlled storage devices.
- **ERBI** is the European term for remote allocation.

Note: Remote allocation and remote assignment are only available with a HaemoBank device.

15. Does BloodTrack have an interface with my BBIS?

BloodTrack has interfaces with most BBIS vendors. The nature of the interface may be one-way communication (unidirectional) or a two-way communication (bidirectional):

- **Unidirectional interface (Print Capture) – Remote Assignment**
  - Cerner® Classic, Sunquest®, Meditech® and any BBIS if the required data elements are on or can be added to the printed product compatibility label
- **Basic Bidirectional interface: Remote assignment**
  - Cerner Millennium V2012 and 2015
- **Full Bidirectional interface: Remote Allocation**
  - SafeTrace Tx®, Mediware® HCLL, BBCS, SCC Soft