



Rewriting the blood supply chain script for perioperative patients

Hospital in mid-Atlantic region improves turnaround time, reduces blood waste and decreases annual costs using a point-of-care blood management solution



BloodTrack® has fundamentally transformed our ability to deliver blood products by creating a more efficient process whereby blood is ordered just on time, and only when needed. This point-of-care solution has helped us significantly reduce unnecessary ordering and transfusing while realizing cost savings and enhancing patient care."

Anesthesiologist & Transfusion Committee Member

Introduction

For a major teaching and research hospital located in the mid-Atlantic, the process established for managing critical blood supplies was once an invitation for error. A long distance between the blood bank and the operating room presented challenges that were compounded by multiple supply chain complexities. The results of this combination included safety and compliance risks, delayed patient transfusions, increased waste and staff inefficiencies tied to management of the blood supply.

Like many hospitals, this well-regarded institution faced a fundamental challenge related to architecture. Its blood bank was located two floors and one entire wing away from the operating room suite. This location disparity created obstacles relating to physical delivery that the institution previously sought to resolve by use of pneumatic tube or human carrier. Either way, delays were common, with typical transport times of 30 minutes or longer. Plus, a complex delivery process that involved multiple handoffs created several points of potential failure as well as safety, visibility and efficiency concerns. The challenging combination of geography and delivery process ultimately led to inefficiencies, transport delays and blood component waste associated with mishandling.

Beyond the fundamental challenges involving distance and handoffs, longstanding operating procedures also contributed to waste and errors. For example, it was common for blood units that were received at the OR desk but not needed for immediate transfusion to be stored in unlocked refrigerators

at the OR Core. Often, units for multiple patients were stored together in the same refrigerator, with no mechanical barrier in place to prevent caretakers from grabbing the wrong unit. Additionally, blood components often remained after the patient left the OR, again creating opportunities to mistakenly reach for the incorrect unit. Finally, there was no effective way to monitor or control access to refrigerators.

But now, there's a better approach at work. The hospital is among a new breed of cutting-edge institutions that have rewritten their perioperative blood supply scripts for providing the correct blood components to the right patient quickly and accurately, using state-of-the-art, point-of-care blood management technology. The old storyline, with its manual procedures, multiple handoffs and invitations for error, is gone. The new themes are efficiency, cost savings and big improvements in safety and patient outcomes.



Point-of-care distribution

The hospital's new enabler of perioperative blood supply chain transformation is a revolutionary point-of-care blood management solution called BloodTrack OnDemand®, which allows the blood bank to operate remotely by electronically assigning blood components to patients and making them available at the precise time of need, while maintaining both the control and visibility needed for compliance and to ensure patient safety. Because components are labeled only at the time of dispensing, components not needed for transfusion are released in the blood bank computer system without further effort required from the blood bank staff.

The hospital went live in 2013 with the BloodTrack OnDemand point-of-care blood management solution from Haemonetics. Implemented in the hospital's 20-room OR plus its post-anesthesia care unit and its cardiovascular surgery recovery room, the BloodTrack system replaced old-school, manually intensive methods of distributing blood components with a new approach for managing critical informational demands tied to just-in-time point-of-care blood product dispensing.

From availability to turnaround time to patient safety, improvements have been dramatic since the implementation of BloodTrack OnDemand. One example: The average time required for blood to become available in a patient's room has plunged to less than 5 minutes from the previous average of 30 minutes – and as long as 60 minutes in some instances.

For a hospital that performs roughly 21,000 red blood cell transfusions annually, improving efficiency and reducing the complexity of blood supply systems and processes can produce a dramatic impact.

Implementing BloodTrack OnDemand to manage blood product allocation for the hospital's OR, PACU and CVRR has significantly streamlined the hospital's processes, eliminating hand-off risks, improving availability and reducing costs.

Here are capsule summaries of how BloodTrack OnDemand® has contributed to improved blood supply chain management in critical areas:

Transport

Previously, 4.5% of units issued to the OR were wasted, mainly because components were exposed to improper temperatures over extended transport durations. Now, units are available within five minutes of the originating order, enabling clinicians to transfuse patients when they need it, and without delay.

Utilizing a point-of-care blood management solution in patient care locations yields improvements in transport time while sharply reducing the number of human handoffs and incidents of improper handling.

Cost savings

Blood bank workloads related to preparing, packaging and transporting blood products – and tracking down missing or delayed units – has been significantly reduced, freeing resources for other tasks.

The BloodTrack OnDemand solution captures and records blood product movements, enforcing chain-of-custody accountability and helping to prevent diversions. By working with the blood bank computer system, the BloodTrack OnDemand solution eliminated the need to crossmatch and label products in advance.

Staffing for the blood bank has been reduced, and waste attributable mainly to out-of-temperature storage has decreased by 30 units per month, or 360 per year, producing annualized savings of more than \$90,000.* Additional savings have been achieved because BloodTrack OnDemand eliminates the need to use HemoTemp® temperature stickers, saving approximately \$10,000 annually.



As a clinician, having an unlocked, uncontrolled refrigerator creates the potential for error. BloodTrack's chain-of-custody accountability and security eliminates this problem while delivering greater efficiencies and cost savings for the hospital."

Safety and compliance

Using BloodTrack OnDemand ensures that blood products are stored under the proper conditions, handled by authorized users and available when needed. Making blood products available at the precise time they're needed obviates the need for OR staff to manually identify and procure blood units from unsecure and unmonitored refrigerators.

Confidence

Finally, there's the most important contribution of all, patient care. In an ideal scenario, being able to transfuse a patient when and where needed has clinical benefits. This makes point-of-care delivery of blood products, when the point-of-care is far away from the blood bank, even more important. BloodTrack eliminates these challenges by providing safe, fast access to blood products when and where they're needed, and security throughout the process.



BloodTrack provides a high degree of blood product availability, reduces the number of handling steps, and decreases the likelihood that a unit will go out of temperature. It also reduces the potential for a diversion because there is accountability for the handling of blood products throughout the entire process - from the blood bank to the patient."

*Based upon national average cost for RBCs.

The customer experience testimonial described here relates an account of a single institution's experience using BloodTrack Software. The account is genuine and documented. There may be factors other than the use of BloodTrack that could affect the ultimate outcome this institution experienced. However, we do not make any representation that this institution's experience is typical, and indeed it may not be typical. This institution's experience does not provide any indication, guide, warranty, or guarantee as to the experience other institutions may have with BloodTrack Software. The experience other institutions or customers may have with the product could be different. Experiences managing blood supplies, with or without BloodTrack Software, can and do vary among institutions.

For a list of worldwide office locations and contact information, visit www.haemonetics.com/officelocations

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