



Improving the patient's odds in "the golden hour"

A new emergency blood management system helps Medical City Plano drive efficiencies—and save lives.



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Matthew Carrick, MD
Medical Director of Trauma Services

Introduction

The late emergency medicine pioneer R. Adams Crowley coined the term “the golden hour” to describe the critical 60-minute period following an injury that’s crucial to patient survival. For the 547-bed Medical City Plano, in Plano, Texas, one aspect of “golden hour” treatment that had traditionally posed frustrations was a manual, multi-step process required to get blood to trauma patients.

The Medical City Plano emergency department treats 30-40 trauma patients monthly. It typically takes about 8 minutes to prepare and physically transport a cooler from the blood bank to the emergency department (ED). Trauma doctors at Medical City Plano routinely ordered coolers in advance of arrival for nearly all incoming trauma patients—whether they ended up needing transfusions or not. The tactic worked to ensure available blood supplies during critical moments, but resulted in inefficiencies and unnecessary inventory tie-ups, with only 10 percent of coolers fully used. It also sapped valuable staff time as technologists typically made 20-45 trips per month from the blood bank to the ED.

Different picture

But the picture has changed dramatically by adopting a new blood supply paradigm. The number of trips to and from the blood bank has plunged to one per month from as many as 45. And, Medical City Plano has gone from sequestering 30-40 coolers containing as many as 160 RBCs to a monthly average of fewer than 18—an improvement of more than 80 percent. [Improvements referenced are the experiences of one user and results may vary for other users.]

Most importantly, physicians and surgeons now have full confidence that critical blood supplies will be available when they need them. “In a situation where every second counts, I have immediate access to blood products,” says Matthew Carrick, MD, Medical Director of Trauma Services. “As a trauma facility that treats the most critically injured patients, there is peace of mind knowing this resource is available.”

The difference between the “before” and “after” posture is credited to the BloodTrack® Emergency Blood Management System which combines the BloodTrack Emerge software with a storage device. This new Emergency Blood Management System transformed the way Medical City Plano’s trauma department works. Since its November 2016 implementation, the system has triggered big improvements in blood use efficiencies, freed up technologists to perform important tasks, tightened traceability and inventory control procedures, and contributed to Medical City Plano’s bid to attain verification as a Level 1 trauma center.

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*Victor Portillo, MD
Trauma Surgeon*



Here are some of the specific improvements produced by the BloodTrack® Emergency Blood Management System [Improvements referenced are the experiences of one user and results may vary for other users.]:

- **More traceable blood supply:** The new system ensures that blood supplies are immediately available upon the patient's arrival in the ED and maintains visibility and control from the blood bank.
- **Proactive blood management:** Rather than preparing coolers of blood in case they may be needed in emergency situations, Medical City Plano's staffers now have ready access to emergency units whenever they're actually needed. Plus, audio and visual alerts notify the blood bank when emergency units are removed, allowing them to quickly respond.
- **More balanced workload:** Blood bank technologists no longer have to prepare coolers of blood and transport them back and forth to the ED—freeing up an estimated 6-10 hours of tech time per month during which they can perform other tasks.
- **Informed inventory management:** The blood bank now has a real-time view of inventory levels and restocking needs. Plus, by stocking emergency blood supplies in the ED, the blood bank isn't unnecessarily tying up group O RhD red blood cell units. Today, the blood bank stocks and maintains 2-4 units of O-negative, 4 units of O-positive, and 4 units of group A thawed plasma/liquid plasma in the BloodTrack Emergency Blood Management System.

More improvements are on the way. A few months after the initial implementation, Medical City Plano was making plans to take advantage of Massive Transfusion Protocol Pack management, enabling the release of multiple blood products (such as one unit of RBCs and one unit of thawed plasma) in a single transaction. The ability to immediately retrieve blood supplies in the ED also aligns with the American College of Surgeons' Trauma Quality Improvement Program, which recommends storing universally compatible blood products in the ED to support ratio-based transfusions.¹

The most profound impact of all, though, revolves around survival. "In a patient who comes in with hemorrhagic shock, where every second matters, having blood immediately available to begin the resuscitation process can potentially be the difference between life and death," says trauma surgeon Victor Portillo, MD.



1. The American College of Surgeons (ACS) Trauma Quality Improvement Program (TQIP) Guidelines recommends storing universally compatible blood products in the emergency department (ED) or resuscitation bay so that they are immediately available on patient arrival to support ratio-based transfusion.

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.

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