

Clark County Pre-Hospital Whole Blood Initiative

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BACKGROUND

Clark County, Nevada, lacked ground Emergency Medical Services (EMS) pre-hospital whole-blood available to the community. With the population of Clark County growing substantially every year, the need for whole blood availability could vastly improve the community's trauma medical needs. In 2023, a partnership began with the Clark County Fire Department and the main level one trauma center at University Medical Center. Pros include overall community trauma safety and a decrease in preventable deaths of hemorrhagic shock patients not surviving pre-hospital injuries. Cons include the lack of EMS protocols & training. Training financial responsibility to get this initiative up and running.

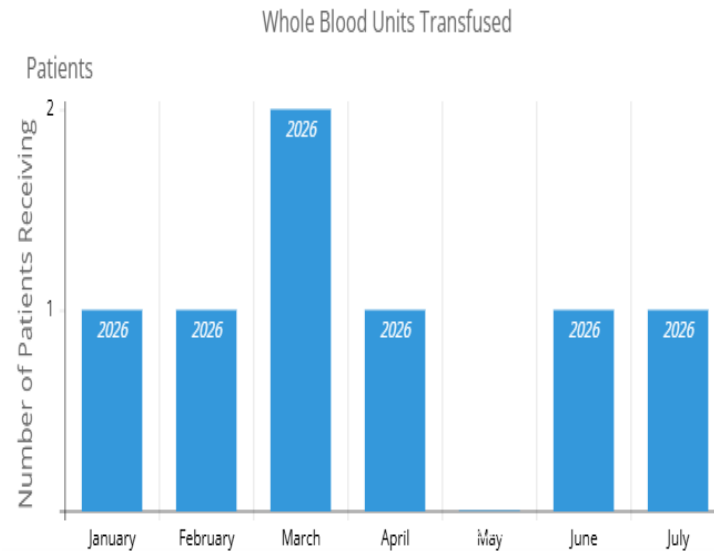
PURPOSE

Development and implement a prehospital whole blood program that enables EMS clinicians to administer low-titer O whole blood to trauma patients experiencing hemorrhagic shock before arrival to the Level I trauma center at University Medical Center. The goal is to reduce preventable mortality, improve early resuscitation, and strengthen the trauma system's ability to deliver timely, evidence-based care during the most critical phase of hemorrhage management.

METHODS

The project population includes all trauma patients meeting criteria for suspected hemorrhagic shock who were treated by the participating EMS agency during the project period. Data were drawn from two primary sources: (1) EMS electronic patient care reports (ePCRs) documenting prehospital assessment, interventions, and whole blood administration, and (2) receiving hospital clinical records confirming diagnosis, transfusion outcomes, and disposition.

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RESULTS

A total of seven trauma patients met criteria for suspected hemorrhagic shock and received prehospital whole blood during the project period. Ten units of low titer O positive whole blood were administered, with zero transfusion reactions reported. All administrations met protocol inclusion criteria, and 100% were documented in the ePCR using the standardized fields added during implementation. Three patients demonstrated optimal clinical response (improved hemodynamics and survival to discharge), while the remaining patients survived to hospital admission.

CONCLUSIONS

The implementation of prehospital whole blood demonstrated meaningful clinical, operational, and system level value for the EMS agency and trauma system. The project strengthened early hemorrhage management by enabling faster access to definitive resuscitation, supporting the overall goal of improving outcomes for patients with suspected hemorrhagic shock.

REFERENCES

