

Massive Transfusion Protocol in a Level 1 Trauma Center

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Introduction:

A level 1 trauma center can impose an unexpected burden upon a transfusion service at any time of day. Communication and understanding between the trauma team personnel and the transfusion service staff is critical. Having emergency blood products that are available at all times allows for a quick response to any unforeseen emergency until a specimen has been collected.

Implementing and adhering to a massive transfusion protocol can greatly decrease the burden put upon the transfusion service staff, and all people involved in patient care. The ultimate goal of this protocol is to safely provide the trauma team with blood products as quickly as possible.

Methods:

By setting specific guidelines in regards to the type of blood products issued, when they will be issued and where they will be sent allows for better patient care and a less stressful situation. As soon as type specific blood is available 2 sets of 10 leuko-reduced red cells, 4 fresh frozen plasma or equivalent, and 1 single donor platelet are setup and sent to the requesting location. The transfusion service maintains an additional set of these products on hold in the department. Manual transporters are used from the lab or hospital to deliver the products in validated coolers. Communication is also vital between the transfusion service and their medical director as well as the local blood center as inventory levels may begin to deplete.

Results:

After beginning the massive transfusion protocol-the high level of preparedness becomes apparent in any trauma situation that arises. The technologists' confidence helps provide adequate blood products as quickly as possible to the physicians. The physicians also feel more confident that they will have the blood products they need when they implement the massive transfusion protocol. Each situation varies greatly; some using only a dozen products, to the more in depth cases where blood product usage exceeds 200 units spanning multiple shifts.

Conclusion:

A detailed massive transfusion protocol is very effective. By working at a level 1 trauma center, transfusion service employees are exposed to these situations often and remain competent in the protocol. In smaller hospitals it may be necessary to construct training and competency testing annually to ensure technologists can execute it effectively when the need arises.