



SAFETY ALERT

Delayed Blood Transfusion

“Sharing Lessons Learned”

A Sentinel Event was reported last July 2021, related to confusion and delay in Blood Transfusion. It became crucial to illustrate the importance of differentiating between Emergency Blood Transfusion and Massive Blood Transfusion protocols.

Situation:

The patient was admitted with Upper Gastrointestinal bleeding and needed a lifesaving blood transfusion. The Blood Bank was contacted for an Emergency Blood Transfusion, so only one unit of Packed Red Blood Cells was provided.

Background:

The patient came to KFSH&RC- Jeddah with a history of vomiting large amounts of blood. The patient was stable and went for upper Endoscopy, which showed large esophageal varices. The patient’s level of consciousness started to deteriorate due to excessive melena with a drop in hemoglobin, which necessitated transferring the patient to a Critical Care unit, followed by intubation.

Assessment:

A Root Cause Analysis revealed several factors that contributed to this event:

- Δ **Policies and procedures:** Staff unawareness of the existing IPPs guiding the practice of Emergency Transfusion (*CIPP-3160*) and Massive Transfusion Protocol (*CIPP-3196*). This led to the inability to differentiate between the criteria, requirements, and protocol for each type of blood transfusion.
- Δ **System factors:** ICIS view shows three (3) types of Packed Red Blood Cells “*Routine, Emergency and Massive*” orders, which may lead to confusion in selecting the correct type.

Recommendation:

Several recommendations were made with some strong actions targeting system enhancements:

- Δ Simplify the ICIS ordering process using Human Factors Engineering to ensure selection of the appropriate (PRBS) order.
- Δ Build an alert reminder to order Type and Screen near expiry.
- Δ Develop and share guidelines with a process flowchart of ordering blood transfusion “to include direct communication with the Blood Bank.”
- Δ Review and update the Massive and Emergency Transfusion IPPs to be multidisciplinary.

Differences Between Massive and Emergency Blood Transfusion

Massive Transfusion	Emergency Transfusion
Require valid type & screen	Does not Require valid type & screen
10 cross-matched units minimum	2-4 uncross-matched units maximum
Group specific or ABO compatible	Always O Negative unit issued
Does not require Physician consent	Require Physician consent