

Prescription charts

Prescription charts used in NUTH are placed in a sleeve on the Major Haemorrhage box at the point of packaging by the laboratory staff, who also keep a record of which box has been issued and release times using the [telephone request sheet](#).

In order to ensure delivery of 1:1 to the patient NUTH made a number of systems / logistic changes.

1. Activate Major Haemorrhage Policy (MHP) early and use that solely.
2. Avoid use of any satellite fridges for O D neg blood or storage of products (NUTH have audited use of satellite O D neg and it is rarely used, usually only one unit per patient. As use of the MHP tends to ensure earlier and better delivery of balanced ratios, O D neg in satellite fridges has now been withdrawn from all locations including the Emergency Department, Trauma Theatres and Obstetrics).
3. Everything required for the MHP is delivered in Credo cool boxes and one cool box matches one round of the MHP.
4. All required documentation comes in a clear wallet inside the cool box. (This includes the major haemorrhage prescription sheets and a decision tree regarding storage as a reminder to staff).
5. Notably the box has a space for the laboratory staff to enter the time the box would need to be returned to the lab (2 hrs). The lab also provide a backup phone call at 90 mins, this is to clarify if the clinician would i. require further Major Haemorrhage boxes ii. stand down / return the partially used box back to the laboratory, to avoid wastage.

On arrival of the box in Theatre / ED

1. Affix Major Haemorrhage prescription sheet onto a wall
2. Delegate all checking of products to dedicated nursing staff member
3. Remove all units from box, check and sign (as per local policy) and **RETURN UNITS TO COOL BOX**.
4. As each unit is administered to patient, place the sticker onto the prescription sheet – no need to count bags and can be discarded once transfused. If labels are placed on the prescription sheet in real time, it is very quick / easy to see how many units have been given, if ratios correct or what is missing, and you always know what will be delivered next.

All MHP boxes are credo cool boxes which hold both 4 RBC and 4 FFP. We found that if things arrived in different boxes they weren't given simultaneously, and the ratios were usually wrong.

[Box 1](#) - 4 RBC and 4 FFP (contains no platelets)

[Box 2](#) - 4 RBC, 4 FFP and 2 pools platelets

[Box 3 and subsequent boxes](#) - 4 RBC, 4 FFP, 1 pool platelets and 2 pools of Cryo

The reasoning behind this decision is that many major haemorrhage activations are stood down either before any products are given or after ½ units have been given. With this level of blood loss the patient is unlikely to require platelet transfusion and we calculated that this could lead to a significant amount of platelet wastage if they were sent with the first box. By the time box 2 is required the patient has bled significantly and it is now a priority to restore balanced transfusion, this is achieved by the giving of 2 platelets at this point. To achieve 1:1:1 ratio box 3 and subsequent boxes then go on to contain 1 platelet each.

Cryo ratio slightly higher than 1:1:1:1 ratios but NUTH found that the order of > 3 boxes of the MHP is actually reasonably rare and those patients have significant trauma by comparison and often present with extremely low fibrinogen / severe ACOT and this recipe in clinical practice tends to work well.