

Improving blood stewardship on Labour Ward

Katie Morse, Rebecca Patel, Nuala Lucas, Abigail Richardson
Northwick Park Hospital, London North West University Healthcare NHS Trust

Introduction

Blood transfusion is a regular occurrence on a labour ward, with incidence of post partum haemorrhage (PPH) of 8.6% in a Welsh study (1). Our transfusion team reported large numbers of requests for crossmatched blood from labour ward, with relatively low numbers of units being used, putting pressure on their blood stocks. Blood remains allocated, by default, to a patient for up to 36 hours before being available for other patients. This is costly to the Trust, and increases the Trust's requirements at a time of national shortage, with ongoing 'amber alerts' for products (2). We wanted to explore methods to improve our blood stewardship, although acknowledged that there will always be a relatively high demand for crossmatched blood on labour ward. Labour wards can be isolated from the main hospital, with blood loss rapid but slightly unpredictable, meaning that blood may be crossmatched at a lower threshold than elsewhere in the hospital.

Aims

- To audit crossmatch requests made from labour ward, to determine whether these were appropriate, or whether education of requesting teams may improve stewardship.
- To encourage timely return of blood to the laboratory following haemostasis at delivery.

Methods

Following local audit approval, the electronic notes of all women for whom blood had been crossmatched during a one month period were reviewed. A list of patients was obtained from our transfusion team, and information about circumstances surrounding delivery with respect to bleeding risk was gathered. It was also noted what proportion of crossmatched blood was used.

Results

335 patients delivered during the month studied. 55 patients had at least one unit of crossmatched blood requested. Chart 1 shows the proportion of patients who received at least one unit of blood, whilst Chart 2 shows the proportion of units used compared to total crossmatched. Table 1 shows the indications for crossmatch.

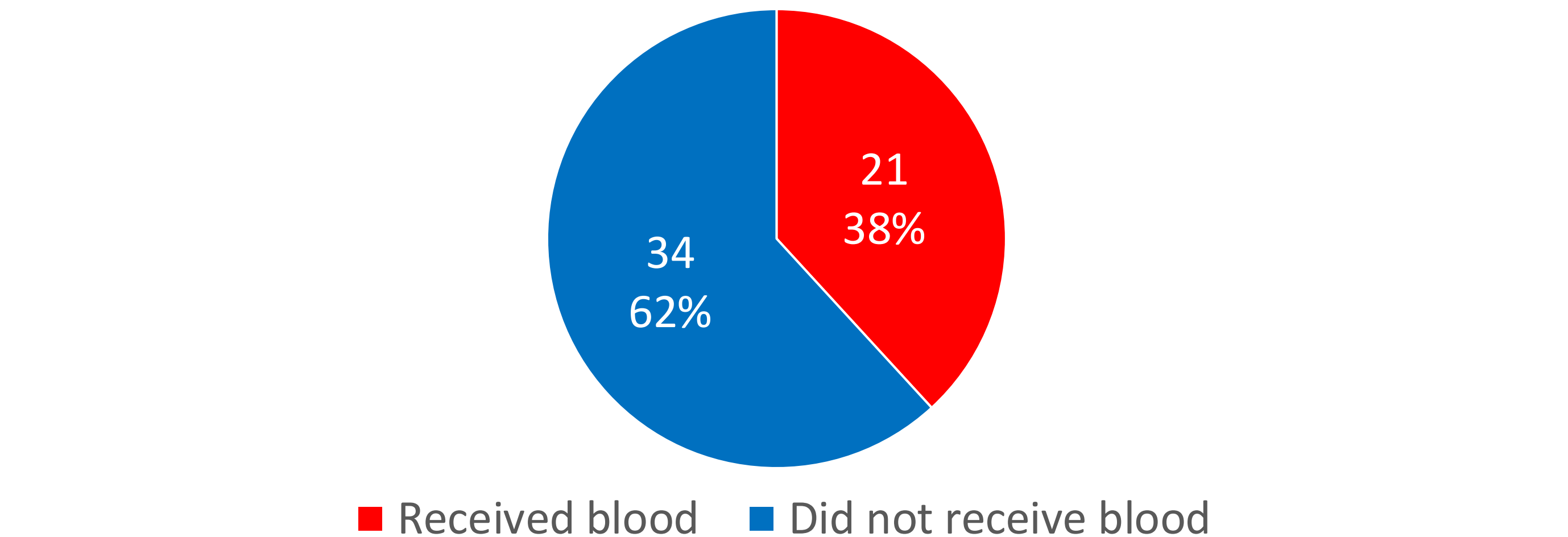


Chart 1. The number of patients who received at least one unit of blood, from the total of 55 patients who were crossmatched.

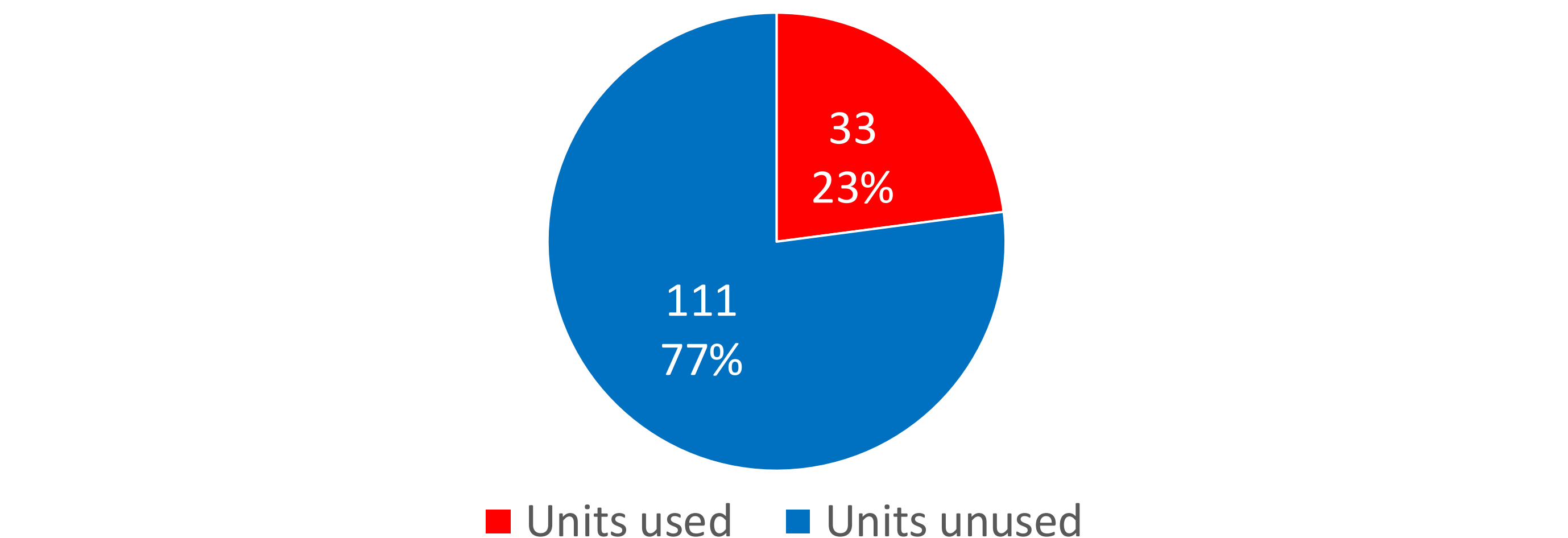


Chart 2. Total numbers of crossmatched blood transfused from the total units crossmatched.

Indication for crossmatch	Number of patients (% of patients)
Major obstetric haemorrhage	17 (31%)
Pre-operative anaemia	15 (27%)
Antibodies	7 (13%)
Other	7 (13%)
No clear indication	9 (16%)

Table 1. Indications for crossmatched blood

Discussion

Analysis revealed that most crossmatch requests were appropriate; however eventual rates of transfusion were fairly low. This reflects our remotely located labour ward, as there is a desire to have blood on our labour ward for those at risk of PPH, particularly out of hours when it can be more difficult to get timely delivery of blood. There is no guidance on when blood should be crossmatched, which leaves the decision at the discretion of the clinicians involved. This may be beneficial as it allows for factors such as location of labour ward to be considered. However, in some instances this may lead to over or under requesting of products.

Other methods for reducing transfusion of allogeneic blood were discussed, including cell salvage. Whilst cell salvage has an important role, we do not believe that its use will reduce the rate of crossmatching significantly, as nearly 50% of the patients studied did not have a Caesarean Section, preventing its use. In a high risk patient, it is not likely to prevent the team cross-matching some blood, although may reduce the actual transfusion of it into the patient. To potentially limit the impact of appropriate crossmatch on bloodstock flow, we have introduced educational initiatives to expedite the return of blood to stock following delivery and haemostasis. We provided posters (as seen in Figure 1) and brief education for the multi disciplinary team, encouraging discussion at the WHO sign- out following operative delivery as to whether blood could be 'un-allocated' from the patient and returned to stock.

Another focus for future work could be management of pre-delivery anaemia, as many crossmatch requests were for this.

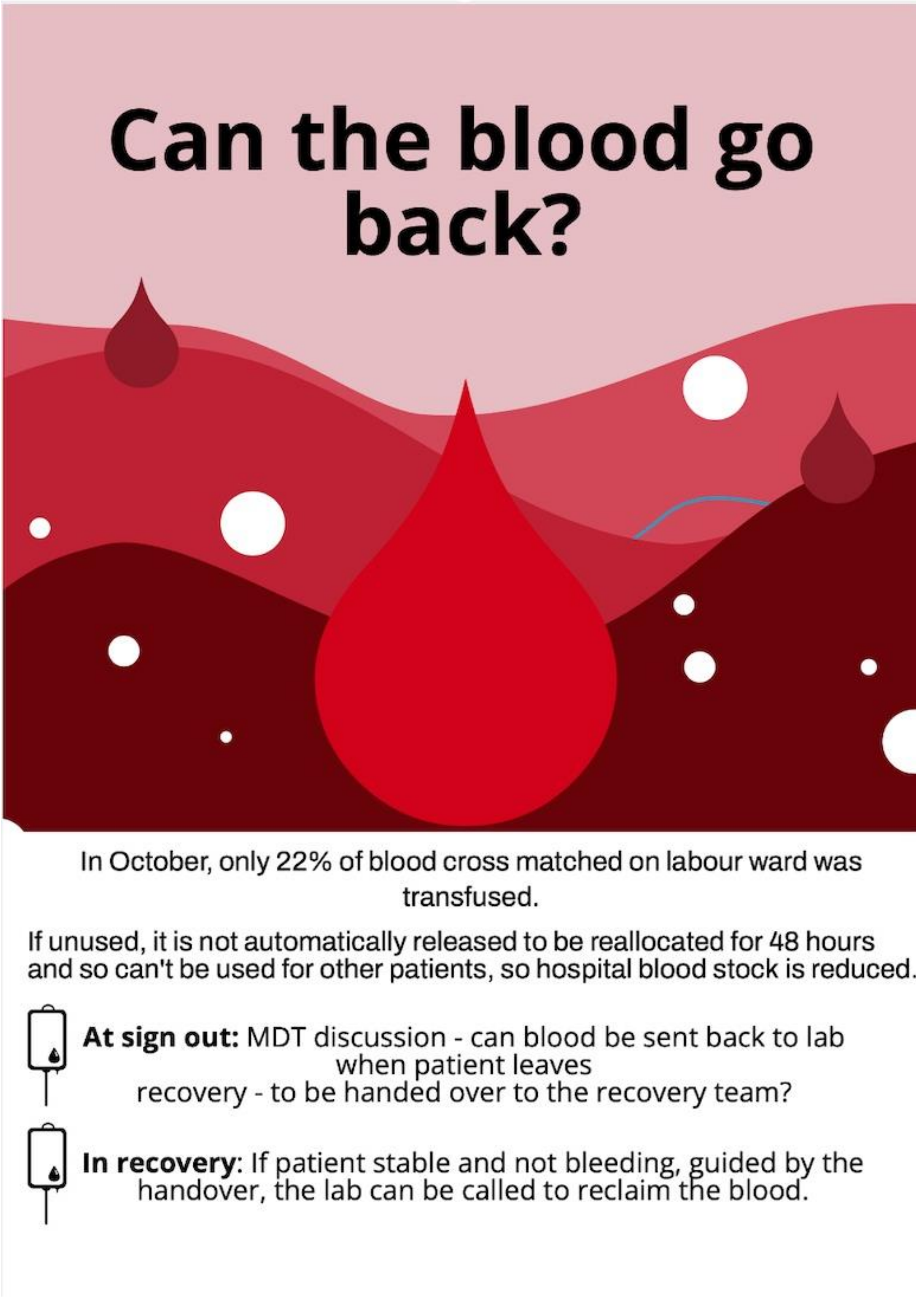


Figure 1. The poster provided to the MDT to encourage return of blood to the laboratory.