

Implementation of Remote Release Blood Fridges in the BHSCT; A Service Improvement Strategy

Introduction

The rapid and effective provision of red cells to patients is of major importance in transfusion medicine and is a lifesaving intervention. From this perspective, blood bank services are an essential resource within the hospital environment. In order to future proof blood bank services for an ever evolving and demanding health service, blood bank aims to maximise modern technology with the introduction of remote release blood fridges. It is hoped that this system will support existing services in the BHSCT in providing a sustainable, optimum quality blood bank service that will meet the present & future needs of the population.

The Hemosafe



The benefits of Remote Release Technology for the BHSCT

- The Hemosafe provides safe storage of cross matched, emergency and unallocated units of red cells within the Hemosafe blood fridge which will facilitate the remote issue of red cells across site
- Blood is readily available on site for the patient therefore reducing the waiting time for clinical staff to access blood. This is particularly useful given the geographical lay out of our trust.
- Staff will be able to access 'Ward inquiry' software to ascertain what blood is available for their patient without having to contact blood bank.
- In most circumstances, delays in surgery whilst waiting for the appropriate blood to be delivered will be obviated.
- It is anticipated that this system will help resolve many 'cold chain issues' which can lead to inappropriate wastage of red cells

Electronic Issue

Clinical staff may already be familiar with electronic issue which has been utilised by blood bank for some time. This system of blood issue occurs when the blood bank computer system permits the issue of blood to patients that have had two or more group & hold samples taken.

Importantly, these samples must be identical in ABO and RhD status and should show no clinically significant atypical antibodies either in the current sample or on any previous sample(s) (Staves *et al*, 2008).

These results are automatically uploaded to the Laboratory Information Management system (LIMS) which is interfaced with the 'remote issue technology', providing the system with important information such as the eligibility of patients for remote electronic issue or the assignment of specific units.

Therefore, if a patient is suitable for electronic issue, compatible blood can be issued to the patient by the Laboratory Information Management system (LIMS) and accessed from the HemoSafe blood fridge.

The Hemosafe

The Hemosafe blood fridge provides the storage, assignment and distribution of blood units at the point of care. With the integrated management software, the Hemosafe blood fridge facilitates the selection of the most suitable unit of blood for each patient and delivers it to the trained operator safely & efficiently. For those patients that are suitable for Electronic Issue, the HemoSafe blood fridge makes blood available 24 hours a day, 7 days a week therefore optimizing the distribution of blood units more effectively across the Belfast trust.

It also provides a cohesive and rational management of blood stocks for blood bank.

How does it work?

The HemoSafe is capable of holding a maximum stock of 110 units of blood. When blood is required, a bar-coded collection slip, containing all the patient details, will be scanned at the HemoSafe blood fridge. The collection slip is generated using specialist software (Blood track ward Inquiry) which is used in conjunction with the HemoSafe blood fridge. The Hemosafes' integrated computer is networked to the Laboratory Information Management system (LIMS) which facilitates the identification of and the subsequent selection and release of the most appropriate unit of blood for the patient.

An example of one of the potential processes involved in using the Hemosafe in the Mater hospital. This particular one is for those patients who are suitable for electronic issue

