The role of nurses in blood services and donor sessions

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On 14 June the National Blood Service (NBS) is hosting World Blood Donor Day (WBDD). The need for blood is universal and many people know of someone who has required blood to save or improve her or his life. The nurse is clinically responsible for the donation session, with the care of donors and the safety of the blood being their main priority.

On 14 June the National Blood Service (NBS) is hosting World Blood Donor Day (WBDD). The event commemorates the birth of Karl Landsteiner who discovered the ABO blood group system and offers an opportunity for blood services across the world to recognise voluntary, non-remunerated donors for their contribution to saving lives. WBDD is co-sponsored by four organisations that work for the global provision of safe blood – the World Health Organization, the International Federation of Red Cross and Red Crescent Societies, the International Federation of Blood Donor Organisations and the International Society of Blood Transfusion.

Access
Most of the world’s population does not have access to safe blood. More than 80 million units of blood are donated every year around the world but only 38 per cent is collected in developing countries where 82 per cent of the global population live (World Health Organization, 2002).

The use of blood
The need for blood is universal and many people know of someone who has required blood to save or improve her or his life. Blood contains three main components that are routinely used to treat many different types of patient – red cells, platelets and plasma.

Red cells
Red cells are essential for replacing lost blood after events such as accidents, surgery and childbirth, as well as for preoperative top-ups for patients with anaemia and those with burns. Regular red cell transfusions play a vital role in the treatment of patients with sickle cell anaemia and those with aplastic anaemia.

Platelets
Platelets allow the blood to clot and are essential for cancer patients who undergo chemotherapy. During chemotherapy the bone marrow (which makes blood cells) is damaged. If the patient is not given regular platelet transfusions, the slightest knock can be fatal. Patients with burns can also benefit from platelet transfusions.

Plasma
Fresh frozen plasma is used after obstetric loss of blood (usually in childbirth), during cardiac surgery and to reverse any anticoagulant treatment. It is also used to replace clotting factors following massive transfusions.

Blood collection
The demand for blood never ceases. Last year the NBS collected 2.3 million donations of blood from just over 1.3 million voluntary donors (National Blood Service, 2004).

When donors arrive at a blood donor session they are asked to complete a donor health-check form, which asks questions on lifestyle, medical and travel history. New donors and those who have not given blood in the last two years will also talk through the health check in more detail, in a confidential area, with a nurse or donor carer.

Providing the donor is suitable, a test will then be carried out to make sure that she or he is not anaemic and has a haemoglobin level high enough to ensure that donating will not result in anaemia. Haemoglobin levels are checked using a tiny drop of blood taken from the fingertip.

Before the donation takes place, a sample of blood is taken for both blood grouping and viral testing in the laboratory. About 470ml of blood is taken (just under one pint).

The body usually makes up the fluid from the donation within a couple of hours but the red cells may take up to two or three months to fully replace (Janetzko et al, 2001). The donation process can take anything from 5 to 20 minutes and is automatically stopped once the blood pack reaches the desired weight.
The NBS also has both tissue bank nurses and re- search nurses. They have a position to be able to directly influence patient care. In some regions the NBS provides a therapeutic apheresis service for their local hospitals. However, they also have a number of other critical roles. The NBS employs nurses to support hospitals to ensure blood is used as safely and as appropriately as possible and some NBS nurses are also in a position to be able to directly influence patient care. In some regions the NBS provides a therapeutic apheresis service for their local hospitals. The NBS also has both tissue bank nurses and research nurses.

**REFERENCES**


**BLOOD DONATION FACTS AND FIGURES**

- The NBS needs to provide 8,000 units of blood every day to the 310 hospitals in England and North Wales that it supplies.
- Only 6 per cent of the eligible population are blood donors.
- An average district general hospital uses between 6,600 and 9,000 units a year and a large hospital uses between 18,000 and 30,000 units a year.
- More than 95 per cent of blood collected is processed into its main components – red cells, platelets and plasma. Red cells last only 35 days and platelets only five days.
- There are currently about 1.8 million registered blood donors who give about 2.3 million units of blood each year.
- Each unit of blood collected is 470ml – just under one pint.
- To become a donor you must be aged from 17 to 60, weigh over 7st 11lb and be in general good health.
- For further information about becoming a blood donor, call 0845 7 711 711 or visit the www.blood.co.uk website.

The blood packs contain an anti-coagulant, which ensures that the blood does not clot once it has left the body. It is then heat-sealed and stored at body temperature before being sent along with the sample to an NBS blood centre where it will be processed, tested and then issued out to one of the 310 hospitals the centre supplies.

**Screening procedures**

The focus of all donor selection is safety, both for the donor and the recipient. It is often necessary for donors to discuss intimate health or lifestyle-related issues to ensure that they are suitable. No risks can be taken, so if the donor is unsure of anything, the NBS will not take a donation.

It is important to remember that an enthusiastic donor will, on occasion, find it difficult to accept that she or he cannot donate. It is the role of the nurse to be sensitive to donors’ needs and to ensure that they are motivated to return at a later date if they can.

If the volunteer cannot return it is important that the nurse clearly communicates the reason for the decision and shows appreciation for the effort that the person has made to help others.

Changes are made regularly to the donor selection guidelines so nurses face the challenge of keeping up to date with the guidance and ensuring that new and essential policies are put into practice. It is important that any changes are managed competently and accurately and with as little disruption to blood stocks and the relationship with donors as possible.

The testing system plays a very important role in ensuring a safe blood supply for patients. Blood is tested for both blood grouping and for infections that can be passed from a donor to a patient via blood transfusion. The NBS carries out mandatory virology tests for syphilis, hepatitis B, HIV 1 and 2, hepatitis C, and human T-cell lymphotropic viruses (HTLV) 1 and 2.

Supplementary tests are carried out on selected donations, either because of information provided by the donor or to meet the needs of certain patients. These tests include malaria testing, sickle haemoglobin screening, more detailed blood grouping and, very occasionally, tests for other relevant proteins in the blood.

The range of blood tests carried out by the NBS is under regular review and other tests may be introduced in the future.

**The role of the nurse**

The nurse is clinically responsible for the donation session, with the care of the donors and the safety of the blood being their main priority. It is also the role of the nurses to supervise the donor carers, who carry out a function similar to that of health care assistants in hospitals, and to ensure they deliver a first-class service.

As well as providing clinical leadership for the teams, nurses are also required to provide medical assessment expertise and have a critical role to play in the care and selection of donors. A donor carer will assess the suitability of the donor to a certain level but the nurse will provide advice relating to more complicated medical and travel issues. Making critical medical decisions regarding a donor’s suitability to donate requires extensive training and medical knowledge.

NBS nurses also help to educate both nurses and medics from hospitals, thus improving their knowledge about blood products and their uses. Informal training like this takes place through building up good links between the NBS centres and hospitals.

Most NBS nurses work in donation collection. However, they also have a number of other critical roles. The NBS employs nurses to support hospitals to ensure blood is used as safely and as appropriately as possible and some NBS nurses are also in a position to be able to directly influence patient care. In some regions the NBS provides a therapeutic apheresis service for their local hospitals. The NBS also has both tissue bank nurses and research nurses.