HIV-infected blood transfusions are responsible for about 5-10 per cent of HIV transmission worldwide. Using screening to prevent transmission is a cost-effective way of ensuring sufficient supplies of safe blood.

This section looks at the key issues to consider for ensuring blood safety.

Blood screening should be anonymous and linked. This means that the test result cannot be linked with the person whose blood has been tested, other than by the person themselves or a counsellor. Normally the blood sample is given a number or code, so that the person can be contacted if their results are positive.

Confidentiality must be ensured. Collecting infected blood poses a risk to blood bank workers and people who receive transfusions, and also wastes money and staff time. Blood transfusion services use strategies to avoid collecting infected blood, including encouraging only people who are at low risk of HIV infection to give blood, and counselling people about the need to be responsible donors and not to give blood if they have been at risk of HIV.

3.1 Reducing the risk of transfusing infected blood

Blood transfusion services use three strategies to reduce the risk of using infected blood:
- They minimise the number of HIV-infected blood donations, by recruiting, motivating, educating and retaining voluntary and unpaid donors who are at low risk of HIV. Donors are informed about transmission of blood-borne infections, including HIV, and that their blood will be tested.
- They screen all donated blood for HIV and other blood-borne infections and dispose of infected blood safely.
- They reduce the number of unnecessary transfusions of blood and blood products.

These strategies involve setting up a process for selecting donors, training staff in education and counselling skills, providing a regular supply of equipment for
3 SCREENING BLOOD FOR TRANSFUSION

In Thailand, donated blood is tested after pre-test counselling.

3.2 Information for blood donors

Blood screening services need to provide information to blood donors before they donate blood, to provide post-donation information and counselling, and to refer donors for voluntary HIV counselling and testing.

People who are interested in donating blood should receive pre-test information to help them decide whether or not to donate, to let them know that their donated blood will be tested for a variety of blood-borne infections, including HIV, and to discourage them from using the service for HIV testing, or from donating blood if they may have been at risk of HIV.

Pre-donation information is necessary to inform potential donors of the procedures for testing blood. It can be helpful to give a talk, show a video or talk to people in small groups about the counselling and blood collection process. Pre-donation information should cover:

- what happens when you decide to give blood
- why regular safe donations are needed
- the fact that all donated blood is tested for HIV and other infections
- basic facts about HIV and other infections and how to prevent them
- the fact that confidentiality is guaranteed and how this is done
- the importance of not donating blood if you think you may have HIV or have been at risk in the past three months
- the importance of avoiding future HIV infection by avoiding risk activities
- post-donation procedures for infected and uninfected donors
- where to go for counselling and HIV testing or for more information if you do not wish to donate.

Ideally, each potential donor should have a confidential, one-to-one talk with a trained health worker, before blood is collected. The person should be encouraged not to give blood if they may have been at risk of HIV (see box above). Staff need to be able to provide accurate information, to ask and answer questions sensitively, and to refer people for counselling and testing.
The counsellor or nurse should check that the person understands how HIV is transmitted and explain which tests will be done and why, and what the window period is. He or she should explain that blood may not be used for a number of reasons, including anaemia or syphilis, as well as HIV infection.

Donors need to know why personal questions, for example about sexual activity and injecting drug use, are necessary. Discussing these issues helps people decide whether they should give blood or whether they should exclude themselves because they may have been at risk of infection from HIV or other serious blood-borne infections.

Some important lessons that have been learned from blood donor counselling programmes are:
- self-exclusion materials (materials that help people decide not to donate if they have been at risk of infection from HIV) should be written in simple terms
- self-exclusion materials should only be used to inform donors about the risk of HIV and other transfusion-transmitted infection
- links with other agencies and services are essential for referring those who want more information or who need counselling.

Combining education about giving safe blood with counselling blood donors about practising safer sex and avoiding infection has been found very effective. Research in Uganda and Zimbabwe has shown that people who give blood regularly and who receive counselling are more likely to remain HIV negative than other people.

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**Fears about giving blood**

I'm worried that my test results for HIV or syphilis will be made public.

Good systems of confidentiality need to be developed and clearly explained to donors.

I'm scared of being infected with HIV while giving blood.

There is no risk of infection because a new needle and syringe are used for each person.

I'm worried that giving blood causes physical weakness or infertility.

Many donors have given blood over 50 times, up to four times a year, without any harm to their health.

I can't give blood because I think I'm anaemic.

Before taking blood, a simple test is performed on a drop of blood taken from a finger prick to find out if the person is anaemic.

I hate needles.

A local anaesthetic is applied to the skin to make sure that giving blood is not painful, and the donor does not have to watch the procedure.

It's too inconvenient and I'm too busy.

Giving blood can mean life itself for a patient, and even the busiest people find time to donate.

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**DECIDING WHETHER TO GIVE BLOOD**

In Namibia, the blood transfusion service found that potential donors had difficulty filling in a self-exclusion questionnaire on their own. Now a trained nurse goes through it with each person and answers any questions. The questionnaire lists activities which exclude the person from giving blood. These include ear and skin piercing, tattoos or traditional skin incisions, any past sexually transmitted infection (STI) or common HIV-related symptoms such as night sweats, swollen glands or persistent diarrhoea.

In Honduras, the Red Cross National Blood Programme provides pre-test counselling for voluntary blood donors. Each potential donor is asked to read a leaflet that explains HIV and the importance of not donating if the person has engaged in activities that may have a high risk of infection. A nurse encourages questions and checks that the information has been understood. The nurse then asks specific questions about sexual behaviour, such as unprotected sex and history of STIs.

A year later, after the introduction of pre-test counselling, the HIV prevalence among blood donors had halved, even though the overall prevalence of HIV among Honduras increased during this period.
Good systems for keeping test results confidential need to be developed and clearly explained to blood donors. Donors need to know that confidentiality will be maintained. In some places, people are reluctant to give blood because they are worried about their test results being made public.

People wanting to give blood may not have seriously considered that they might have an infection. However, it is important that people are discouraged from using blood collection services as testing centres. People who want to find out their HIV status should be referred for voluntary counselling and testing. Independent counselling and voluntary testing services help people to access testing and keep the blood supply safe, by deterring people from using blood collection services as a way of finding out their HIV status.

In rural areas, where blood supplies are scarce, members of patients' families are sometimes asked to donate blood. However, this should be avoided unless there is no alternative because, where HIV is common, a high proportion of blood donated by family members may be infected. Collecting and disposing of infected blood is a waste of time and resources. And if the blood has been collected from someone in the family, rather than an anonymous donor, there can be problems related to confidentiality and stigma. To avoid this, health workers can take the family member's blood for testing but use an existing tested unit of blood from the hospital blood bank for the patient. The donor should be told that their blood will not be used for their own relative, but, if free of infection, it will be deposited in the hospital blood bank.

Blood samples with unclear or positive results for HIV should be disposed of safely, for example, by incineration.

Confidentiality

In 1993, Zimbabwe's blood service reviewed its notification systems after some donors expressed anxieties about confidentiality. In the past, people were referred to their doctors. Now, donors with positive test results for HIV, syphilis or hepatitis are told by mail that they have an unspecified infection, and are offered counselling and follow-up support with an organisation or doctor of their choice.

One problem with this system is that not all those referred go for counselling. Reasons include: unwillingness to go to the local HIV centre; fears about which infection they have or that they have HIV; worries about being referred to a counsellor whom they know personally; problems related to travel or opening hours and problems with the postal service.