

HIV/AIDS and blood safety

Blood transfusions

There is a 90-95% chance that someone receiving blood from an HIV infected donor will become infected with HIV themselves. Millions of lives are saved each year through blood transfusions, even in countries where a safe blood supply is not guaranteed. However, recipients of blood have an increased risk of HIV-infection. This risk can be virtually prevented by a safe blood supply, and by using blood transfusions appropriately. Difficulties hindering a safe blood supply include:

- Lack of national blood policy and plan
- Lack of an organized blood transfusion service
- Lack of safe donors or the presence of unsafe donors
- Lack of blood screening
- Unnecessary or inappropriate use of blood.

Most of these conditions exist in Pakistan at this moment, creating a high risk situation with regard to HIV transmission.

Minimizing the risk of HIV infected blood transfusions

In many countries, regulations on blood donations, screening and transfusions exist, but are not adhered to. It is vitally important that regulations be established and rigorously enforced.

Three essential elements must be in place to ensure a safe blood supply

1. There must be a national blood transfusion service run on non-profit basis which is answerable to the Ministry of Health.
2. Wherever possible, there should be a policy of excluding all paid or professional donors, but at the same time, encouraging voluntary (non-paid) donors to come back regularly. People are suitable donors only

if they are considered to have a low risk of infection.

3. All donated blood must be screened for HIV, as well as for hepatitis B and syphilis (and hepatitis C where possible). In addition, both donors and patients must be aware that blood should be used only for necessary transfusions.

Screening

The majority of tests done for detection of HIV detect the presence of antibodies to HIV, not the virus (Fact Sheet 5). However, there is a window period (with the most sensitive tests about 3 weeks, and longer with less sensitive tests) when the test may provide a false negative result and the blood can be infected with HIV. Tests also exist (called HIV antigen tests), that detect the virus in the blood, but these are more expensive and of limited value. In many countries, correct screening of blood is still applied to some but not all blood donations. For example, in many developing countries, blood is screened in the capital city, and perhaps in one or two other larger towns, but not screened in rural districts. Lack of screening is most often due to lack of funding, and it is expensive to set up a national system to test all donated blood. Good organization, planning, and management are necessary, as well as trained staff at all levels and the availability of test kits.

Selecting blood donors

Paid donors very often come from the poorest sectors of society. They may be in poor health, undernourished and at risk of having infections that can be passed on through transfusions. In Pakistan, injecting drug users are among the paid donors who sell blood in order to buy drugs. They are the most risky blood donors, because HIV infection among them is increasingly common. In addition, paid donors are more likely to give blood too frequently, making their blood

substandard, and increasing the possibility of damage to their own health.

The practice of paying donors usually goes hand-in-hand with the practice of selling blood to people who need it. Under such a system, poor families may not be able to afford vitally needed blood.

Replacement donors have also been found to be problematic. In the replacement donor system, families of people needing a transfusion are asked to donate the same quantity as that given to their relation. This blood may be used directly for the relative, or placed in the general pool. This practice is strongly discouraged because the "relation" is often a paid donor, and even if the person is a relative, there are doubts about the safety of the blood, as normal criteria for selecting donors cannot be applied.

Therefore, the safest type of blood donor is the voluntary, unpaid donor. Such donors give their blood for humanitarian reasons and are more likely to meet national criteria for low-risk donors. Every effort should be made to educate, motivate, recruit and retain low-risk, unpaid donors.

Avoiding unnecessary or inappropriate transfusions

Unnecessary transfusions increase the risk of transmitting HIV, especially in places where there is no adequate screening programme. Additionally, unnecessary or inappropriate transfusions can create a shortage of the blood supply, which in turn encourages professional donors to become more active, thus reducing the safety of the supply. This is very common in Pakistan.

Doctors and other health care workers should be educated to avoid prescribing inappropriate transfusions. Blood substitutes should be given where appropriate. In addition the underlying cause for the blood transfusion should be

considered. For example, blood transfusions are often given for anaemia. Instead, the underlying cause of the anaemia should be investigated. Anaemia may be due to malnutrition, slow blood loss, and to infections such as malaria. Blood is often needed during complications accompanying childbirth. However, providing proper care for women before, during and after delivery, can decrease the need for blood transfusions. Not only health care workers need to be educated on reduction of transfusions, but also the people who often demand such transfusions because they believe it is the best remedy for their health problems.

Creating a national blood transfusion service

A national blood transfusion service means making all transfusion centres and blood banks part of a national network accountable to a government appointed non-profit organization. This service must be developed within the framework of the country's health service, and must have an adequate budget and trained staff. There must be a national system of regulations, and regular, independent monitoring of the blood transfusion service. There is no guarantee that blood can be 100% free of HIV, however, with political commitment, good organization, sufficient funding and donation of blood from low-risk, voluntary, non-paid donors, the risks can be reduced to a minimum. Citizens of a country – in this case Pakistan – have the right to obtain safe blood through the national health system.

Body organs and tissue transplantation

HIV transmission can also occur through transplantation of body tissue or organs from an HIV-infected donor. This body tissue should follow the same screening programme as blood.

Source: Adapted from WHO Fact sheets on HIV/AIDS for nurses and midwives.