HIV-infected blood transfusions are responsible for between 5 and 10 per cent of HIV transmission in developing countries. Ensuring sufficient supplies of safe blood poses ethical and financial challenges in under-resourced countries where many people are at risk of HIV, or already living with the virus. Collecting infected blood wastes time and money and risks the lives of recipient patients.

The HIV epidemic has a major impact on blood collection strategies. Ideal blood donors are healthy adults and young people, but these individuals are likely to be sexually active and at risk of HIV. More people are reluctant to become donors because they don’t want to consider their personal risk of HIV, or fear that their confidentiality will be broken. Others use the blood collection service as a way to find out their HIV status.

Individuals who do test positive for HIV need to be sensitively referred for counselling and follow-up. This must be done in a way which does not breach people’s privacy or lead them to be questioned by their friends or colleagues about why they are not donating blood.

Increasingly, blood services are linking education about giving safe blood with having safer sex. They are working more closely with organisations and health services involved in HIV prevention and care. Collaboration helps to make safe blood collection easier and more successful. Staff can provide public education about what happens during the blood collection process, and the serious responsibility of giving safe blood. Many may also have a key role in counselling people who have been referred by the blood transfusion service.

Success stories
The most successful strategy for a safe blood supply involves encouraging people who are at low risk of HIV infection to give blood, and counselling them about the need to be responsible donors, deciding not to give blood if they have been at risk of HIV.

It seems that this strategy may be having a double benefit. Less HIV-infected blood is being collected, thus reducing the risk to recipients. And, significantly, regular blood donors are showing that they have a key role in educating others about giving blood and HIV prevention, and that they themselves are keeping up safer sexual behaviour. Research from Uganda and Zimbabwe shows that both young people and adults who give blood regularly are more likely to remain HIV-negative than non-donors.
Strategies for safe blood

Receiving an HIV-infected blood transfusion carries more than a 95 per cent risk of HIV transmission. AIDS Action explains how blood can be made safe.

Donating safe blood
The best way to ensure that donated blood is free from infection is to encourage donation by people who are:
- unpaid and willing to donate blood voluntarily, responsibly and regularly
- at low risk of HIV and other infections transmitted by blood
- healthy and fully grown in order not to affect their own health, and not pregnant or anaemic, or suffering from any infections
- informed about the tests to be done on their donated blood, including HIV.

Schools, universities, church groups, community centres and workplaces provide opportunities for educating and recruiting people at low risk of HIV. Public education and sensitive counselling can help people to decide not to give blood if they feel they have been at risk (self-exclusion).

Avoiding unsafe donations
Using donors who are paid to give blood is likely to lead to a commercial, often illegal, blood trade and an unsafe blood supply. People who have to sell their blood in order to make a living are often those at most risk of serious communicable disease.

Blood donation should never be compulsory, and should not be carried out in institutions such as prisons or the army. Even if the authorities encourage voluntary donation, it is often hard for people to decide freely whether to give blood. Positive results often lead to discrimination, such as isolation in prisons or dismissal from army service.

In rural areas where blood supplies are scarce, members of the patient's family are sometimes asked to donate their blood. However, this should be avoided unless there is no alternative.

Screening blood
All donated blood needs to be tested for HIV, hepatitis B and syphilis.

Occasionally a person whose blood tests HIV negative does in fact have HIV. This is usually because of the
HIV tests do not detect HIV itself but antibodies produced by the immune system in response to infection with the virus. However, it can take up to three months for these antibodies to be produced.

During the window period an HIV antibody test will produce a negative result even though HIV is present in the blood and may be transmitted. It is therefore very important for anyone who has had possibly risky activity during the past three months to be advised not to give blood.

HIV test kits used by blood collection services must be of high quality and the instructions followed exactly. The test used depends on local hospital or national recommendations but it needs to identify all possible HIV infections. This means that the test must be highly sensitive, meaning that it has a low number of false negatives (blood testing negative which is in fact positive).

If a blood bank is testing at least 40 blood samples each day an ELISA test will be the most cost effective. If less than 40 blood samples are tested a reliable simple/rapid HIV assay will be more cost effective than an ELISA test.

However, highly sensitive tests can produce false positive results (blood testing positive which is in fact negative). Therefore a positive result does not necessarily mean that the person is infected with HIV.

People should not be informed of their results after only one positive test result. A second blood sample must be tested. Ideally the test needs to be a different test. It does not need to be a Western blot test but should be done independently of the first test and accurately checked.

People should be informed of their HIV infection only if the results of both tests are positive, and if counselling and follow-up support are available.

Reducing blood transfusions

Despite rigorous HIV screening procedures, a few infected blood units may go undetected. It is important to reduce the number of transfusions to the minimum, to keep the risk of infecting patients as low as possible and to save costs and blood product use.

Blood transfusion guidelines can help prevent over-use of blood products. For example, in rural Tanzania, staff at district, mission and referral hospitals were trained to use guidelines including:

- Precise indications for prescribing transfusions to children, pregnant women and other adults with severe anaemia; to patients with acute blood loss; and during, before and after operations.
- Using blood substitutes where possible such as saline, for example to replace the amount of fluid in circulation after a haemorrhage.
- Using the patient’s pre-collected own blood when surgery is planned.
- Not using a single unit transfusion of blood as a ‘tonic’ (often used for ‘topping up’ blood when someone is weak from anaemia or after an operation).

The project also recommends the following strategies:

- Setting up a blood transfusion committee to monitor blood use.
- Regular continuing education and supervision on using guidelines.
- Clinic meetings where blood transfusions can be discussed by staff.
- Ensuring that staff provide clear reasons when prescribing blood transfusions on a request form.

Most importantly, illnesses and conditions requiring blood transfusions need to be better prevented. In developing countries most blood transfusions are given to children and women for anaemia or pregnancy complications. Community health care programmes need to provide treatment for malaria and worms for pregnant women and vulnerable children, and to improve nutrition, water supply and sanitation.

With thanks to Dr. Jean Emmanuel, Chief, Blood Safety Unit, WHO; Dr. Robert Beal, Interim Director, Blood Dept., IFRS-RCH; Mr. David Mware, Technical Director; RK Shamu, National Blood Transfusion Service, Zimbabwe; Dr. Zainoa Bharucha, Head, Dept. Transfusion Medicine, Tata Memorial Hospital, Bombay, India.

Source for Reducing blood transfusions: TANESA Project, PO Box 434, Mwanza, Tanzania.

What is hepatitis B?

All blood should be screened for hepatitis B, a viral illness which can affect the liver. The infection can be symptomless, but tiredness, yellowing of skin and eyes and loss of appetite are common. Most people recover completely from the early acute infection without treatment, but 10 per cent develop chronic hepatitis, remain infectious to others and may develop liver disease which can lead to death.

The virus can be spread by saliva as well as other body fluids. Common transmission routes are: from an infected mother to her baby before or during birth; during unprotected sex with an infected partner; through an infected blood transfusion; through intimate contact with an infected person, such as through sharing toothbrushes or razors; and by contaminated injecting equipment.

A blood test is the only way to know if someone is infected with hepatitis B. People carrying the virus need education about caring for themselves, such as limiting their intake of alcohol, and preventing transmission by not sharing toothbrushes or razors, and having safer sex. In some countries children are now routinely vaccinated against hepatitis B, as well as close family members of people with chronic hepatitis.

Blood may also screened for hepatitis C, a more recently discovered form of the virus which is transmitted mainly by blood and causes chronic disease in most people infected.
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.

Adapted from Fiji Red Cross leaflet.

Safe blood and Education and counselling for donors not only contribute to making the blood supply safe, but also to promoting safer sexual behaviour.

Public education

Basic information is provided in leaflets, newspaper articles and television or radio advertisements. Donors can be recruited during campaigns or talks at church groups or schools. Messages should emphasise the positive reasons for giving blood, including stories about lives saved with blood transfusions. Education should also highlight the serious need for people to be responsible donors who do not put patients at risk of HIV or other infections.

Before donating blood

When people come to the blood collection centre or mobile van, it is helpful to give a talk or show a video to small groups about the counselling and blood collection process. The key messages are:

- what happens when you decide to give blood
- why regular safe donations are needed
- your donated blood is tested for HIV and other infections
- basic facts about HIV and HIV prevention
- your confidentiality is guaranteed
- the importance of deciding not to donate blood if you think you may have HIV or another infection (self-exclusion)
- where to go for counselling and HIV testing, if you wish.

One-to-one counselling

Ideally each potential donor should have a one-to-one talk with a trained health worker before blood is collected. Staff need to be able to provide accurate information, ask and answer questions sensitively, and refer people to other sources of support.

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safer sex

Information for blood donors

- Your name will not be used at the blood bank. Instead we use your mother’s unmarried name, your birthplace and your date of birth.
- You will be given a code number which is used on all your records and blood samples.
- You will be asked some questions about your health to make sure that giving blood will not harm you.
- You will be asked questions about your private life to ensure that our test results are accurate.
- A sample of your blood will be taken by finger pricking and tested to make sure you have enough blood to spare for a donation.
- If so, we will draw your blood. Afterwards we will ask you to rest for a few minutes, take some refreshment to replace the fluids you have lost and take some iron pills to help your body replace the donated blood quickly.
- The blood you have donated will be tested for hepatitis and HIV viruses.
- The results of these tests will be available to you (and no-one else) in two weeks if you choose to know them.

Please do not give blood if:

- in the last six months you have had sex with someone other than your regular partner; or
- in the last year you have had:
  i) an injection except at a hospital or clinic
  ii) skin scarring or cutting by a traditional healer
  iii) a surgical operation; or
- you have ever had hepatitis (jaundice causing yellow coloured eyes)
- you are pregnant, have had malaria or a sexually transmitted infection.

Please do:

- if you have given blood before and it has been found safe
- when three months have passed since your last donation.

Adapted from Uganda Blood Transfusion Service information leaflet

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Keeping up commitment

Zimbabwe’s National Blood Transfusion Service found that school students, aged 16 years and over, have low levels of HIV infection.

Basic education is provided through school talks, where students are invited to give blood at mobile blood collection vans. Each year, a shield is awarded to the school in each region providing the most donors. Students are also recruited from some schools to be peer promoters, trained in blood donation education, and involved in designing educational materials and approaches. In these schools, recruitment has doubled and students are also more likely to continue giving blood.

School students now contribute about 65 per cent of the country’s blood supply. However, staff are aware that new HIV infections may be common even in groups with lower prevalence levels of HIV. For example, in some areas the number of school-age girls with HIV is increasing very rapidly.

Staying safer

Analysis of blood donor information shows that adult donors who return to give blood and receive counselling are less likely to have blood-borne infections than first time donors. People who have already donated safe blood need to be encouraged to donate regularly, and to remain HIV negative.

Zimbabwe’s blood service targets school leavers, by inviting them to register for attendance at regular blood collection sessions in local community centres. School leaver donors have tripled since the programme started in 1993, and analysis shows that they continue to have low levels of HIV.

Some students set up the ‘Pledge 25’ Club in 1994 where school leavers promise to donate blood 25 times in their lives and try to remain HIV negative in order to be able to do that. Members of the Pledge 25 Club and peer promoters celebrate a national Youth Donors Day in December each year, where many new blood donors are recruited.

In Zimbabwe, badges, caps, scarves and plaques are awarded to regular adult donors. Special occasions are held where people who have donated for long periods are honoured. Press coverage of these events often motivates other people to give blood. Regular donors also have a key role to play as educators and role models in their communities.
Testing positive

Providing counselling for donors who test HIV positive poses key challenges for blood services and counselling groups.

Ideally, people who may be HIV positive should be encouraged not to give blood. However, if the person decides to give blood, they should be given the option of knowing their results.

They should only be informed if two test results are positive and follow-up counselling and support are available. After talking with a counsellor, people may decide not to give blood but may also want to be referred for an HIV test. Many blood services are trying to link up with NGOs and hospital counselling services.

In 1993, Zimbabwe’s blood service reviewed its notification systems after some donors expressed anxieties about confidentiality, especially in relation to HIV, and numbers of adult donors were declining. In the past, people were referred to their doctors, but many donors either did not have a doctor or were reluctant to discuss HIV or syphilis infection with them.

Now, donors with positive test results for HIV, syphilis or hepatitis are informed by mail that they have an unspecified infection, but are offered counselling and follow-up at an organisation or doctor of their choice (who are also sent letters explaining the situation).

However, NGOs which provide counselling have difficulties in following up donors. In Zimbabwe some NGOs reported that less than half of the people referred to them came for counselling. Common reasons included: people’s unwillingness to go to the local ‘AIDS centre’; fears about which infection they had, or that they had HIV; worries about being referred to a counsellor whom they already knew personally; difficulties in travelling to the counselling centre during its opening hours; and problems with the postal service.

HIV counselling services often receive referrals for other blood infections, such as syphilis or hepatitis, but counsellors may not have enough information on these illnesses.

Young donors

In many countries school age donors are recruited because they have low risk. It may be best only to recruit students who are legally adults, who therefore can consent to being tested and to receiving their test results without their parents’ permission.

Some blood services invite parents to approve the participation of their children, although there is still debate about whether to involve parents in counselling if the young person tests HIV positive. It may be more difficult to confidentially inform and support young people who test HIV positive, especially if they are at school, and if other students are becoming regular donors.

Counselling services and blood transfusion centres need to have a policy on recruiting young donors, and counselling them if they are diagnosed HIV positive.

Other HIV testing options

Individuals who are worried that they have HIV often use blood collection services in order to find out their HIV status, rather than to donate blood. This increases the risk of an unsafe blood supply. Independent counselling and testing services help the blood supply to become safer, by making sure that people who want an HIV test can obtain one.

With thanks to Dr S Kalibala, UNAIDS and Mr David Mvere, NBTS, Zimbabwe.

Counselling organisations can help the blood transfusion service by

- encouraging head teachers or employers to allow enough time for pre-donation education and counselling, and post-donation counselling and support
- educating the blood service staff, head teachers and employers about HIV to make sure that confidentiality is respected and discrimination does not occur

Blood services can help counsellors by:

- organising adequate pre-donation counselling before taking blood, to help people decide not to give blood if they have engaged in risky activities, or to encourage them to return for counselling if they are notified of possible positive results
- ensuring that, if the first HIV test is positive, a second test is carried out and is positive, before informing someone that they have HIV
- making sure that referral information is passed to the counselling service before it is mailed to the donor so that the counsellor has full information and time to prepare
- making sure that the donor information contains information about the advantages of knowing results.

Effective counselling

- Wherever possible, the same person should do the pre-donation and post-donation counselling, before referring.
- Pre-donation counselling should include talking about what it means for a person to know their HIV status.
- Blood donors should know that they will be referred if their blood cannot be used, because of other infections, malaria or anaemia and not only HIV.
- Counsellors need information about infections such as hepatitis and syphilis, in local languages, and to know where to refer people for treatment.
- Donors need to understand the meaning of an unclear or false positive result.
Towards better counselling

Keeping confidences

This training exercise aims to help counsellors think about the importance of trust and what might happen if someone’s test results are made public.

People’s greatest concern about giving blood is that their confidentiality will be broken. Confidentiality is essential both to protect people’s privacy and help them to feel safe about discussing their personal experiences.

1 Introduce the exercise by raising the issue of confidentiality. Remind the group that people feel more able to discuss personal issues and feelings if they trust that the counsellor will not tell anyone else without their permission.

2 Split the group into pairs. Ask each person to think of someone they trust and write down ten words describing them, such as friendly, close, and honest.

3 Ask each pair to read out their words to the larger group and write them on a large sheet of paper, noting common words.

4 Split the group into smaller groups of three or four people to discuss the following questions:
   - What do you need to say and do when you are counselling someone to help them have confidence in you? What do you need to do to enable them to keep trusting you? What might happen when confidentiality is broken? What are the benefits of maintaining confidentiality?
   - Invite one person from each small group to report back to everyone.

5 Then give each small group a situation (two examples below), and ask them to discuss their reactions and feelings about being in that position.

   You have been diagnosed with HIV. During counselling the counsellor promised that he was not going to tell anyone about your diagnosis without your consent. Three days later you receive a phone call from a friend who wanted to confirm the news that you had HIV. Your friend has heard this from your counsellor.

   You work in a factory and the blood collection team arrives. While you are doing the questionnaire you mention to the nurse that you were treated for a sexually transmitted infection four months ago. Your blood is not collected. Later a friend mentions to you that the person next in the blood donation queue saw your form and is telling all your work colleagues that you have AIDS.

   Is this situation likely to happen? Why might it happen? How would it make you feel? What would you do or say in that situation? As counsellors, how would you prevent it from happening?

   Source: Mr T R Makoni, National Blood Donor Counselling Co-ordinator, NBTS Zimbabwe.

Assessing personal risk

This activity helps counsellors to think about how they handle risk in their own lives, and increase their understanding of why other people take risks and their feelings about this. Before deciding to take an HIV test people need time to think about what it may mean to discover they have HIV. Many people feel anxious about discussing their personal risk of HIV (often for the first time) and are worried about being judged.

1 Invite participants to consider the following on their own for a few minutes:
   - ‘Think back on your own life and identify any occasion when you took a risk – related to sex and relationships, to work or to money, for example. It may have been a small risk or a big one that was very important to you at the time.’
   - What factors influenced your decision to take a risk?
   - What were your feelings at the time?
   - What was the result of taking that risk?
   - Do you generally take risks?
   - How do you view risk taking in others? How does risk taking among your friends affect you?
   - How does this affect your attitude towards the risk of HIV?

   It may be useful to write these questions down.

2 After a few minutes ask everyone to choose a partner and share as much of their situation as they wish. Each person should talk for a few minutes and then listen to the partner’s story.

3 Invite everyone to join the full circle. Encourage them to explore links between how people deal with risk and ways in which it may affect their responses to HIV/AIDS.

   It may be useful to make the following points:
   - We often feel that it is all right to take risks if they turn out well. But we tend to blame others if they take risks and things go wrong.
   - We are generally much less harsh in judging ourselves than we are in judging others. Is this fair?
   - We are all taking risks all the time.

4 Then invite people to link this discussion with their counselling work. How can they introduce the subject of risky sexual behaviour without being judgemental? How can this be linked to information about safer sex and reducing the risk of HIV infection?

One world?

‘One world, one hope’, this year’s theme for World AIDS Day, December 1, was also the key message for participants at the IX International Conference on HIV and AIDS, held in Vancouver, Canada in July.

Presentations revealed the extent to which we are living in a divided world, highlighting the great gulf between people living with HIV in high income countries and those in poorer countries. Over 90 per cent of people living with HIV are in developing countries, which receive only 8 per cent of global spending on AIDS. Sessions also showed how HIV follows discrimination and inequality within countries – everywhere people in poverty are most affected, and have least access to care.

However, participants from Africa, Asia and Latin America felt that some of their key priorities were being discussed. Some successes should give encouragement to AIDS Action readers. Researchers in countries such as Uganda and Thailand, where there are vigorous community-based and government prevention campaigns, announced that the rate of HIV transmission is slowing down. Behaviour change and prevention messages are slowly getting through, and there is greater commitment to policy change and building more supportive economic and social environments.

Scientists have found out more about how the virus works, which has led to major developments in anti-viral drug therapy. There is now proof that taking a combination of different types of anti-viral drugs keeps people healthy for longer and reduces viral reproduction. However, these drugs are still in development, and are beyond the reach of most people – costing US$15,000 per person annually. It is still unclear whether HIV will become resistant to combination therapies over time, especially if not taken regularly. There are also some interactions with other drugs used to treat HIV-related infections which need careful management.

The research has raised many questions as well as some answers, and there is still no cure for AIDS. The main emphasis still needs to be on challenging inequalities within and between countries, and making sure that everyone has access to essential medicines and care, as well as preventive education and social support.

RESOURCES

Counselling for HIV/AIDS: a key to caring covers counselling service management and policy issues for planners and managers.

Source book for HIV/AIDS counselling training provides guidelines for developing training courses and participatory activities. Single copies of both books in English available free from UNAIDS Information Centre, c/o WHO, 1211 Geneva 27, Switzerland.

Guidelines for blood donor counselling on human immunodeficiency virus (HIV) explains how to integrate donor selection, risk assessment and HIV counselling into blood donor programmes, for programme planners and staff. Single copies in English, French and Spanish available free from International Federation of Red Cross and Red Crescent Societies, PO Box 372, CH 1211 Geneva 19, Switzerland or WHO (see below).

Safe blood and blood products is a distance learning course (five manuals) containing guidelines for managing safe blood transfusion and donation (WHO/GPA/CNP/93). Available in English (order no 1930050) for Sw.fr.84/US$60 (developing countries) or Sw.fr.120/US$84 from WHO/DST, 1211 Geneva 27, Switzerland.

New resources

TB/HIV: a clinical manual is a clinical management guide for clinicians in resource-poor countries. Available for Sw.fr.12/US$10.80 in developing countries from WHO (as above).

Starting the discussion: strategies for making sex safer is based on the popular series Let’s Teach about AIDS, and provides guidelines for participatory education on HIV, gender and relationships. Available free to readers in developing countries and for £5/US$10 to readers elsewhere from AHRTAG.