

FACT SHEET UPDATE

BLOOD, SAFETY AND DONATION A GLOBAL VIEW

The chance of receiving a safe transfusion if you need one varies enormously from one country to another, depending largely on whether there is a good, safe blood donor programme in place. Some 60% of the global blood supply goes to 18% of the world's population. There is a serious disparity between countries when it comes to both the availability and safety of blood.

People in developing countries continue to face the greatest risks from unsafe blood and blood products. In general, countries with higher per capita incomes have higher donation rates, more efficient blood collection systems, more available blood and more voluntary, unpaid donors, who have been shown to be the safest donors.

In wealthy countries, it is estimated that one out of every 10 people entering a hospital needs blood. That person may be a trauma victim — due to an accident or burns — they may need heart surgery or an organ transplant, or they may be receiving treatment with blood products for leukaemia, cancer or other diseases, such as sickle cell anaemia.

With an ageing population, advances in medical treatments and procedures requiring blood transfusions the demand for blood continues to increase in wealthy countries. According to national statistics, 4.5 million Americans would die each year without blood transfusions. The national blood service of England and Wales says that in 2004 blood donors saved or improved approximately one million lives.

In low income countries, women and children are the groups with the greatest need for blood. More than half a million women die every year from complications related to pregnancy and childbirth worldwide - 99% of them in developing countries. Haemorrhage, accounting for 25% of complications, is the most common cause of maternal death. Up to 70% of all blood transfusions in Africa are given to children with severe anaemia due to malaria, which accounts for about one in five of all childhood deaths in Africa.

Safety issues

In the early 1990s, unsafe transfusions were estimated to be responsible for up to 10% of all HIV infections, many of them in high income countries. HIV-contaminated blood now accounts for approximately 5% of HIV infections in Africa today.

In many countries more and more testing is being done to make blood safe, but the majority of developing nations still do not carry out even the most basic mandatory tests for diseases such as HIV or hepatitis B and C. Annually, some six million tests that should be done to check for infections are not done.

Most countries still lack a nationally coordinated Blood Transfusion Service. Despite some recent improvements in this important area, fewer than 30% of countries have a well-organized service in place.

Too many countries still rely on family replacement (a member of the patient's family donating his/her blood) or paid donors. Argentina, for instance, relies heavily on replacement donors, who make up 92% of its blood supply. Although Pakistan has increased its voluntary unpaid blood donation in the last five years to 20% of its blood supply, replacement donors made up 70% and paid donors 10% of blood supplies in 2004.

Family replacement donors may feel under pressure to donate and may therefore hide aspects of their health and lifestyle, which could mean that their blood is more likely to contain infection. In the case of paid donors, governments may think that the financial incentive will motivate more donation and boost supplies, but paid donors are often pushed by need and are therefore also more likely to avoid mentioning important details about their health status.

Many blood transfusions are unnecessary. Patients around the world risk being infected during blood transfusions when alternatives — such as intravenous replacement fluids — would be equally effective.

Getting the right blood to the right patient, at the right time

At the heart of global efforts to ensure universal access to safe blood is the move to a system of regular voluntary, unpaid blood donors. Deemed the safest, it is also demonstrated that such donors have a sense of responsibility towards their community and keep themselves healthy so as to be able to keep giving safe blood.

It is clear that quality checking is also vital to a safe blood supply. A reliable system needs to be in place to ensure proper screening and proper matching of blood. The error of giving the wrong blood can be fatal to a patient.

Centralized blood collection systems coordinated nationally have several advantages over small blood banks — better trained personnel, better equipment, for instance — and those benefits contribute substantially to blood safety.

These centres can also provide better attention to donors, which is important for increasing voluntary, unpaid donations, and are better equipped to break blood down into its component parts. In many cases, full blood transfusions are not needed as the patient may only require one component of the blood for his or her condition. Overuse or misuse of whole-blood transfusions is not only less cost-effective, it also increases the risk of transmitting infections.

Progress

Real improvements are being made:

In China, voluntary blood donation went from 45% of donations in 2000 to 91.3% in 2004.

Malaysia, China and India reached 100% screening of donated blood for HIV by the year 2000.

While 100% voluntary, unpaid blood donation is usually found in high income countries in the Americas region, Cuba and Suriname, both low-income countries, represent the exceptions as they have introduced 100% voluntary donation since they created their national blood transfusion service.

In Bolivia, the establishment of a national blood programme and concerted media campaigns run by the government have brought the rate of voluntary, unpaid donations from 10% in 2002 to 50% today.

South Africa has had 100% voluntary, unpaid donation since it established a national blood service. With HIV prevalence of 23.3% in the adult population, only 0.02% of its regular blood donors have contracted HIV.

Voluntary blood donor organizations have been set up in over 50 countries. These organizations, which are managed by blood donors themselves, play an important role in blood donor recruitment and retention through peer education and promotion.

Data collected from 178 Member States showed that the number of tests not being performed for the four main markers of infection, HIV, HBV (hep B virus), HCV (hep C virus) and syphilis, decreased from 13 million in 1998- 99 to just six million in 2000 - 01.

By 2001, 123 countries were monitoring the prevalence of transfusion-transmissible infections among blood donors, compared with 98 countries in 1998-1999. This has enabled them to focus their blood donor education and recruitment activities on people who are likely to be the safest blood donors.

Facts about blood

Blood is a rich product which can be broken down into many parts. Its main components are red cells, platelets and plasma, and the plasma itself contains a variety of proteins.

All of these substances have different uses and patients will need different components depending on their own blood type and on their condition. For instance, an anaemic person will only require red cells, while a haemophiliac needs clotting factors from plasma.

Red cells last only 35 days and platelets only 5 days, so a regular supply of fresh blood is vital.

Just one half litre of donated blood can help save as many as three people's lives.

There are four main blood types: A, B, AB and O. AB is the universal recipient and O negative is the universal donor.

Blood centres often run short of type O and B blood.

While a given individual may be unable to donate, he or she may be able to recruit a suitable donor. Blood banks are always in need of volunteers to assist at blood draws or to organize blood drives.

Much of today's medical care depends on a steady supply of blood from healthy donors.

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More on World Blood Donor Day, the campaign “Celebrating your gift of blood” and activities in different parts of the world can be found on the web site www.wbdd.org or <http://www.who.int/bloodsafety/events/en>

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