

Global blood safety and availability

Facts and figures from the 2007 Blood Safety survey¹

Key facts

- 65% of all blood donations are made in developed countries, home to just 25% of the world's population.
- In 73 countries, donation rates are still less than 1% of the population (the minimum needed to meet basic needs in a country). Of these, 71 are either developing or transitional countries.
- 42 countries collected less than 25% of their blood supplies from voluntary unpaid blood donors, which is the safest source.
- 31 countries still reported collecting paid donations in 2007, more than 1 million donations in total.
- 41 countries were not able to screen all blood donations for one or more of the following transfusion-transmissible infections (TTIs) –HIV, hepatitis B, hepatitis C and syphilis.

Sufficient supplies of safe blood can only be assured by regular donations from voluntary unpaid donors.

Global data

Blood transfusion saves lives and improves health, but millions of patients needing transfusion do not have timely access to safe blood. The WHO programme on Blood Transfusion Safety monitors key quantitative blood safety indicators to assess the global situation on blood safety, monitor trends and progress and identify priority countries for support. This fact sheet is based on data collected for 2007².

In 2007, 162 countries provided data to WHO on 85.4 million³ blood donations. The data comes from countries that account for a total of 5.9 billion people, representing 92% of the global population. The report covers 7 997 blood centers which collected on average 9 000 donations per centre (range from 20 – 499 212). In developed countries, the average annual collection per blood centre was 13 600 (range 49 – 289 075), in transitional countries 6 000 (range 20 – 499 212) and in developing countries 2 800 (range 114 – 23 251).

Blood supply

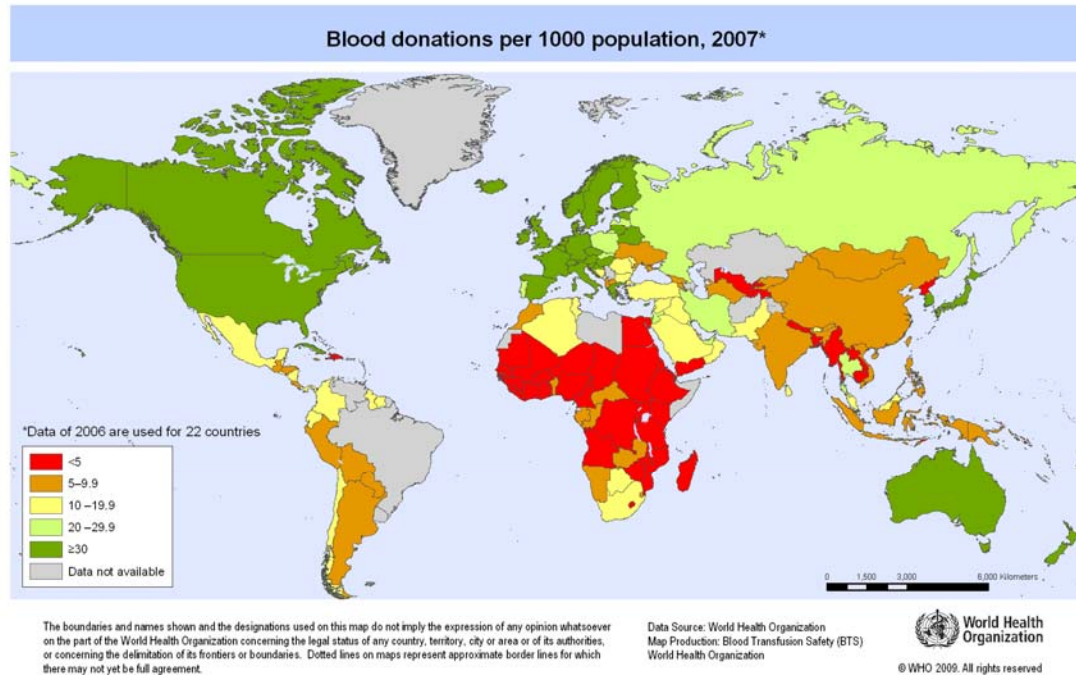
While the need for blood is universal, there is a major imbalance between developing and developed countries in the level of access to safe blood. It is estimated that donation by 1% of the population (10 per 1000 population) is generally the minimum needed to meet a nation's most basic requirements for blood; the requirements are higher in countries with more advanced health-care systems.

¹ Based on WHO Global Database on Blood Safety (GDBS) and Blood Safety Indicators.

² A good response rate was seen in data collection for 2007 with responses being received from 162 countries, covering 92% of the world's population.

³ It is estimated that more than 92 million blood donations were collected globally.

- Of the 85.4 million donations in 2007, about 65 % were collected in developed countries, home to just about 25% of the represented population.
- Blood donations per 1000 population, which also reflect the general availability of blood in a country, vary widely and the lowest levels of availability are found in developing and transitional countries. The average donation rate in developed countries is 38.1 donations/1000 population (range 4.92 – 68.01); in transitional countries, this rate is 7.5 (range 1.07 – 35.18) and in developing countries an average 2.3 (range 0.40 – 7.46) donations per 1000 population were collected.
- 73 countries reported collecting fewer than 10 donations per 1000 population. Among them, 71 are either developing or transitional countries.



Types of blood donation

There are three types of blood donation: voluntary, unpaid donations; family/replacement donations and paid donations. Donors who give blood voluntarily and for altruistic reasons have the lowest prevalence of HIV, hepatitis viruses and other blood-borne infections, as compared to people who donate for family members or in lieu of payment. Sufficient supplies of safe blood can only be assured by regular donations from voluntary unpaid donors. The 2007 data reveal some improvements in such donations worldwide, but many developing and transitional countries still rely heavily on relatively unsafe family/replacement donors and paid donors.

Voluntary, unpaid donations

- 57 countries report collecting 100% of their blood supplies from voluntary unpaid donors.
- Since World Blood Donor Day was celebrated for the first time in 2004:
 - ⇒ 111 countries reported an increase of the number of voluntary donations;
 - ⇒ 32 of these 111 have more than doubled the number of voluntary donations as compared to 2004 figures;

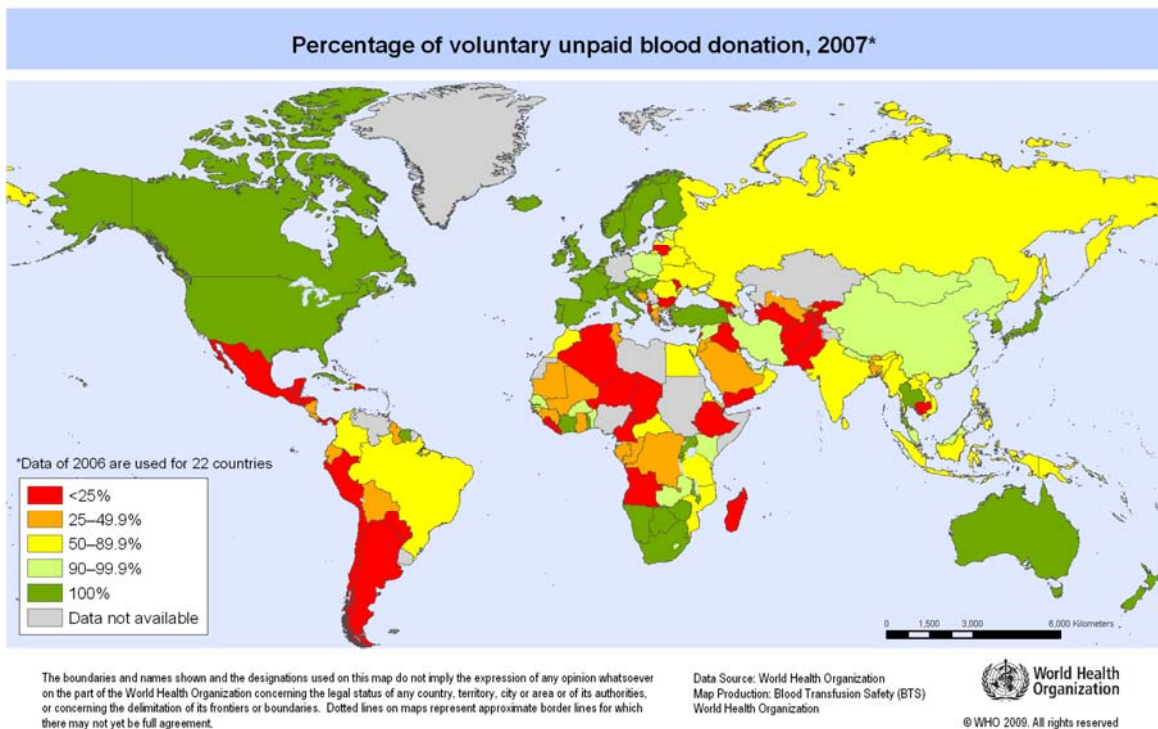
⇒ All these 32 countries are developing or transitional countries.

- 11 countries (Bosnia and Herzegovina, Burkina Faso, Cook Islands, Cape Verde, Kuwait, Guinea Bissau, Mauritania, Myanmar, Niue, Vanuatu and Vietnam) report more than a 10% increase in voluntary unpaid donations in 2007, as compared to 2006 figures.

Family/replacement donors and paid donors

Forty-two countries collect less than 25% of their blood supplies from voluntary unpaid blood donors. A significant amount of the blood supply in these countries is still dependent on family/replacement and paid blood donors. Thirty-one countries still report collecting paid donations in 2007, more than 1 million donations in total.

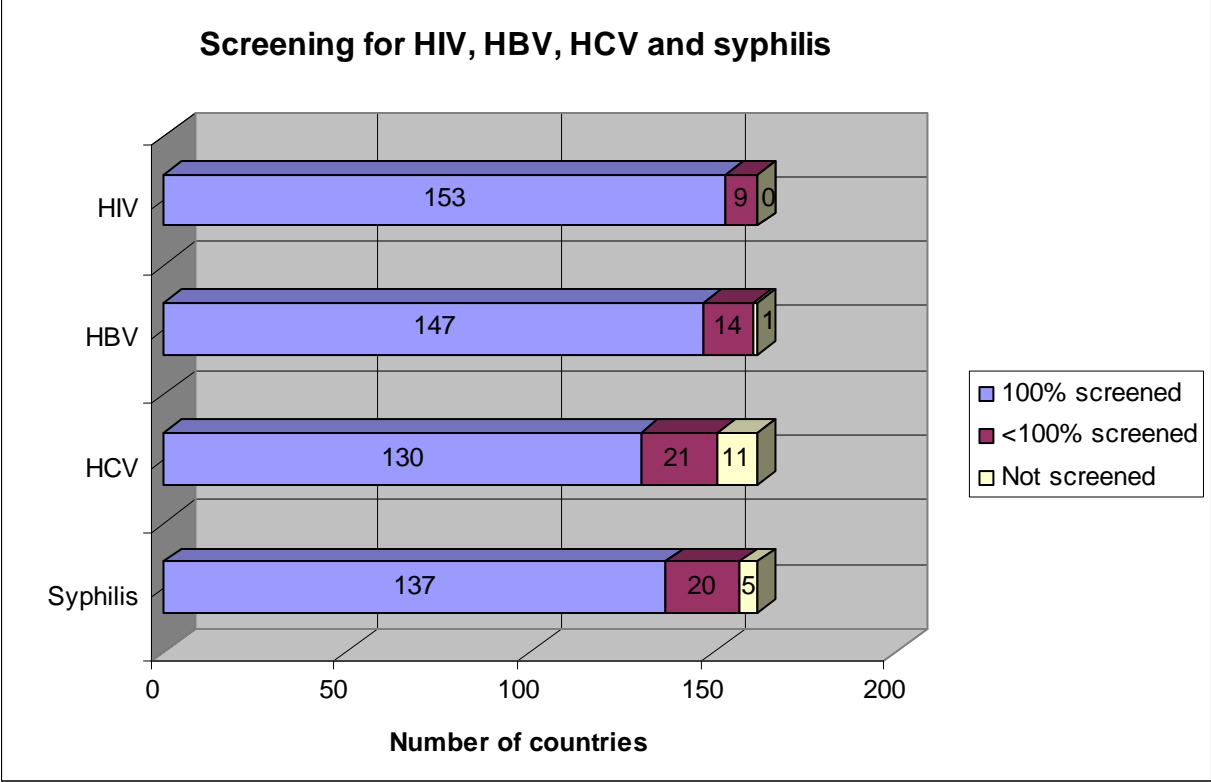
	Family/replacement and paid blood donations
Developing countries	31%
Transitional countries	24%
Developed countries	5%
Global	13%



Blood screening

WHO recommends that, at minimum, all donated blood to be used for transfusion should be screened for HIV, hepatitis B, hepatitis C and syphilis. Complete and accurate data on the screening of donated blood are not available from many developing countries, particularly those where blood services are not coordinated. Many countries do not have reliable testing systems because of staff shortages, lack of basic laboratory services, poor quality test kits or their irregular supply.

- 41 of 162 countries that provided data on screening for transfusion-transmissible infections – including HIV, hepatitis B, hepatitis C and syphilis – are not able to screen all donated blood for one or more of these infections.
- 121 of 162 countries provided data on whether blood donations were screened in a quality-assured manner (use of standard operating procedures and participation in an external quality assessment scheme). Overall, 88% of donations are screened following these basic quality procedures: 89% in developed countries, 87% in transitional countries and 48% in developing countries. For the blood donations collected in the remaining 41 countries, which account for 22% of the global donations reported to WHO, the use of these basic quality assurance procedures for laboratory screening is still unknown.



Source: Global Database on Blood Safety (GDBS), 2007 survey

Blood usage

Data on the use of donated blood is limited, but studies suggest that transfusions are often given unnecessarily when simpler, less expensive treatments can provide equal or greater benefit. Not only is this a waste of a scarce resource but, it also exposes patients to the risk of serious adverse transfusion reactions or infections transmitted through the blood. Hospital transfusion committees and system for reporting adverse transfusion reactions should be established in each hospital to implement the national policy and guidelines and to monitor the safe and rational use of blood and blood products at the local level.

In 2007, 120 countries (including 46 developed countries, 48 transitional countries and 26 developing countries) identified a total of 51 400 hospitals that perform blood transfusions, serving a population of around 3.6 billion. Not all countries were able to provide information on clinical practice. Based on the data provided by 96 countries (including 38 developed countries, 40 transitional countries and 18 developing countries):

- 88% hospitals performing transfusion in developed countries, 33% in transitional and 25 % in developing countries have a transfusion committee

- 90% hospitals performing transfusion in developed countries, 52 % in transitional and 23 % in developing countries have mechanisms to monitor clinical transfusion practice
- 91% of hospitals performing transfusion in developed countries, 46% in transitional and 23% in developing countries have a system for reporting adverse transfusion events.