



BLOOD TRANSFUSION SAFETY

**Facts and Figures from
the WHO Global Database on Blood Safety
1997–1999**



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WHO Global Database for Blood Safety (GDBS)

The WHO Global Database for Blood Safety contains data on 167 countries.

The global distribution of blood donation, screening and use in the period 1997–1999 has been analyzed with reference to the UNDP Human Development Index (HDI)* which classifies countries as having a low, medium or high HDI. The classification is based on the following criteria:

- ◆ Life expectancy
- ◆ Educational attainment
- ◆ Adjusted income.

* *Human Development Report*, UNDP, 1999

Blood donations

- ◆ Globally, more than 75 million units of blood are donated each year
- ◆ Only 40% (30 million units) of the global blood supply is donated in countries with a low or medium HDI
- ◆ The blood donation rate per 1000 population is 18 times higher in countries with a high HDI than countries with a low HDI

Table 1: Global annual blood donations, analyzed according to Human Development Index criteria

	Countries with low HDI		Countries with medium HDI		Countries with high HDI	
Blood supply, in millions of units and by percentage	1.3 m	1.7%	28.9 m	38.5%	44.9 m	59.8%
Estimated blood donation rates per 1000 population	Average	2	Average	10	Average	40
	Range	0.3 – 5.3	Range	1.7 – 50.3	Range	10.4 – 74.0

Blood donors

- ◆ The safest donors are regular voluntary non-remunerated blood donors from low risk populations
- ◆ Family/replacement donors have a higher incidence and prevalence of transfusion-transmissible infections than voluntary non-remunerated donors
- ◆ A system of family/replacement blood donation often constitutes a ‘hidden’ paid system of blood donation because families may pay others to give the required number of units of blood
- ◆ Paid donors have the highest incidence and prevalence of transfusion-transmissible infections
- ◆ Only 16% of the global supply of blood is donated by voluntary non-remunerated low-risk blood donors in countries with low and medium HDIs

Table 2: Estimated number (in millions) and percentage of donations, by type of donation

	Countries with low HDI		Countries with medium HDI		Countries with high HDI	
Voluntary non-remunerated donations	0.4 m	31%	11.6 m	40%	43.9 m	98%
Family/replacement donations	0.8 m	61%	11.7 m	41%	1.0 m	2%
Paid donations	0.1 m	8%	5.6 m	19%	0.03 m	Not applicable
Total donations	1.3 m	100%	28.9 m	100%	44.9 m	100%

Screening for transfusion-transmissible infections

- ◆ All donated blood should be screened for:
 - HIV
 - Hepatitis B
 - Syphilis
- ◆ Where feasible and appropriate, all donated blood should also be screened for:
 - Hepatitis C
 - Malaria
 - Chagas disease
- ◆ More than 20% (13 million units of blood) of the global blood supply is *not* screened for all relevant transfusion-transmissible infections, mainly in countries with a low or medium HDI

Access to safe and adequate supplies of safe blood

- ◆ 17% of the global population has access to 60% of the global blood supply
- ◆ 80% of the global population has access to only 20% of the global supply of *safe* blood