BLOOD TRANSFUSION SAFETY

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

World Health Organization
Blood Transfusion Safety
Department of Blood Safety and Clinical Technology
20 Avenue Appia, CH-1211 Geneva 27, Switzerland
Tel: +41 22 791 4385  Fax: +41 22 791 4836
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.

*B 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

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

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
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