

Letter to the Editor

Supply of donated blood in the Islamic Republic of Iran, 2001–2002

Sir

The Iranian Blood Transfusion Organization was established in May 1974 with a mission to ensure effective and safe transfusion therapy throughout the country. We report here on the blood supply status in the Islamic Republic of Iran during the 12-month period 21 March 2001–20 March 2002.

A total of 1 582 622 applicant blood donors were registered in 28 provinces throughout the country. After taking their medical history, 221 301 (14.0%) were rejected. The most common reasons were high/low blood pressure (24.1%), taking medication (12.2%) and having a cold/sore throat (5.2%). After completing the application form and reading the information in the blood transfusion booklet, 6.2% of the applicants refused to donate blood (self-deferral).

Table 1 shows the number of blood donations in each province during the year under study. It is recognized that volunteer donors provide the safest blood supply [1]; none of the donors received remuneration. Of a total of 1 361 365 donations, 108 950 (8.0%) were from family/replacement donors and 1 252 415 (92.0%) from voluntary donors. This is much higher than the < 40% of blood donations [2] from voluntary, non-remunerated blood donors reported for countries with a low and medium human development index (HDI) [a measure of development derived from 3 basic components of human development: life expectancy at birth; adult literacy rate plus school enrolment ratio; and per capita gross domestic product (GDP)] [3].

Table 2 shows the number of blood components prepared from whole blood

Table 1 Number of blood donations in each province, Islamic Republic of Iran, March 2001–March 2002

Province	Blood donations
Tehran	312 860
Fars	113 795
Khuzestan	93 814
Khorasan	92 707
Mazandaran	87 084
Esfahan	85 074
Sistan Baluchestan	58 866
Gilan	44 810
Kerman	44 552
Azarbaijan Sharqi	42 681
Golestan	36 426
Kermanshah	36 391
Hormozgan	34 373
Azarbaijan Gharbi	29 036
Yazd	26 364
Markazi	25 032
Lorestan	23 365
Semnan	20 421
Hamedan	20 071
Qazvin	19 957
Kordestan	19 195
Bushehr	18 745
Chaharmahal Bakhtiari	18 199
Qom	18 000
Ardabil	13 709
Zanjan	10 785
Ilam	7 946
Kohkiluyeh Boyer Ahmad	7 063
Total	1 361 321

for the period 21 March 2001–20 March 2002. Effective clinical transfusion practice requires that whole blood be separated into its components. In the Islamic Republic of Iran, < 10% of blood is transfused as whole blood. The availability and use of blood components is limited in many low and medium HDI countries: the use of whole blood is around 10 times higher in these countries compared to high HDI countries, e.g. > 90% is transfused as whole blood in Bangladesh, Democratic People's Republic of Korea, India and Nepal [2].

Globally, the blood donation rate per 1000 population is almost 20 times (41–50 units) higher in developed countries (high HDI) than in countries with a low HDI (0–

Table 2 **Number of blood components derived from whole blood, Islamic Republic of Iran, March 2001–March 2002**

Component	No. of units
Packed red cells	1 148 601
Fresh frozen plasma	767 847
Cryo precipitate	221 858
Cryo poor plasma	236 281
Platelet concentrate	356 917
Washed red cells	108 609

10 units) [2]. In comparison, in the Islamic Republic of Iran, the blood donation rate per 1000 population is almost 21 units.

References

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3. United Nations Development Programme. *Human development report 2003*. New York, Oxford University Press, 2003:237.

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