

CHAPTER 8

CADAVERIC ORGAN AND TISSUE DONATION

Editor:

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List of Tables

Table 8.1: Number of Procurement by Year, 1997-2007.....172
 Table 8.2: Potential Donor Referrals and Actual Donations by month, 2007.....173
 Table 8.3: Distribution of Donors by Age, 1997-2007.....174
 Table 8.4: Distribution of Donors by Gender, 1997-2007.....176
 Table 8.5: Distribution of Donors by Ethnic Group, 1997-2007.....177
 Table 8.6: Distribution of Donors by Religion, 1997-2007.....178
 Table 8.7: Distribution of Donors by Nationality, 1997-2007.....179
 Table 8.8: Distribution of Donors by State, 1997-2007.....180
 Table 8.9: Donor’s Pledged Status, 1997-2007.....181
 Table 8.10: Distribution of Donors by Type, 1997-2007.....182
 Table 8.11: Distribution of Donors by Cause of Death, 1997-2007.....183
 Table 8.12: Distribution of Organ Donors by Blood Group, 1997-2007.....185
 Table 8.13a: Type of hospital/institution where donors originated, 1997-2007.....187
 Table 8.13b: Location where donors were referred from, 1997-2007.....188
 Table 8.13c: Location where procurement was carried out, 1997-2007.....189

List of Figures

Figure 8.1: Number of Procurement by Year, 1997-2007.....172
 Figure 8.2: Potential Donor Referrals and Actual Donations by month, 2007.....173
 Figure 8.3: Distribution of Donors by Age, 1997-2007.....175
 Figure 8.4: Distribution of Donors by Gender, 1997-2007.....176
 Figure 8.5: Distribution of Donors by Ethnic Group, 1997-2007.....177
 Figure 8.6: Distribution of Donors by Religion, 1997-2007.....178
 Figure 8.7: Distribution of Donors by Nationality, 1997-2007.....179
 Figure 8.9: Donor’s Pledged Status, 1997-2007.....181
 Figure 8.10: Distribution of Donors by Type, 1997-2007.....182
 Figure 8.12a: Distribution of Organ Donors by Blood Group, 1997-2007.....185
 Figure 8.12b: Distribution of Organ Donors by Blood Group (pie chart), 1997-
 2007.....186
 Figure 8.12c: Distribution of Organ Donors by Blood Group (pie chart), 2007.....186
 Figure 8.13a: Type of hospital/institution where donors originated, 1997-2007.....187
 Figure 8.13b: Location where donors were referred from, 1997-2007.....188
 Figure 8.13c: Location where procurement was carried out, 1997-2007.....189

CADAVERIC ORGAN AND TISSUE DONATION

There was a decline in the number of potential cadaveric donors referred to the National Transplant Procurement Unit (NTPMU) nationwide from 112 the previous year to 73 in 2007. However, the number of actual donors remained the same at 25 for the year, which translated to a conversion rate of 34% and a donation rate of 0.99 per million population (Table 8.1). Of these 15 (60%) were brain dead donors who donated organs and tissues which were procured in the operating theatre, while another 10 were tissue donations after cardiac death, two being eye donations in the ward and the others multi-tissue procurement in the mortuary (table 8.2). In total 83 organs and tissues were procured, comprising 32 corneas, 28 kidneys, 3 hearts, 2 lungs, 5 livers, 8 pairs of heart valves and 5 sets of long bones.

The pattern of distribution of the donations throughout the year showed an interesting trend (Figure 8.2). The month of March recorded the highest number of potential donors identified and referred to the NTPMU (14/75) as well as the highest number of actual donations (6/25), but majority (4/6) was tissue donations after cardiac death. These six donors together with another multi-tissue donor in early April and a brain dead organ donor in June were the only cases of successful donations in the first half of 2007.

The second half of the year saw an increasing number of brain dead multi-organ organ donations particularly from the month of September onwards. This was in response to the almost daily media blitz in the mainstream and vernacular newspapers and television focusing on the 13 year old Chinese girl who had been put on the Left Ventricular Assist Device (LVAD) while awaiting her heart transplant. As a result there were several referrals and donations occurring quite close together during that period, sometimes two to three cases in a day, and many of which were family initiated. The girl received her heart transplant on 4th October, and her donor was a 15 year old Malay boy, a Quranic scholar whose parents were religious teachers who also donated his lungs, liver, kidneys and corneas after receiving clearance from the state Mufti (religious leader). When that transplant failed as a result of hyperacute rejection, she received a second heart within 24 hours from another 21 year old deceased Chinese motor vehicle accident victim.

Because of the prominent write up about the heart transplant case and the Muslim boy's donation in the Malay media and particularly after the public declaration of support by three state Muftis and the director general of JAKIM (Department of Islamic Development), there were subsequently four other Malay donors who donated multiple organs and tissues after brain death within a short space of time. With the age of these donors mainly in the teens, two of the donations were initiated by the parents. These 5 donors constitute the highest number of Malay (five-fold rise from the previous year) or Muslim donors (two and a half times increase) in a year and for the first time there were more Malay than Indian donors (20% vs 12%) (Table 8.5) although the Chinese still remained the most common ethnic group (56%) and Buddhist the most common religious group (52%) (Table 8.6).

There were more paediatric donors compared to previous years with three donors under the age of five years and another 6 donors in their mid-teens, which together constitute 36% of the total number of donors (Table 8.3). Another 24% (6/25) were in

their twenties which mean that 60% of the donors were under the age of thirty. The mean age was 29.6 years with the youngest being a 14 month old who donated kidneys and the eldest 68 years old Canadian lady who donated corneas. As previously, males exceed females four to one (Table 8.4).

Majority of the donors came from Selangor (24%) followed by Johor (20%) and Kuala Lumpur (12%) (Table 8.8). Most of the donations (84%) took place in Ministry of Health hospitals with a three-fold increase in donations from district hospitals with only 2 cases each occurring in private or university hospitals (Table 8.13a). Sixty-eight percent of the donors were found in the ICU, but there were also five direct referrals for tissue donation from the mortuary with one each from the ward and emergency department (“brought in dead” BID) (Table 8.13b). Six out of the 25 actual donors (24%) had pledged to donate before and carried the donor card (Table 8.9).

Road accident related injuries still remain the most common cause of death, accounting for 60% of the brain death and 40 % of the cardiac death. Another 40% of post-cardiac death tissue donors died from heart related diseases while there was one case of homicide who became a brain dead multi-organ and tissue donor (Table 8.11).

In 2007, the most common blood group among the 15 organ donors was group A rhesus positive (40%), followed by O positive (33%) and B positive (7%), and only 1 (7%) from group A negative and no AB group (Table 8.12). But when considered in totality since 1997, blood group O positive remained the most common group (41%) followed by B positive and A positive.

Table 8.1: Number of Procurement by Year, 1997-2007

Number of procurement by year N=187											
Year	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Number of donors	5	7	4	13	24	30	25	16	13	25	25
Rate of procurement (per million population)	0.25	0.34	0.19	0.59	1.07	1.31	1.07	0.67	0.53	1.01	0.99
Organs procured											
Cornea	4	10	6	18	34	48	40	20	22	38	32
Heart	1	3	2	3	4	0	2	0	1	1	3
Liver	0	0	2	1	1	2	1	3	3	6	5
Kidney	8	10	6	22	38	25	16	18	8	26	28
Heart valve	0	1	2	8	11	11	10	20	6	15	8
Bone	0	1	0	3	2	6	5	5	2	5	5
Skin	0	0	0	2	2	3	0	1	0	3	0
Lung	0	0	0	0	0	0	0	0	1	1	2

Figure 8.1: Number of Procurement by Year, 1997-2007

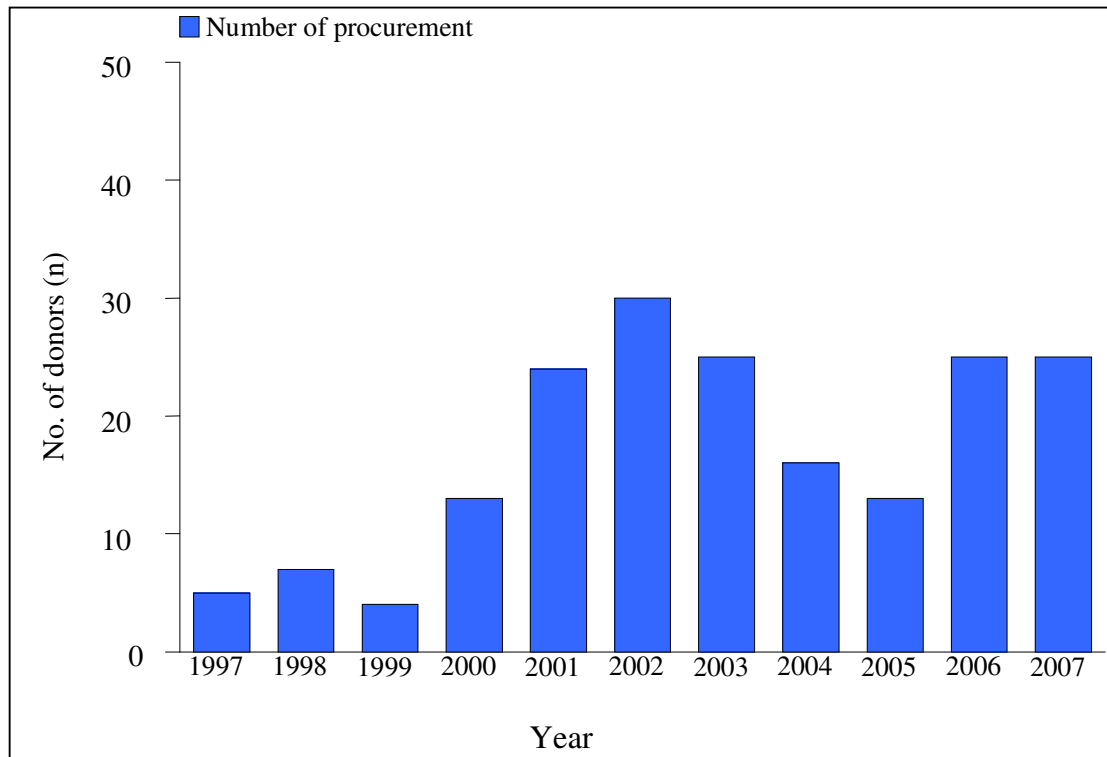


Table 8.2: Potential Donor Referrals and Actual Donations by month, 2007

Month	No. of donors					
	Potential Donor Referrals			Actual Donors		
	Brain Death (BD)	Cardiac Death (CD)	Total	Brain Death Organ Donors (BD)	Cardiac Death Tissue Donors (CD)	Total
Jan	1	3	4	0	0	0
Feb	2	3	5	0	0	0
Mar	7	7	14	2	4	6
Apr	0	6	6	0	1	1
May	0	1	1	0	0	0
Jun	3	2	5	1	0	1
Jul	4	2	6	2	1	3
Aug	3	5	8	1	0	1
Sep	3	5	8	2	2	4
Oct	4	3	7	4	1	5
Nov	4	2	6	3	0	3
Dec	0	3	3	0	1	1
TOTAL	31	42	73	15	10	25

Figure 8.2: Potential Donor Referrals and Actual Donations by month, 2007

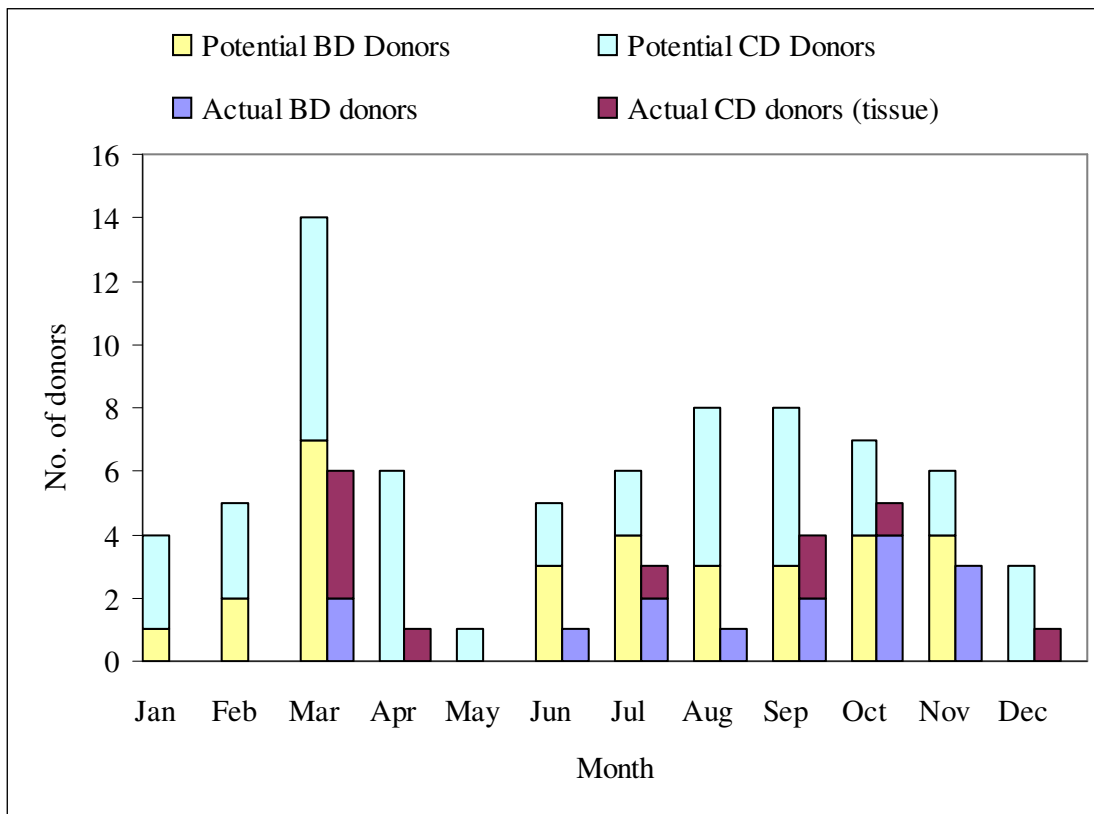


Table 8.3: Distribution of Donors by Age, 1997-2007

Donor's age (years)	1997 N=5		1998 N=7		1999 N=4		2000 N=13		2001 N=24		2002 N=30		2003 N=25		2004 N=16		2005 N=13		2006 N=25		2007 N=25		Total N=187	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
<1	0	0	0	0	0	0	0	0	0	0	0	0	1	4	0	0	0	0	0	0	0	0	1	1
1-9	1	20	0	0	0	0	1	8	1	4	1	3	1	4	1	6	1	8	2	8	3	12	12	6
10-19	0	0	1	14	2	50	7	54	2	8	3	10	4	16	3	19	1	8	9	36	6	24	38	20
20-29	1	20	3	43	2	50	1	8	6	25	6	20	4	16	3	19	2	15	2	8	6	24	36	19
30-39	1	20	0	0	0	0	0	0	5	21	1	3	2	8	2	13	1	8	1	4	1	4	14	7
40-49	0	0	1	14	0	0	2	15	4	17	8	27	4	16	4	25	2	15	3	12	5	20	33	18
50-59	1	20	2	29	0	0	1	8	4	17	7	23	3	12	3	19	1	8	2	8	2	8	26	14
60-69	0	0	0	0	0	0	1	8	2	8	1	3	3	12	0	0	3	23	4	16	2	8	16	9
70-79	0	0	0	0	0	0	0	0	0	0	3	10	3	12	0	0	1	8	2	8	0	0	9	5
80-89	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	8	0	0	0	0	1	1
No data	1	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Total	5	7	4	13	24	30	25	16	13	25	16	13	25	13	25	25	25	187						
Mean	27.25	34.43	20.50	25.23	36.83	41.87	39.36	32.50	46.38	35.72	35.72	46.38	35.72	35.72	35.72	29.6	29.6	35.70						
SD	21.06	17.12	4.43	18.71	15.71	18.92	22.26	15.57	24.78	22.45	22.45	24.78	22.45	22.45	22.45	18.75	18.75	20.09						
Median	28.00	25.00	21.00	17.00	37.00	46.00	40.00	31.50	48.00	23.00	23.00	48.00	23.00	23.00	23.00	29.60	29.60	34.00						
Minimum	2	16	15	5	8	4	<1*	8	3	3	3	3	3	3	3	1**	1**	<1*						
Maximum	21	57	25	60	66	79	77	55	81***	77	77	77	77	77	77	68	68	81***						

* The youngest tissue donor was 37-days-old donated heart valves in 2003

** The youngest organ donor was 14.5-month old donated kidneys 2007.

*** The oldest tissue donor was 81-years-old donated eyes in 2005; the oldest organ donor was 65-years-old donated kidneys in 2001.

Figure 8.3: Distribution of Donors by Age, 1997-2007

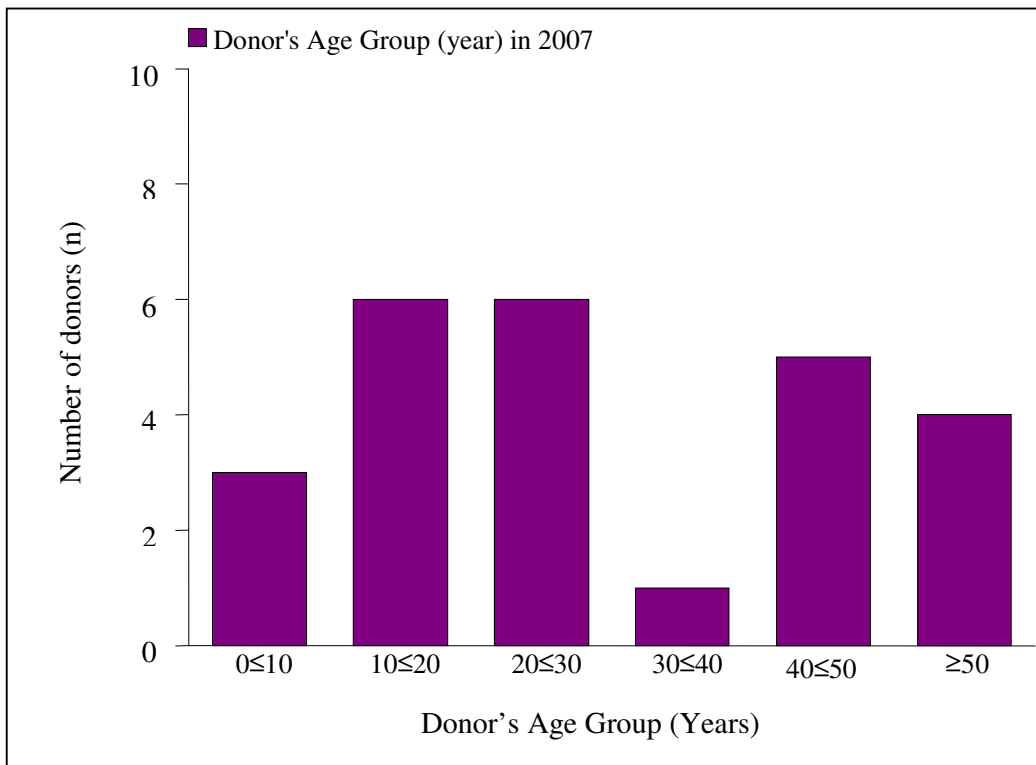
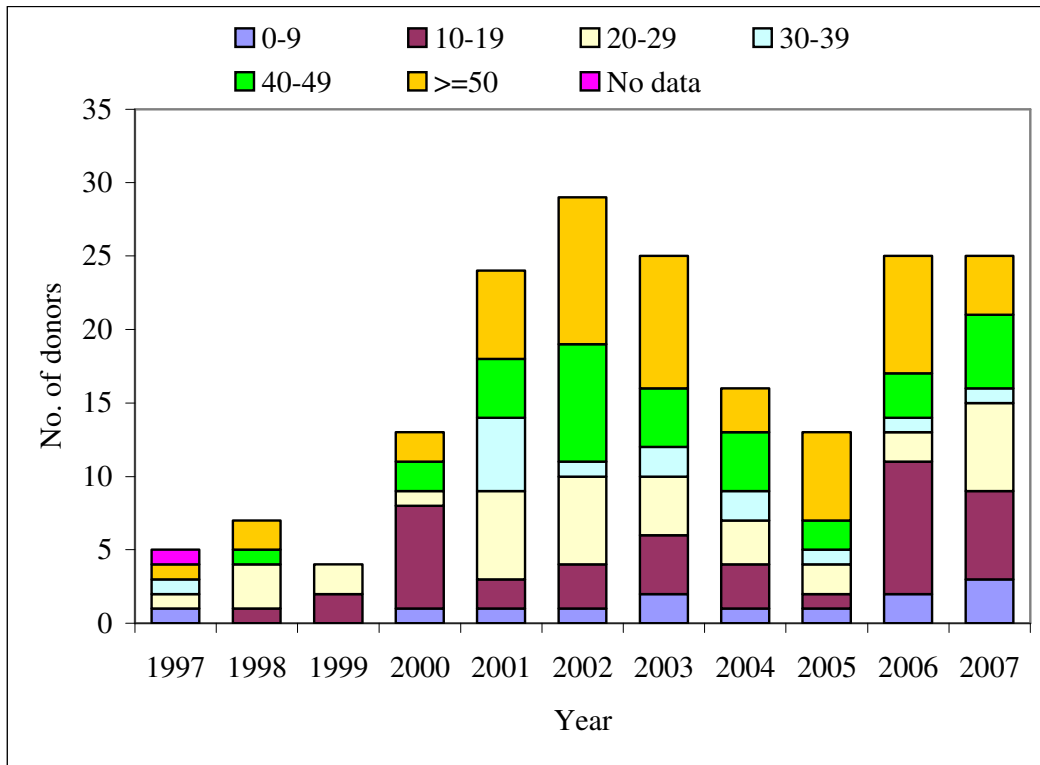


Table 8.4: Distribution of Donors by Gender, 1997-2007

Donor's gender	1997 N=5		1998 N=7		1999 N=4		2000 N=13		2001 N=24		2002 N=30	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Male	3	60	7	100	3	75	11	85	20	83	27	90
Female	2	40	0	0	1	25	2	15	4	17	3	10

Donor's gender	2003 N=25		2004 N=16		2005 N=13		2006 N=25		2007 N=25		Total N=187	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Male	21	84	12	75	8	62	19	76	20	80	151	81
Female	4	16	4	25	5	38	6	24	5	20	36	19

Figure 8.4: Distribution of Donors by Gender, 1997-2007

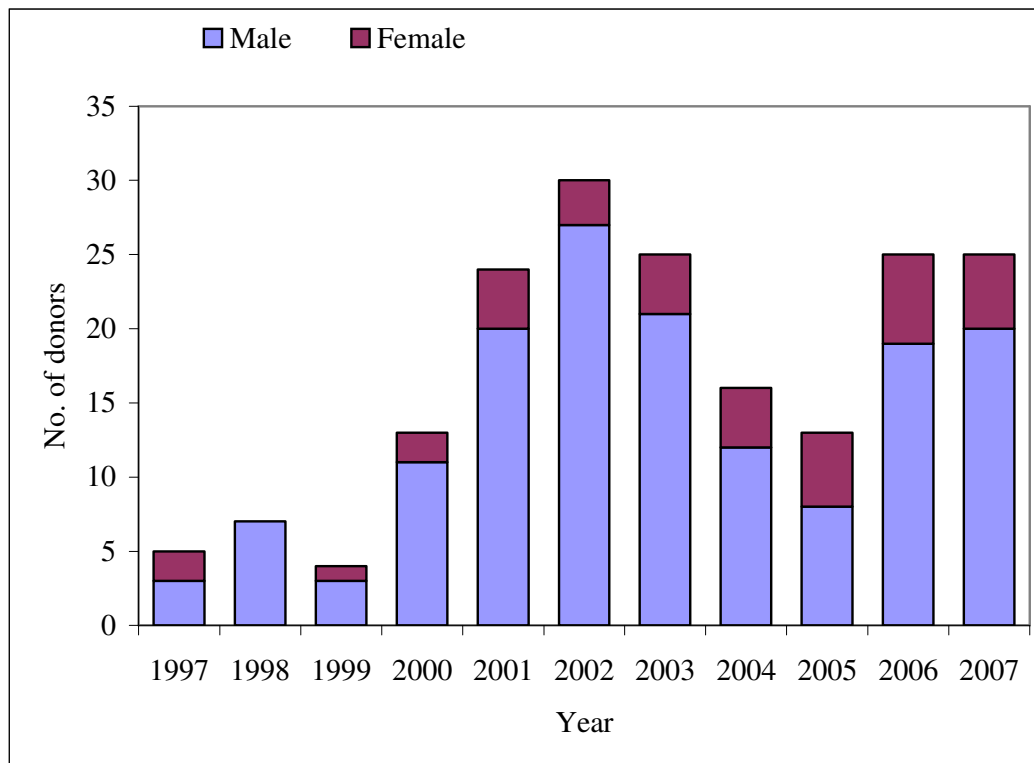


Table 8.5: Distribution of Donors by Ethnic Group, 1997-2007

Donor's ethnic group	1997 N=5		1998 N=7		1999 N=4		2000 N=13		2001 N=24		2002 N=30	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Malay	1	20	0	0	0	0	2	15	1	4	0	0
Chinese	3	60	4	57	4	100	7	54	17	71	13	43
Indian	1	20	3	43	0	0	3	23	4	17	15	50
Others	0	0	0	0	0	0	1	8	2	8	2	7

Donor's ethnic group	2003 N=25		2004 N=16		2005 N=13		2006 N=25		2007 N=25		Total N=187	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Malay	0	0	1	6	1	8	1	4	5	20	12	6
Chinese	14	56	14	88	5	38	12	48	14	56	107	57
Indian	9	36	1	6	7	54	11	44	3	12	57	30
Others	2	8	0	0	0	0	1	4	3	12	11	7

Figure 8.5: Distribution of Donors by Ethnic Group, 1997-2007

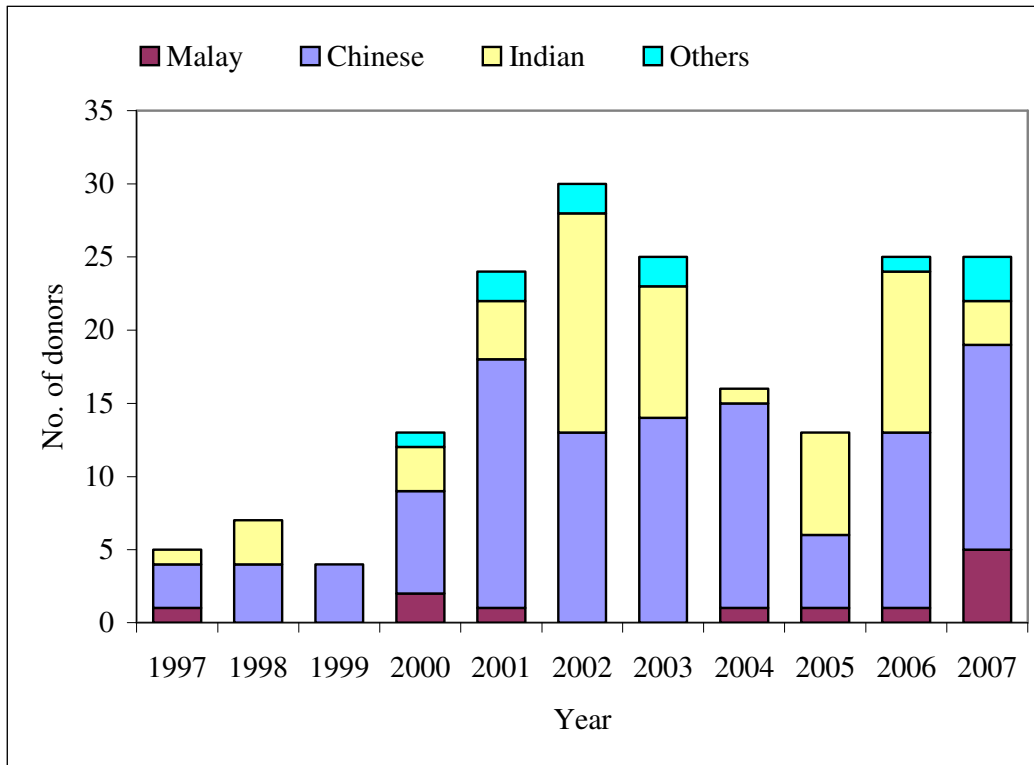


Table 8.6: Distribution of Donors by Religion, 1997-2007

Donor's religion	1997 N=5		1998 N=7		1999 N=4		2000 N=13		2001 N=24		2002 N=30	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Islam	1	20	0	0	0	0	2	15	1	4	0	0
Buddhism	3	60	3	43	0	0	0	0	1	4	5	17
Hinduism	1	20	3	43	0	0	3	23	3	13	13	43
Christianity	0	0	0	0	0	0	1	8	0	0	1	3
Others	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	1	14	4	100	7	54	19	79	11	37

Donor's religion	2003 N=25		2004 N=16		2005 N=13		2006 N=25		2007 N=25		Total N=187	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Islam	1	4	2	13	1	8	2	8	5	20	15	8
Buddhism	15	60	14	88	5	38	12	48	13	52	71	38
Hinduism	8	32	0	0	5	38	10	40	2	8	48	26
Christianity	1	4	0	0	0	0	0	0	4	16	7	4
Others	0	0	0	0	2	15	0	0	1	4	3	2
Unknown	0	0	0	0	0	0	1	4	0	0	43	23

Figure 8.6: Distribution of Donors by Religion, 1997-2007

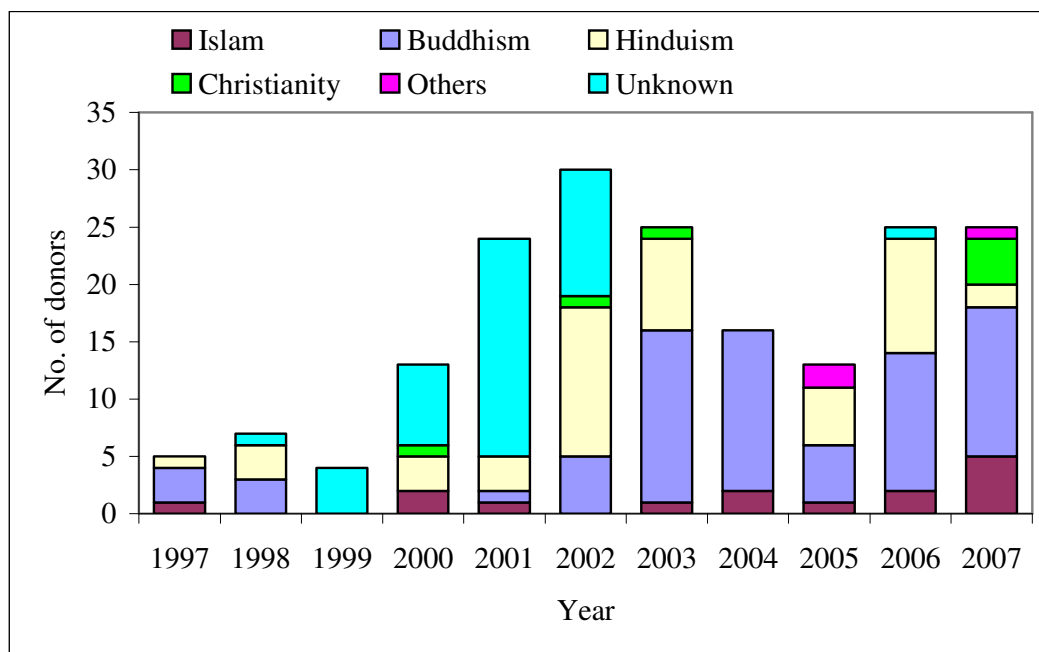


Table 8.7: Distribution of Donors by Nationality, 1997-2007

Donor's nationality	1997 N=5		1998 N=7		1999 N=4		2000 N=13		2001 N=24		2002 N=30	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Malaysian	5	100	7	100	4	100	13	100	21	88	29	97
Non-Malaysian	0	0	0	0	0	0	0	0	3	13	1	3

Donor's nationality	2003 N=25		2004 N=16		2005 N=13		2006 N=25		2007 N=25		Total N=187	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Malaysian	24	96	16	100	13	100	24	96	24	96	180	96
Non-Malaysian	1	4	0	0	0	0	1	4	1	4	7	4

Figure 8.7: Distribution of Donors by Nationality, 1997-2007

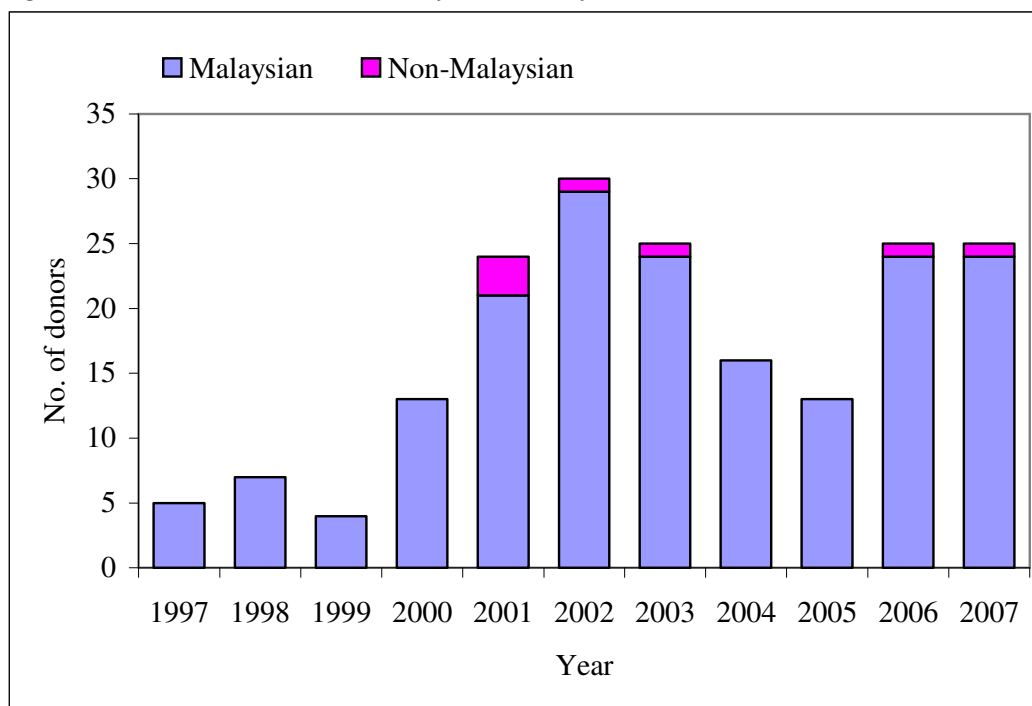


Table 8.8: Distribution of Donors by State, 1997-2007

Donor's state of residence*	1997 N=5		1998 N=7		1999 N=4		2000 N=13		2001 N=24		2002 N=30	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Johor	0	0	0	0	0	0	3	23	0	0	2	7
Malacca	0	0	1	14	1	25	0	0	0	0	1	3
Negeri Sembilan	0	0	1	14	0	0	1	8	0	0	1	3
Selangor	2	40	1	14	0	0	0	0	3	13	9	30
WP Kuala Lumpur	1	20	1	14	2	50	0	0	0	0	5	17
WP Putrajaya	0	0	0	0	0	0	0	0	0	0	1	3
Perak	1	20	2	29	1	25	3	23	0	0	4	13
Kedah	0	0	0	0	0	0	2	15	3	13	1	3
Perlis	0	0	0	0	0	0	0	0	0	0	0	0
Pulau Pinang	0	0	0	0	0	0	1	8	3	13	1	3
Pahang	0	0	1	14	0	0	0	0	3	13	2	7
Terengganu	0	0	0	0	0	0	0	0	1	4	0	0
Kelantan	0	0	0	0	0	0	1	8	0	0	0	0
Sabah	0	0	0	0	0	0	2	15	1	4	0	0
Sarawak	0	0	0	0	0	0	0	0	0	0	0	0
Others**	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	1	20	0	0	0	0	0	0	10	42	3	10

Donor's state of residence*	2003 N=25		2004 N=16		2005 N=13		2006 N=25		2007 N=25		Total N=187	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Johor	3	12	1	6	1	8	1	4	5	20	16	9
Malacca	2	8	0	0	1	8	2	8	1	4	9	5
Negeri Sembilan	4	16	0	0	1	8	2	8	1	4	11	6
Selangor	6	24	6	38	7	54	2	8	6	24	42	22
WP Kuala Lumpur	2	8	3	19	2	15	6	24	3	12	25	13
WP Putrajaya	0	0	0	0	0	0	0	0	0	0	1	0
Perak	0	0	2	13	1	8	4	16	2	8	20	11
Kedah	0	0	1	6	0	0	1	4	2	8	10	5
Perlis	0	0	0	0	0	0	0	0	0	0	0	0
Pulau Pinang	3	12	2	13	0	0	4	16	2	8	16	9
Pahang	2	8	0	0	0	0	1	4	1	4	10	5
Terengganu	0	0	0	0	0	0	0	0	1	4	2	1
Kelantan	0	0	0	0	0	0	1	4	0	0	2	1
Sabah	1	4	1	7	0	0	0	0	0	0	5	3
Sarawak	0	0	0	0	0	0	0	0	0	0	0	0
Others**	1	4	0	0	0	0	1	4	1	4	3	2
Unknown	1	4	0	0	0	0	0	0	0	0	15	8

*State of residence according to home address

**Others constitute donors who were foreigners, one from Yangon, Myanmar (2003), one from Taiwan (2006) and one from Canada (2007).

Table 8.9: Donor's Pledged Status, 1997-2007

Donor's pledged status	1997 N=5		1998 N=7		1999 N=4		2000 N=13		2001 N=24		2002 N=30	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Pledged donors	0	0	0	0	0	0	0	0	0	0	5	17
Non-pledged donors	5	100	7	100	4	100	13	100	24	100	25	83

Donor's pledged status	2003 N=25		2004 N=16		2005 N=13		2006 N=25		2007 N=25		Total N=187	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Pledged donors	6	24	2	13	3	23	1	4	6	24	23	12
Non-pledged donors	19	76	14	88	10	77	24	96	19	76	164	88

Figure 8.9: Donor's Pledged Status, 1997-2007

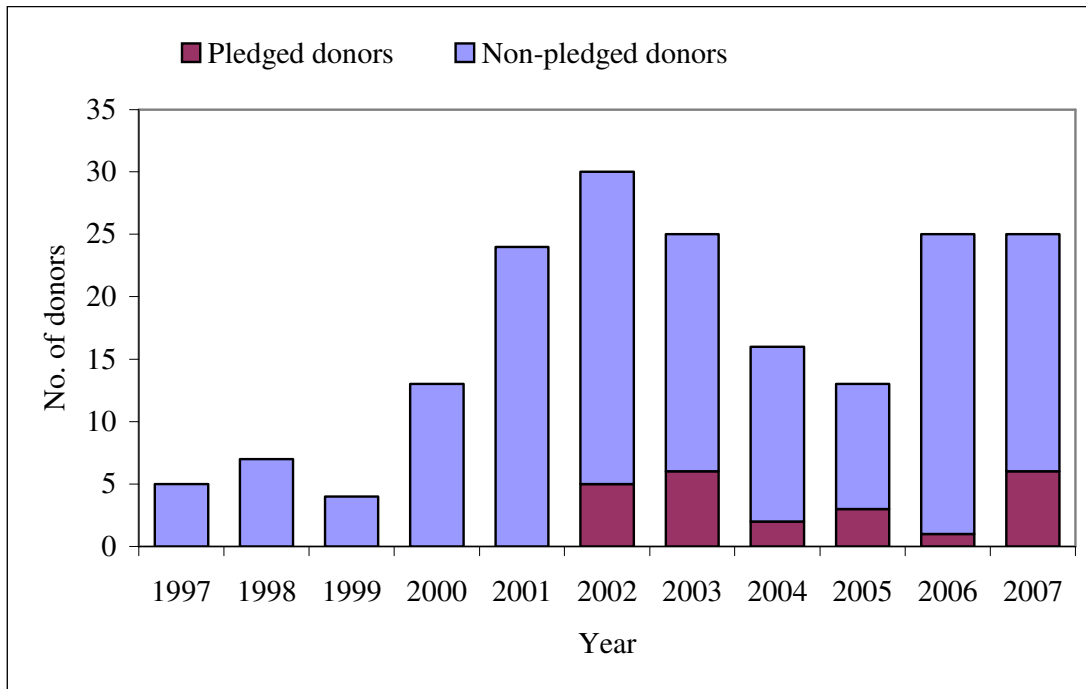


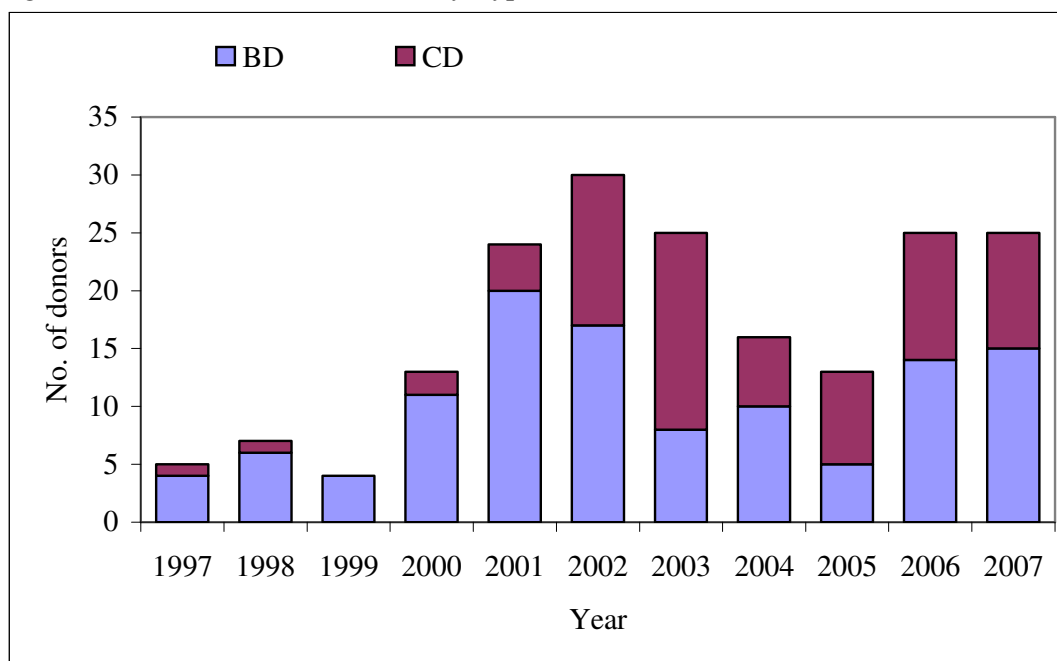
Table 8.10: Distribution of Donors by Type, 1997-2007

Type of donors	1997 N=5		1998 N=7		1999 N=4		2000 N=13		2001 N=24		2002 N=30	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
BD (Brain Dead donors)	4	80	6	86	4	100	11	85	20	83	17	57
CD (Tissue Donors after Cardiac Death)*	1	20	1	14	0	0	2	15	4	17	13	43

Type of donors	2003 N=25		2004 N=16		2005 N=13		2006 N=25		2007 N=25		Total N=187	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
BD (Brain Dead donors)	8	32	10	63	5	38	14	56	15	60	114	61
CD (Tissue Donors after Cardiac Death)*	17	68	6	38	8	62	11	44	10	40	73	39

* CD involve tissue donations only

Figure 8.10: Distribution of Donors by Type, 1997-2007



Causes of death	2003 N=25		2004 N=16		2005 N=13		2006 N=25		2007 N=25		Total N=187						
	Brain dead donors N=8		Brain dead donors N=10		Brain dead donors N=5		Brain dead donors N=14		Brain dead donors N=15		Brain dead donors N=114						
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%					
Injury from MVA	6	75	2	20	1	20	7	50	9	60	4	40	60	53	22	30	
Injury from fall	1	13	0	0	0	0	1	7	1	7	2	20	6	5	3	4	
Injury from assault	0	0	1	10	1	20	0	0	1	7	1	9	1	7	0	0	
Injury from industrial accident	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	
Spontaneous hypertensive intracranial bleed	0	0	1	10	2	33	1	20	0	0	1	7	0	0	12	11	4
Spontaneous AVM/Aneurysm intracranial bleed	0	0	3	30	0	0	0	0	2	13	0	0	0	9	8	1	1
Brain anoxia	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
Brain tumour	0	0	0	0	0	0	0	2	14	0	0	0	0	4	4	0	0
Thrombo embolic brain infarct	1	13	0	0	1	20	0	0	0	0	2	18	0	0	4	4	5
Cardiac disease	0	0	7	41	1	10	1	20	2	14	5	45	0	0	4	4	24
Others	0	0	4	24	0	0	3	38	0	0	3	38	0	0	2	2	9
Unknown	0	0	0	0	0	0	0	0	0	0	1	9	0	0	5	4	3

Table 8.12: Distribution of Organ Donors by Blood Group, 1997-2007

Blood group	No. (%)					
	1997 N=4	1998 N=6	1999 N=4	2000 N=11	2001 N=20	2002 N=13
A positive	1(25)	1(17)	0(0)	1(9)	5(25)	3(23)
B positive	0(0)	1(17)	1(25)	5(45)	4(20)	3(23)
AB positive	1(25)	1(17)	0(0)	0(0)	1(5)	0(0)
O positive	2(50)	3(50)	3(75)	5(45)	10(50)	7(54)
A negative	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)

Blood group	No. (%)					
	2003 N=8	2004 N=10	2005 N=5	2006 N=14	2007 N=15	Total N=110
A positive	4(50)	2(20)	1(20)	4(29)	6 (40)	28 (25)
B positive	3(38)	4(40)	2(40)	5(36)	3 (20)	31 (28)
AB positive	0(0)	0(0)	0(0)	2(14)	0 (0)	5 (5)
O positive	1(12)	4(40)	2(40)	3(21)	5 (33)	45 (41)
A negative	0(0)	0(0)	0(0)	0(0)	1 (7)	1 (1)

Blood group is only ascertained in brain dead donors and is not done for tissue donors post -cardiac deaths

Figure 8.12a: Distribution of Organ Donors by Blood Group, 1997-2007

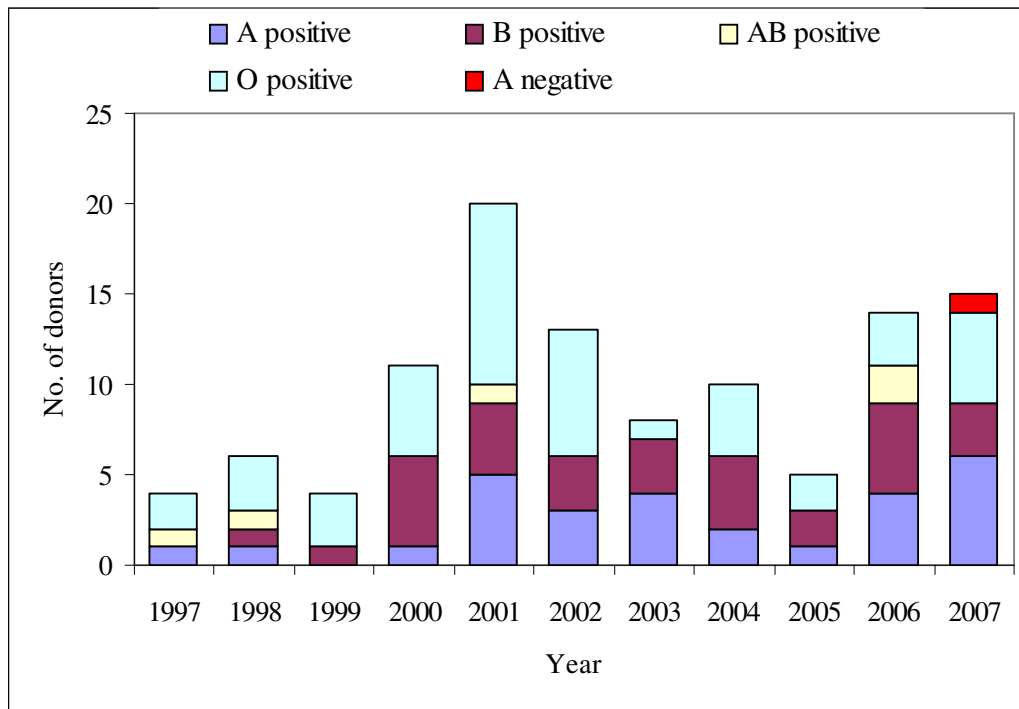


Figure 8.12b: Distribution of Organ Donors by Blood Group (pie chart), 1997-2007

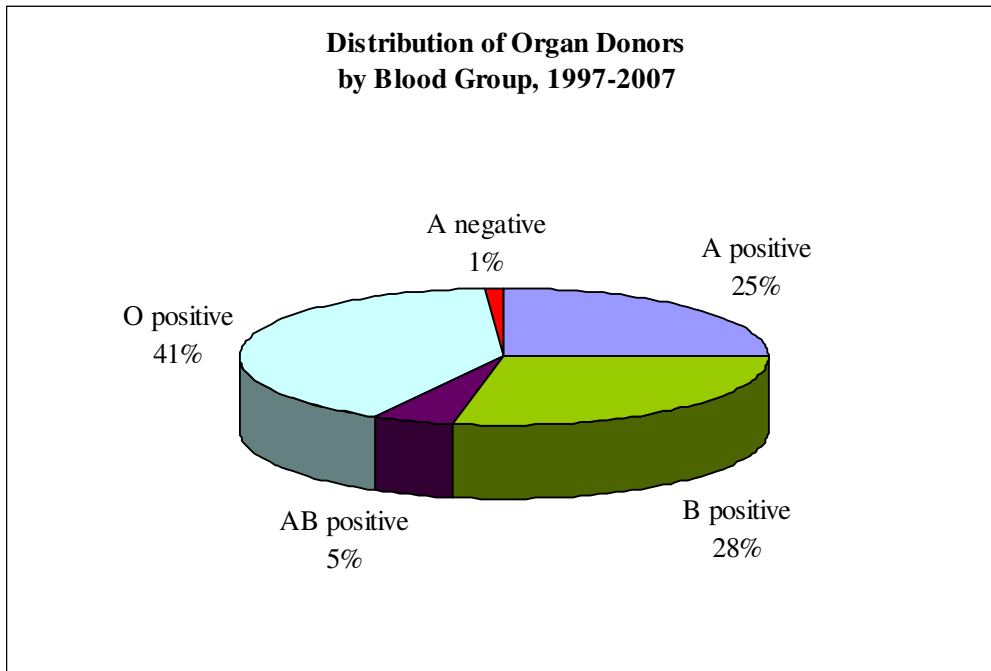


Figure 8.12c: Distribution of Organ Donors by Blood Group (pie chart), 2007

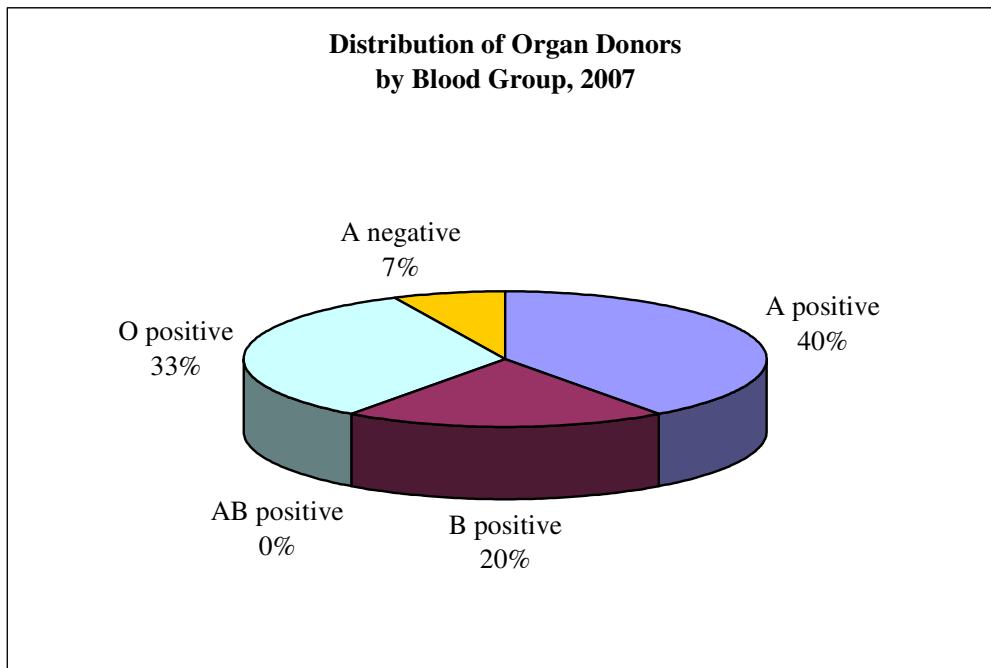


Table 8.13a: Type of hospital/institution where donors originated, 1997-2007

Hospital/Institution	1997 N=5		1998 N=7		1999 N=4		2000 N=13		2001 N=24		2002 N=30	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
MOH state/general hospitals	2	40	5	71	1	25	10	77	16	67	19	63
MOH district hospitals	0	0	0	0	0	0	2	15	0	0	2	7
University hospitals	1	20	1	14	0	0	0	0	6	25	4	13
Private hospitals	1	20	1	14	3	75	1	8	2	8	4	13
Home (eye donors only)	1	20	0	0	0	0	0	0	0	0	1	3

Hospital/Institution	2003 N=25		2004 N=16		2005 N=13		2006 N=25		2007 N=25		Total N=187	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
MOH state/general hospitals	15	60	12	75	7	54	17	68	18	72	105	66
MOH district hospitals	4	16	2	13	0	0	1	4	3	12	10	7
University hospitals	3	12	1	6	1	8	3	12	2	8	20	12
Private hospitals	3	12	1	6	5	38	4	16	2	8	25	14
Home (eye donors only)	0	0	0	0	0	0	0	0	0	0	2	1

Figure 8.13a: Type of hospital/institution where donors originated, 1997-2007

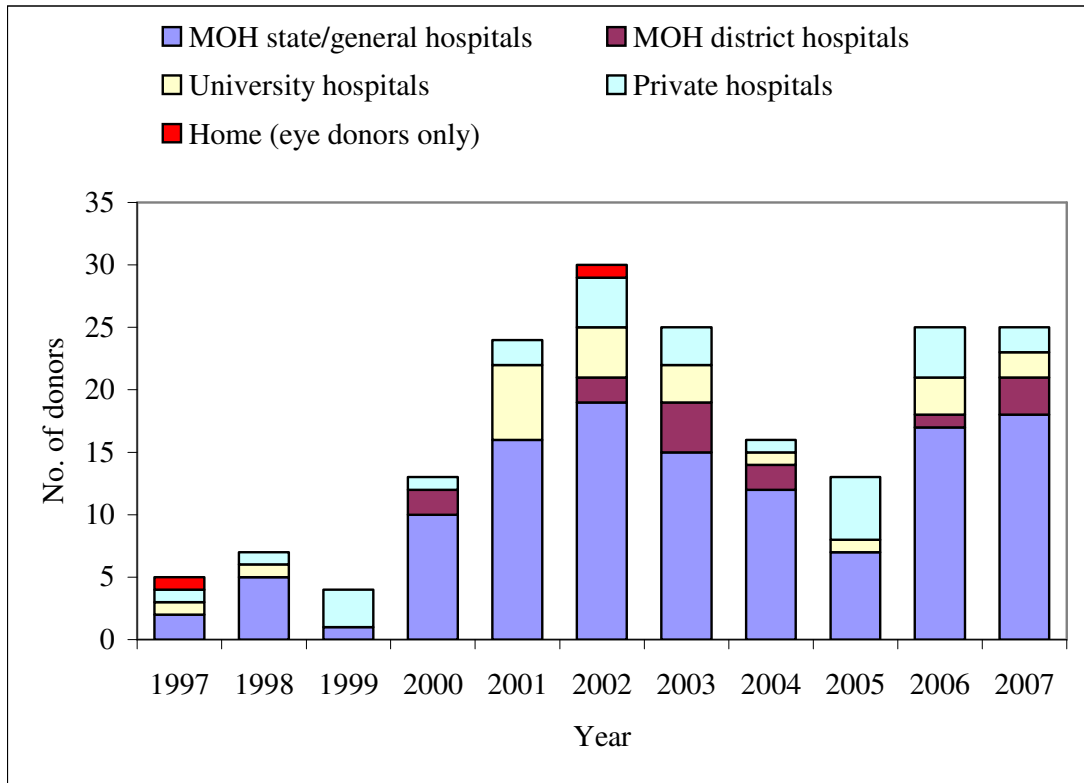


Table 8.13b: Location where donors were referred from, 1997-2007

Location	1997 N=5		1998 N=7		1999 N=4		2000 N=13		2001 N=24		2002 N=30	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
ICU	1	20	0	0	0	0	1	8	14	58	16	53
Ward	0	0	0	0	0	0	0	0	0	0	1	3
Emergency department	0	0	0	0	0	0	0	0	3	13	4	13
Mortuary	0	0	0	0	0	0	0	0	0	0	3	10
Home (eye donors only)	0	0	0	0	0	0	0	0	0	0	1	3
Data not available	4	80	7	100	4	100	12	92	7	29	5	17

Location	2003 N=25		2004 N=16		2005 N=13		2006 N=25		2007 N=25		Total N=187	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
ICU	13	52	12	75	8	62	16	64	17	68	98	52
Ward	3	12	1	6	3	23	3	12	1	4	12	6
Emergency department	1	4	0	0	0	0	3	12	1	4	12	6
Mortuary	6	24	3	19	1	8	3	12	5	20	21	11
Home (eye donors only)	0	0	0	0	0	0	0	0	0	0	1	1
Data not available	2	8	0	0	1	8	0	0	1	4	43	23

Figure 8.13b: Location where donors were referred from, 1997-2007

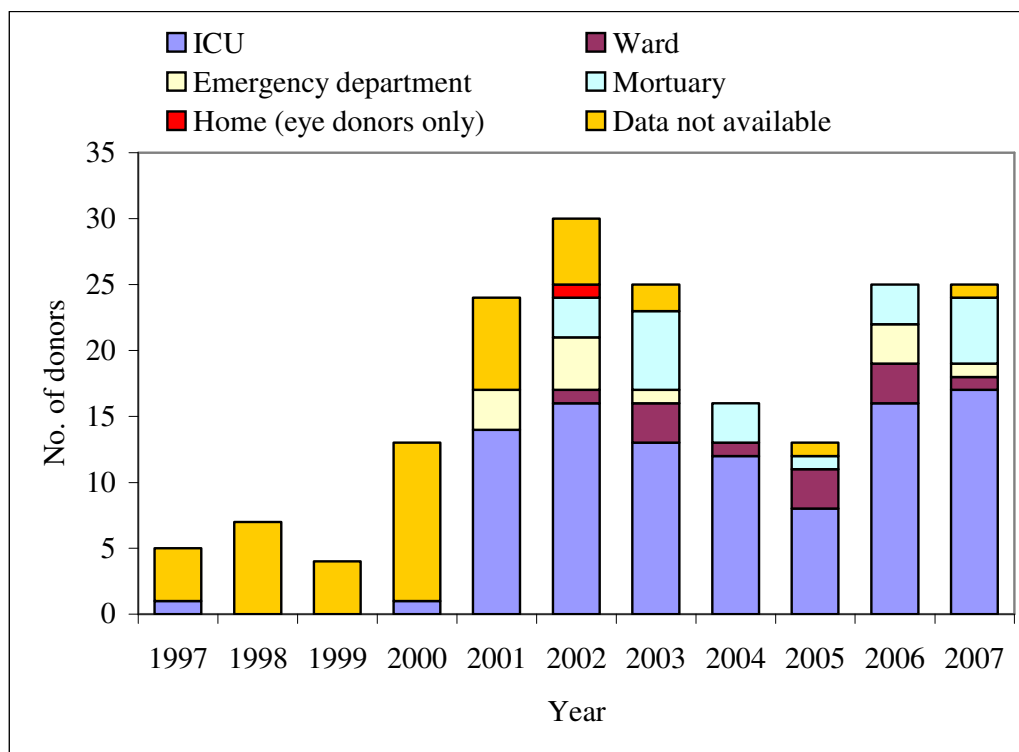


Table 8.13c: Location where procurement was carried out, 1997-2007

Donor Procurement Site	1997 N=5		1998 N=7		1999 N=4		2000 N=13		2001 N=24		2002 N=30	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Operation theatre	4	80	6	86	4	100	11	85	20	83	14	47
Mortuary	0	0	1	14	0	0	2	15	3	13	14	47
Ward	0	0	0	0	0	0	0	0	1	4	1	3
Home (eye donors only)	1	20	0	0	0	0	0	0	0	0	1	3
Data not available	0	0	0	0	0	0	0	0	0	0	0	0

Donor Procurement Site	2003 N=25		2004 N=16		2005 N=13		2006 N=25		2007 N=25		Total N=187	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Operation theatre	8	32	9	56	5	38	14	56	16	64	111	59
Mortuary	14	56	7	44	5	38	10	40	7	28	63	34
Ward	3	12	0	0	2	15	1	4	2	8	10	5
Home (eye donors only)	0	0	0	0	0	0	0	0	0	0	2	1
Data not available	0	0	0	0	1	8	0	0	0	0	1	1

Figure 8.13c: Location where procurement was carried out, 1997-2007

