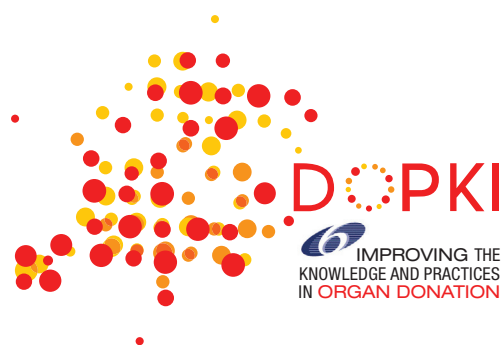


# DOPKI NEWSLETTER 2007

A quick view on DOPKI project and shots of information on the state of the art in donation and transplantation in European countries

[www.dopki.eu](http://www.dopki.eu)







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## DOPKI GOALS

Organ transplantation represents the best and frequently the unique therapeutic alternative for patients with end stage organ failure. The excellent success rates achieved through organ transplantation have led to high levels of demand. While the number of patients placed in the waiting list has been increasing, the number of donors and organs available for transplantation has not improved or has improved at a much lower rate. As a result, there is an increasing gap between the number of patients in the waiting list and the number of performed transplants (Table1). DOPKI is an European project funded by the European Commission targeted to improve the knowledge and develop a common and applicable method for organ donation and its outcome, considering in particular the safety and quality of marginal organs. This knowledge will be used to develop applicable actions in the field that will help to improve organ donation rates:

1. Design and validation of statistic tools to explore relations between general and specific mortality rates, social and demographic data, health systems and donation and transplantation rates.

2. Implementation of hospital-based programmes to evaluate and monitor the donation process, as a tool that will contribute to draw up and implement corrective measures in the donation process.

3. European cooperation in sharing information on the outcome of recipients of the so called expanded criteria donors, a crucial issue to know the safety and quality of marginal organs.

4. Cooperation with the [WHO](#), sharing information on donation and transplantation activities and disseminating the knowledge acquired and the tools developed in DOPKI.

DOPKI project is coordinated by the Spanish National Transplant Organization (ONT) and it will last 3 years (January 2006 to December 2008).

Information about DOPKI project available at [www.dopki.eu](http://www.dopki.eu).




	Transplants	Waiting list
	16819	48966
	6249	6307
	2086	2549
total	25154	57822

Table 1: Transplants & waiting lists in European Union 2006 - Newsletter Transplant (number of patients in waiting list at the end of year)



# PARTICIPANTS AND ORGANISATION OF THE WORK

DOPKI's consortium is composed by 13 organisations on behalf of 16 European countries, which represent 80% of the population and 80% of all the donation and transplantation activity in Europe.



Autoridade para os Serviços de Sangue e Transplantação (ASST), Portugal (PT)



Hungarian National Blood Transfusion Service (HNBT), Hungary (HU)



Agence de la Biomédecine (ABM), France (FR)



Ministry of Health and Social Welfare (MZSS), Croacia (HR)



Centro Nazionale Trapianti (CNT), Italy (IT)



Organización Nacional de Trasplantes (ONT), Spain (ES)



Deutsche Stiftung Organtransplantation (DSO), Germany (DE)



Poltransplant, Poland (PL)



Eurotransplant International Foundation (ET), The Netherlands (NL)



Slovenija Transplant, Slovenia (SI)

Eurotransplant International Foundation provides information on behalf of Austria (AT), Belgium (BE), Luxembourg (LU) and The Netherlands (NL).



Swisstransplant, Switzerland (CH)



Transplant Coordinating Centre of the Czech Republic (KST), Czech Republic (CZ)



**UK Transplant** UK Transplant (UKT), United Kingdom (UK)

Activities in DOPKI are organized in 7 work packages:

**WP 1** Project management/Co-ordination/Communication system (leader: ONT)

**WP 2** State of the Art (leader: DSO)

**WP 3** Design of the work methodology (leader: CNT)

**WP 4** Implementation of the study (leader: ABM)

**WP 5** Statistical data and cost/benefit analysis (leaders: ET, HNBT)

**WP 6** Dissemination plan. Information to stakeholders (leader: ASST)

**WP 7** Conclusions and Policy implications (leaders: UKT, ONT)



# OVERVIEW OF DOPKI NEWSLETTER 2007

## STATE OF ART IN DONATION AND TRANSPLANTATION IN EUROPE

DOPKI Newsletter 2007 aims to provide some information on the work performed within WP2 of DOPKI. This WP aimed to describe the “State of the Art” in donation and transplantation issues in the European countries participating in this project. In the present Newsletter, we will offer a brief overview on:

1. Organizational and legal framework on donation and transplantation

2. Comprehensive analysis of the donation and transplantation activities and waiting list data

The information has been collected through specifically designed questionnaires filled in by the partners. Definitions were based on the DOPKI [glossary](#). Data were collected for the years 2003-2005.





# ORGANISATIONAL FRAMEWORK

Organisational structures have not only an impact on quality and safety of organs but also on the detection, referral and hence the availability of organs for transplantation. In DOPKI, we have reviewed the organisational framework on donation and transplantation issues in the participating countries.

































## Field of activity of transplant organisations

All the transplant organisations participating in DOPKI are in charge of the coordination of organ donation. Only a small percentage of countries with a national procurement agency are not in charge at the same time of cells and tissues.

## Organisational structure

All participating organisations have a national scope, except for UK Transplant and Eurotransplant. UK Transplant is responsible for England, Scotland, Wales and Northern Ireland and hence could be labelled as a supranational organisation. The same is true for Eurotransplant with an exceptional position in the project. Even though it is a Dutch private non-profit foundation, it operates on a supranational level in charge of the allocation of organs in seven countries (Austria, Belgium, Croatia, Germany, Luxemburg, the Netherlands and Slovenia).

The majority of organisations are of public character. In Germany and Switzerland, private non profit organisations have been mandated by the Ministry of Health in Germany and by state contract in Switzerland (Netherlands) to coordinate the donation and procurement activities. Most of the organisations have a national headquarter, but additionally also a regional structure.

Country	Structure	
BE	 	
HR	 	
CZ	 	7 Regional
FR	 	7 ABM
DE	 	7 DSC-Regions
HU	 	4 Regions
IT	 	
LU	 	
NL	 	
PL	 	
PT	 	GCCOT-5
SI	 	
ES	 	17 Regional
CH	 	
UK	 	
ET	 	






-  Public
-  Private
-  National
-  Supranational
-  Regional

Table 2: Organisational Structure



## LEGAL FRAMEWORK

. **Informed consent (opting-in model):** the donor has to express his will to donate explicitly during lifetime. If the donor did not communicate his will during lifetime, consent can alternatively be obtained from relatives or other close persons instead.

An overview of the consent policies (presumed or opting-out versus informed versus opting-in) in participating countries is provided in the Table 3 (next page).

-  Presumed consent
-  Informed consent
-  Non-donor registry
-  Donor registry
-  Check in registry mandatory
-  NO
-  Persons registered?
-  No data available

	Presumed / Informed consent	Non-donor registry	Donor registry	Check in registry mandatory	Persons registered?
AT	Yes	No	No	No	
BE	Yes	No	Yes	No	193132=NO; 51278=YES
HR	Yes	No	No	Yes	
CZ	Yes	No	No	Yes	approx. 600
FR	Yes	No	No	Yes	50000
DE	No	No	No	Yes	
HU	Yes	No	No	Yes	
IT	* Yes	No	Yes	Yes	
LU	Yes	No	No	No	
NL	No	No	Yes	Yes	approx 5 million
PL	Yes	No	No	Yes	23515 (19.06.2006)
PT	Yes	No	No	Yes	
SI	No	No	Yes	Yes	
ES	Yes	No	No	No	
CH	No	No	No	No	
UK	No	No	Yes	Yes	13.4 million

\* Presumed consent, Law 91/1999 set up the presumed consent in Italy however this part of the law is actually not yet applied because the authorities decided to wait for the start-up of national health care system with Ana graphical data base to be sure that every citizen has the right information on donation.

Table 3: Consent and registry; colour guide on previous page

## Non Heart Beating Donation

Non heart beating donation (NHBD) has been described as a useful possibility to expand the donor pool. In spite of this, non heart beating donation is not legally allowed in 4 of the 16 participating countries (Croatia, Germany, Hungary, and Poland), except for Maastricht Category IV, since organs can only be retrieved if brain death diagnosis has been completed. Some countries do not have legal restrictions on NHBD, but programmes have not been installed so far. In Italy, France and Portugal – even though NHBD is not forbidden from a legal point of view, there are no programs or just recently started to be developed (France has a pilot programme).

### NHBD legally approved?

Organisation	Country
./.	AT*
(BTS)	BE
MZSS	HR
KST	CZ
ABM	FR
DSO	DE
HNBT	HU
CNT	IT
./.	LU
NTS	NL
Poltransplant	PL
ASST	PT
Slovenija-Transplant	SI
ONT	ES
Swisstransplant	CH
UKT	UK

\* law says: ..removal of organs of deceased people.. Not specifically brain death or cardiac death.

Yes  
No

Table 4: NHBD



# ANALYSIS OF ACTIVITIES AND WAITING LIST DATA

## Mortality and organ donation rates

The number of potential donors may be influenced by numerous factors, as the mortality rate of patients with brain damage. From our experience we know that 80% of the donors that die with brain death while ventilated are found in the mortality groups of death due to cerebrovascular diseases and motor vehicle accident. We explored whether differences in the potential and effective donation rates among the countries was justifiable on the basis of differences encountered regarding the standardized mortality rate due to cerebrovascular diseases plus motor vehicle accidents, including all ages.

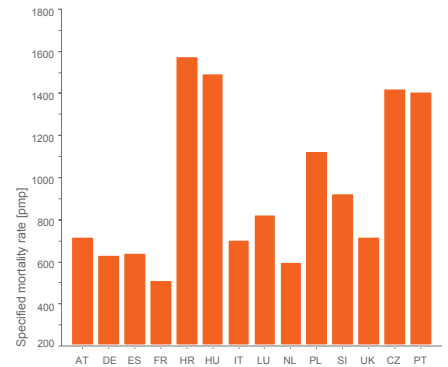


Figure 1: Specified mortality rate across countries

Figure 1 shows a specified mortality rate for the year 2003 that consists of the standardized mortality rate due to cerebrovascular diseases plus the standardized mortality rate due to motor vehicle accidents including all ages. Included in the chart are only those countries where figures on the specified SDR were available. We can see that the specified mortality rate differs immensely across the participating countries. In some of the new EU-member states, such as Croatia and Hungary, it is twice as high as in the old member states, but also Portugal had a fairly high-specified mortality rate.

The figures on potential donors were only available in 9 out of the 16 participating countries, ranging from 16 potential donors pmp in Poland up to 43 potential donors in Spain (Figure 2). Fifteen countries provided the figures on effective donors, highly differing across the countries (Figure 2a).

No significant correlation could be proven between the mortality rate and

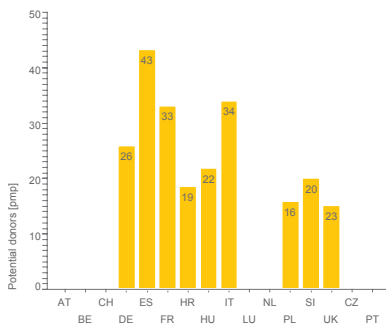


Figure 2: Potential donors pmp (mean 2003-2005)

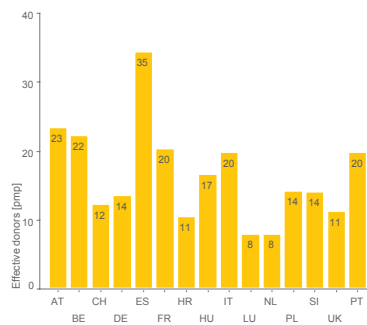


Figure 2a: Effective donors pmp (mean 2003-2005)

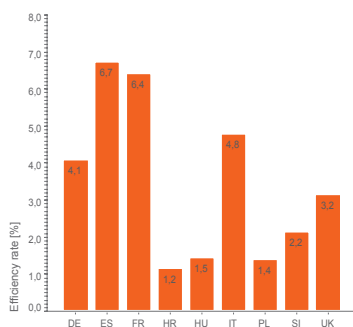


Figure 3: Potential donor efficiency rate

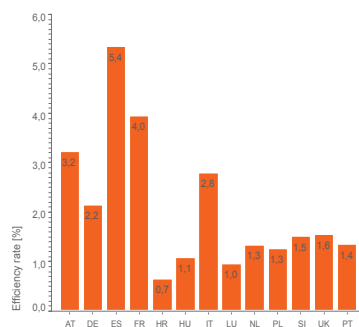


Figure 4: Effective donor efficiency rate

the potential and effective donation rate. This means that differences in potential and effective donation rates across our countries are not explained by variations in the specified mortality rate (SMR, all ages due to cerebrovascular diseases plus motor vehicle accidents).

### Path from possible to effective donor

The problems derived from the complex and long process of donation may be well exemplified by analyzing the flowchart from a possible donor becoming a potential donor and then an effective donor. Data availability in the participating countries was an important obstacle, nevertheless we were able to provide some figures.

### Possible donor into potential donor

Data were only available for 3 countries (Germany, Hungary and UK). Figure 7 illustrates a clear increase of possible and potential donors in Germany over the years 2004 to 2005. In UK from 2004 to 2005 a decrease of possible and potential donors can be observed. However the differences in Germany and UK between the number of possible and potential donors remained stable and did not differ significantly in the two years. Few conclusions may derive from these figures, because of the scarcity of data, although it seems that the higher the number of possible donors, the higher the number of potential donors.

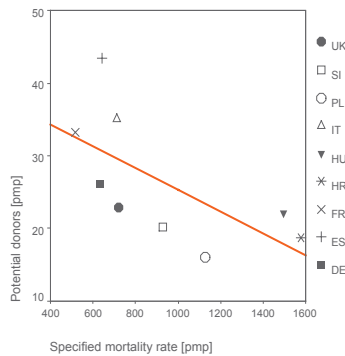


Figure 5: Correlation between specified mortality rate (pmp) and potential donor (pmp)

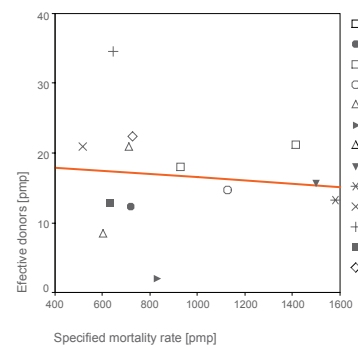


Figure 6: Correlation between specified mortality rate (pmp) and effective donor (pmp)

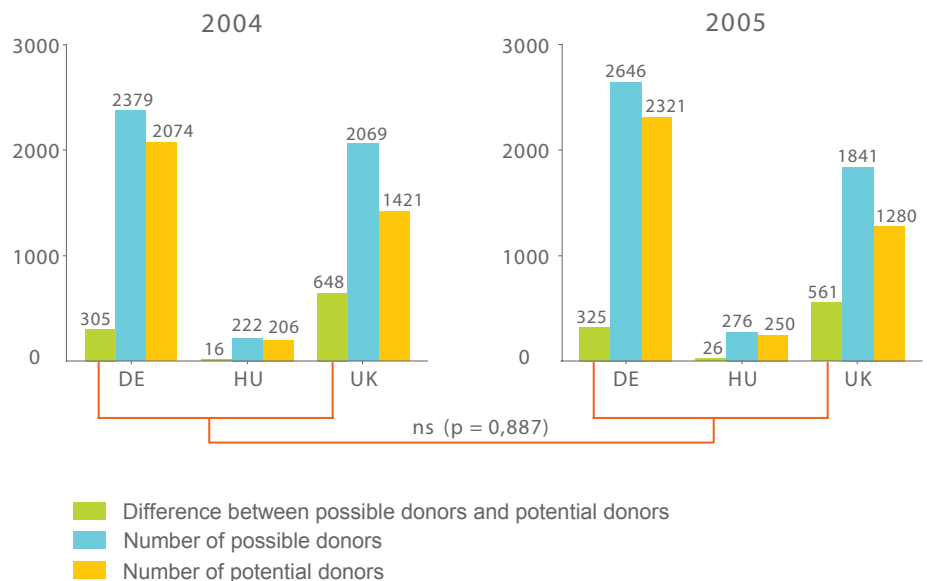


Figure 7: Comparison of possible donors, potential donors and the differences between these two in the countries UK; Germany and Hungary in the 2004 and 2005

### Potential into effective donor

Table 5 displays the mean values from 2003-2005 of selected donor data, for the countries that provided the entire data set, including potential, consented and effective donors. The comparison of means of the conversion rates between countries with informed consent and countries with presumed consent shows significant differences. That means that these conversion rates are clearly higher in countries with presumed consent. The considerably higher number of refusals in countries with informed consent as can be seen in Figure 8 is one of the reasons.

	pot. donors	con. donors	eff. donors	con / pot [%]	eff / pot [%]	eff / con [%]
DE	2151,3	1173,7	1129,3	54,6	52,5	96,2
ES	1877,7	1536,7	1494,7	81,8	89,9	97,2
FR	2048		1260,3		61,5	
HR	83,3	47,3	47,3	56,9	56,9	100,0
HU	223,3	207,3	167,3	92,9	74,6	80,8
IT	1964,7	1378,7	1146,0	70,2	58,3	83,1
PL	613,7	547,7	547,7	89,2	83,2	100,0
SI	40,3	28,3	28,3	69,9	69,9	100,0
UK	1350,5	696,5	628,0	51,5	46,5	90,20

Table 5: Mean values for the year 2003-2005 on potential, consented and effective donors and selected conversion rates across countries

In blue: countries with informed consent; in blue: countries with informed consent

t-Test p = 0,037 conversion rate (eff / pot [%]) countries with informed consent to countries with presumed consent

t-Test p = 0,004 "conversion rate" (con / pot [%]) countries with informed consent to countries with presumed consent

## Refusal rate

The refusal rate, defined as the number of family refusals out of the number of families approached, was available for 8 of the 16 participating countries for the years 2003, 2004 and 2005 (Figure 8). Once again, the refusal rate in countries with informed consent tends to be higher than in countries with presumed consent. Among the countries with presumed consent, Poland, Hungary and Spain show an extremely low refusal rate. However, the difference in the refusal rate when comparing countries with presumed versus informed consent policy should be cautiously considered, since both systems seem to be similar from the practical point of view, as previously explained.



Figure 8: Refusal rates across countries

## Transplantation programs

	KIDNEY	LIVER	HEART	LUNG	PANCREAS	BOWEL	TOTAL
AT	5	3	3	3	3	0	17
BE	8	6	7	4	7	0	32
CH	1	1	1	0	0	0	3
DE	42	25	26	15	25	4	141
ES	42	23	17	7	11	3	104
FR	44	24	26	15	14	4	127
HR	4	1	1	0	2	0	7
HU	4	1	1	0	2	0	8
IT	40	21	19	12	15	3	110
LU	1	0	0	0	0	0	1
NL	9	3	3	3	2	0	20
PL	18	6	4	1	4	0	33
PT	8	3	4	1	1	0	17
UK	26	7	7	6	9	3	58

Table 6: Number of transplant programs to date 31/12/2005 distinguished by organs and countries

## Hospitals involved in the donation process

We only have a complete data set for 5 countries (Germany, Hungary, Italy, Slovenia and Portugal, see Table 7). The percentage of hospitals participating in organ donation is approximately 50%. The highest participation rate can be found in Slovenia and the lowest in Italy. All hospitals with a neurosurgical department participated in organ donation, except in Portugal where the participation rate was 94.4% compared to 100%. All the transplant centres in Italy and Slovenia participate in organ donation. In France and Germany, only 95% of the transplant centres refer donors. In Poland, this participation rate is 71.4%, in Portugal 77.8% and in Hungary 60%.

### total number of hospitals

of which...

- participating in donation
- with neurosurgery
- with neurosurgery participating in organ donation
- without neurosurgery
- without neurosurgery participating in organ donation
- with transplant program
- with transplant program and participating in organ donation

<b>DE</b>	1447	876 / 60,5%	144	144 / 100%	1303	732 / 56,2%	45	43 / 95,6%
<b>ES</b>		161		77		84	42	42 / 100%
<b>FR</b>		160		48		112	42	40 / 95,2%
<b>HU</b>	111	59 / 53,2%	20	19 / 95,0%	91	34 / 37,4%	5	3 / 60,0%
<b>IT</b>	646	313 / 48,5%	95	95 / 100%	551	218 / 39,6%	48	48 / 100%
<b>PL</b>	781	125 / 16%	51		1188		21	15 / 71,4%
<b>SI</b>	12	10 / 83,3%	2	2 / 100%	10	8 / 80%	1	1 / 100%
<b>UK</b>							29	29 / 100%
<b>PT</b>	80	41 / 51,3%	18	17 / 94,4%	62	24 / 38,7%	9	7 / 77,8%

Table 7: Number of Hospital classified by Hospital with and without neurosurgical department, hospitals with transplant programs and their participation in organ donation.



### **Waiting lists for organ transplantation**

The charts series 9, 10 and 11 contain the number of patients waiting for a transplant, the patients newly admitted and the number of patients who died on the waiting list for countries providing the whole information. Data was stratified into 4 age groups, and classified according to the organ (heart, kidney and liver)

Remarkable information provided by these figures:

#### **Heart transplant waiting lists:**

Remarkably, the representation of young patients (15 years or younger) in the admission to the heart waiting list was higher in the UK than in other countries. On the other hand, the representation of older patients (65 years or older) in the waiting lists is over 10% in several countries, as in Austria, Germany, Belgium and Italy (23% in this last country).

#### **Kidney transplant waiting lists:**

More than 10 % of patient waiting for a kidney transplant in Belgium, Austria, the Netherlands and UK are 65 years or older.



## CONCLUSIONS

There are multiple factors that may have some impact on the potential of donation, as general mortality rates, specific mortality rates, road traffic accidents as well as other demographic and structural indexes affecting the health care practices and outcomes in a given region. Besides, organ donor potential rates can be related to code hospital mortality rates or other hospital health care indexes. Finally, potential for organ donation can be correlated with intensive care facilities and practices as well as with neurosurgery facilities and practices.

One of the goals of DOPKI project is to find an adequate tool to be used for a simple and accurate calculation of the potential of donation, either at a hospital, regional or national level. This will give an idea of what can be the achievable goal, by means of a good identification system. Within the work on this topic it became clear that a common terminology is indispensable for comparisons. Even though we decided in a glossary on a common terminology for this project, we found out that not in all countries data is routinely collected following this terminology. Unless data collection is carried out according to standardized patterns, it is very difficult to make comparisons between the countries. In order to evaluate the potential of donation, first of all in all countries a proper data collection would be required. Most of the detailed donor data can only be obtained from the ICU's. The development of a methodology on how to obtain the necessary data is the task of WP 3.

When evaluating the performance in the donation process, in this first approach, it is apparent the wide variability among the countries regarding the conversion rate (%effective/potential donors). One of the most important limitations is represented by refusals to donate, also extremely variable among the countries. Examining how to face refusals to donate will also be a part of the planned actions that shall be taken as the project carries on.

For more information about the project, studies and results please consult [www.dopki.eu](http://www.dopki.eu)



# ANNEXES

## GLOSSARY

Some of the provided terms have been taken out of other projects or organisms. If so, the source is provided in parenthesis.

### A

**Absolute medical contraindications:** Pre-existing medical conditions that according to national regulations generally preclude a deceased person from becoming an organ donor.

**Acute care (short-stay):** hospitals per 100,000 population: The number of acute care (short-stay) hospitals available per every 100,000 inhabitants in a population. Acute care hospitals are all general and specialised hospitals with relatively short average length of stay. An alternative criteria used by OECD to define acute care is the average length of stay of 30 or less days (until 1980s) and 18 days or less after.

**Admission diagnosis:** Evidence-based medical reason for admitting a patient to a intensive care unit (ICU). The admission diagnosis (e.g.: head trauma) can be different from the ultimate cause of death (e.g.: septicaemia). [EUROCET]

**Allocation:** Assignment and distribution of organs and/or tissues and/or cells. [Alliance-O]

### B

**Brain Death:** Complete and irreversible cessation of all cerebral and brain stem functions. (cfr. Council of Europe definition).

### C

**Charts (Charts reviewed):** The number of medical records of patients who died in a intensive Care Unit (ICU) over a defined period of time. [EUROCET]

**Classification of diagnosis resulting in brain death:**

**A** Traumatic brain damage

**A1** Craniocerebral trauma after motor vehicle accident

**A2** Brain damage caused by other traumatic incidents (fall, hit shot in the head and others)

**B** A traumatic brain damage

**B1** Intracranial bleeding

**B2** Ischemic damage (cerebral infarction, stroke)

**B3** Hypoxic damage (intoxication, condition after resuscitation, strangulation and other causes)

**B4** malignant or benignant brain tumour

**B5** inflammatory brain infection (bacterial and viral infections)

**B6** Other cause (e.g. hydro electrolytic disorders)

**Consent:** Consent to donation, either directly from the donor him/herself or as a result of family approach. In countries with a presumed consent legislation, consent to donation can be the result of absence of objection, either in a national non-donor registry, and/or after consulting the donor's relatives after death. [EUROCET]

**Consent to multi organ donation:** Consent to retrieval of at least two different types of solid organs for transplantation purposes.

**Conversion rate (%):**  $N^{\circ}$  of Effective=Actual donors /  $N^{\circ}$  of Potential donors x 100.

### D

**Death diagnosed:** Cases reported in which death was formally diagnosed in compliance with hospital policies, national guidelines and/or legal requirements. [EUROCET]

**Deceased heartbeating donor:** A deceased heartbeating donor is a person declared dead according to national regulations and diagnosed by means of neurological criteria. [EUROCET]

**Deceased non-heartbeating donor:** A deceased non-heartbeating donor is a person declared dead according to national regulations and diagnosed by means of cardio-pulmonary criteria. [EUROCET]

**Donor (Possible Donor):** Deceased person with primary or secondary brain damage without absolute medical contraindications.

**Donor (Potential donor):** A potential donor is a deceased person without absolute medical contraindications with brain death diagnosis initiated or completed.

**Donor (Consented Organ Donor):** Deceased Person without absolute medical contraindications after completed brain death diagnosis and consent to organ donation.

**Donor (Effective=Actual Donor):** Deceased person, from which at least one solid organ was retrieved for transplantation purposes. [EUROCET]

**Donor (Utilised donor):** A utilised donor is a deceased person from which at least one solid organ has been retrieved and transplanted. [EUROCET; Alliance-O]

**Donor (Multiorgan donor):** Effective (=Actual) donor from which at least two different types of solid organs were retrieved for transplantation purposes.

## F

**Family Refusal rate (%):** Refusals / Family Approaches X 100.

**Family approach:** Cases where the potential donor's next-of-kin is approached by hospital and/or procurement staff to get consent for donation. [EUROCET]

## G

**Gross domestic product, US\$ per capita (GDP):** Total output of goods and services for final use produced by an economy, by both residents and nonresidents, regardless of the allocation to domestic and foreign claims.

**Gross national product, US\$ per capita:** Total domestic and foreign value added claimed by residents, calculated without making deductions for depreciation. It comprises GDP plus net factor income from abroad, which is the income residents receive from abroad for factor services (labour and capital), less similar payments made to non-residents who contribute to the domestic economy.

## H

**Health Development Index (HDI):** A composite index measuring average achievement in three basic dimensions of human development - a long and healthy life, knowledge and a decent standard of living (United Nations Development Programme).

**Hospital beds per 100,000:** Number of hospital beds available during the calendar year or, if this is not possible, in available beds at mid-year, per 100,000 inhabitants in a population.

## I

**Infant deaths per 1,000 live births:** A measure of the yearly rate of deaths in children less than one year old. The denominator is the number of live births in the same year.

**ICU:** intensive care unit; unit with ventilation facilities and possibility of admitting patients for more than 12 hours.

## L

**Legal authorities refusal:** Cases where due to an unnatural death the legal authorities such as coroner, state procurator do not release the donor for transplantation purposes.

**Life expectancy at age 65, in years:** The number of years a person would be expected to live, starting at age 65, on the basis of the mortality statistics for a given observation period.

**Life expectancy at birth, in years:** The number of years a person would be expected to live, starting from birth on the basis of the mortality statistics for a given observation period.

**Live births per 1,000 population:** Ratio between the number of live births in a population during a given year and the total mid-year population for the same year, usually multiplied by 1,000. A live birth is considered the complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of the pregnancy, which, after such separation, breathes or shows any other evidence of life, such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles, whether or not the umbilical cord has been cut or the placenta is attached.

**Living donor:** A living donor is a donor which is not classified as deceased. Domino donors are counted as living. [EUROCET]

## M

**Mid-year population:** Estimate of resident (de jure) population on 1 July of given calendar year. Usually, it is calculated as an average of end-year estimates. This data item is used as denominator to calculate most other indicators.

## N

**Nurses (PP) per 100,000 population:** Number of certified nurses (qualified nurses; first- and second-level nurses; feldschers; midwives; and nurse specialists) available per 100,000 inhabitants in a population at a given year. Certified nurses not includes auxiliary and unlicensed personnel.

## O

**Organ donation:** Cases with procurement of at least one solid organ with the purpose of transplantation. [EUROCET]

**Organ Exchange Organisation (OEO):** Organization in charge of organ allocation and distribution in one or more countries according to agreed criteria. [Alliance-O modified]

**Organ Procurement Organisation (OPO):** Organization in charge of all which concerns organ donation and procurement in a country or a state. [Alliance-O]

**Organ Sharing Office (OSO):** Office in charge of collection and management of donor and recipient data and of organ allocation procedures. [Alliance-O]

**Organ transplant coordinator:** Person in charge of organ donation in an hospital or a country and from country to country also in charge of transplantation coordination [Alliance-O]

## P

**Patient referred:** Cases discussed with or referred to a procurement coordinator, organ procurement agency as a potential solid organ donor. [EURO CET]

**Percentage of population aged 0-14 years:** Percentage of total population under 15 years of age, total or a given sex, on 1 July of given calendar year.

**Percentage of population aged 65+ years:** Percentage of total population 65 years of age and over, total or a given sex, on 1 July of given calendar year.

**Physicians per 100,000 population:** Number of physicians available (active working in health services - public or private - of the country) per every 100,000 inhabitants in a population.

## R

**Real gross domestic product, PPP\$ per capita:** GDP expressed in purchasing power parity (PPP) is adjusted to the relative domestic purchasing power of the national currency as compared to the US dollar, rather than using the official exchange rate. Multipliers (PPPs) are estimated periodically, using the cost of the standard basket of goods.

## S

**SDR, Age-standardized death rates per 100,000 population:** Age-standardized death rate is calculated using the direct method and represents what the crude rate would have been if the population had the same age distribution as the standard European population.

**SDR, all causes, all ages, per 100,000 population:** Age-standardized rate of death from all causes per 100,000 population. ICD-10 code: All causes.

**SDR, cerebrovascular diseases, all ages per 100,000 population:** Age-standardized rate of death from cerebrovascular diseases per 100,000 population. ICD-10 code: I60-I69.

**SDR, external cause injury and poison, aged 0-64 per 100,000 population:** Age-standardized rate of death from external cause injury and poison in persons aged 0-64 per

100,000 population. ICD-10 code: V00-V99, W00-W99, X00-X99, Y00-Y99.

**SDR, motor vehicle traffic accidents, all ages per 100,000 population:** Age-standardized rate of death from motor vehicle traffic accidents per 100,000 population. ICD-10 code: V02-V04, V09, V12- V14, V20-V79, V82-V87, V89.

**SDR, suicide and self inflicted injury, all ages per 100,000 population:** Age-standardized rate of death from suicide and self inflicted injury per 100,000 population. ICD-10 code: X60-X84.

## T

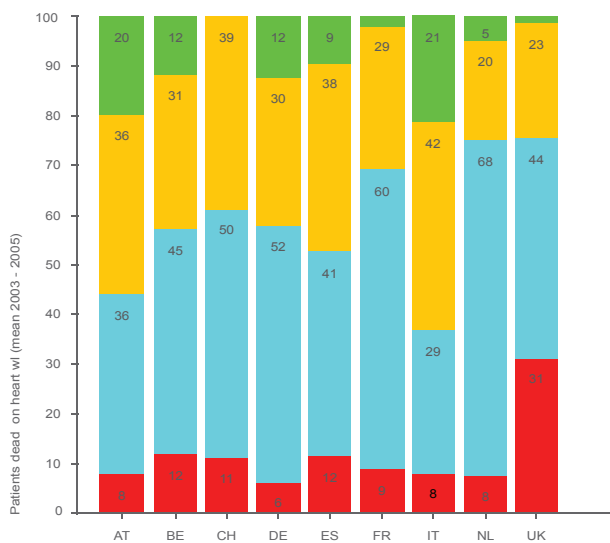
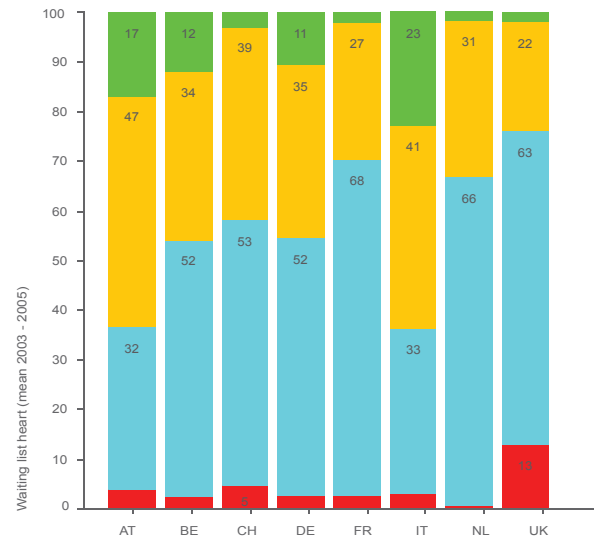
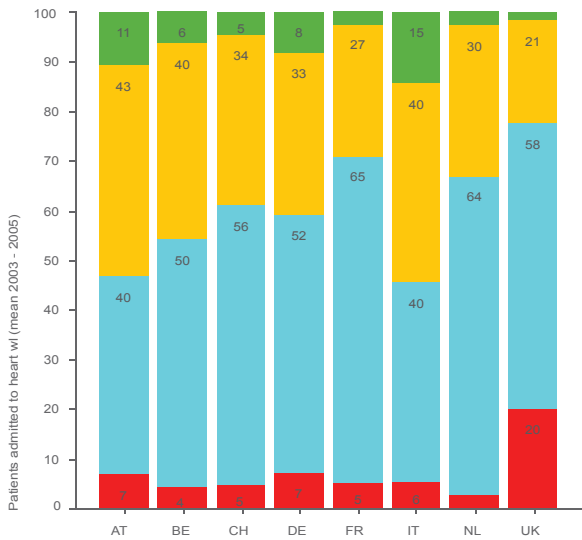
**Total fertility rate:** the average number of children that would be born per woman if all women lived to the end of their child bearing years (usually referring to women aged 15 to 49 years) and bore children according to a given set of age-specific fertility rates. It is computed by summing the agespecific fertility rates for all ages and multiplying by the mid point of the interval into which the ages are grouped.

## W

**Waiting List:** collection of patients who are awaiting an organ transplant for a particular organ. All patients are counted regardless as to whether they are “actively” participating or are suspended (temporally not transplantable) on the date of the reporting of the waiting list information. [EURO CET]

# ANNEXES

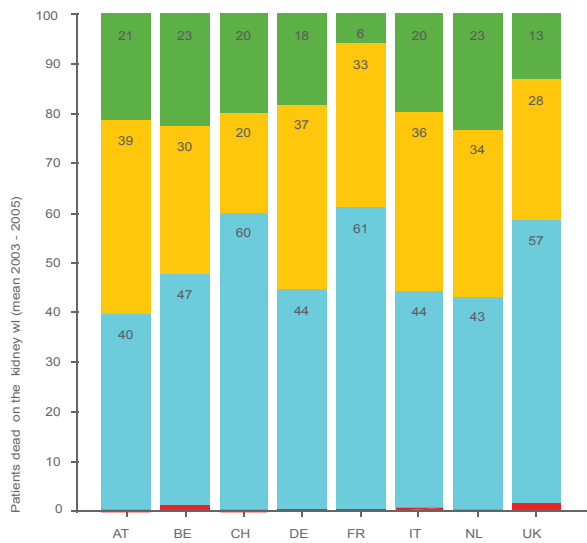
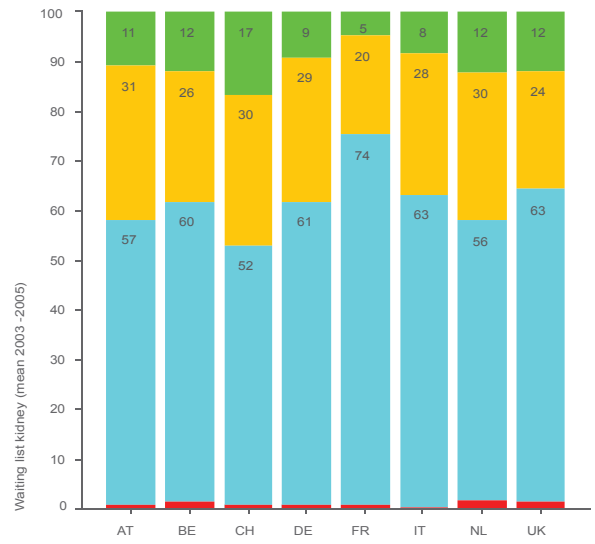
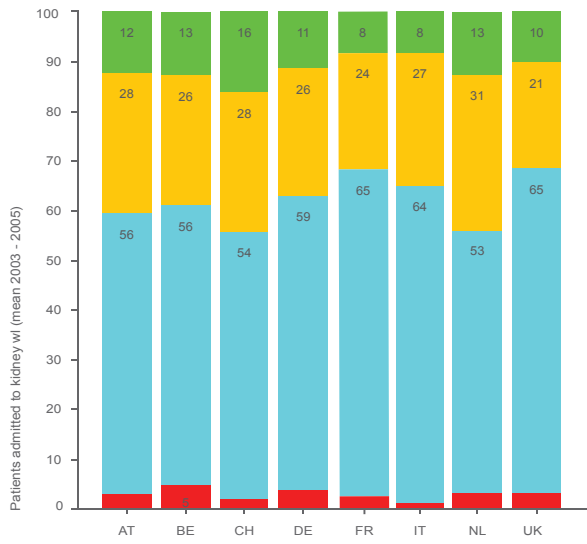
## CHARTS 9-11



■ <= 15 Years
 ■ 16-54 Years
 ■ 55-64 Years
 ■ >= 65 Years

Figures 9 a-c:  
 Number of patients on the waiting list, new admitted patients and patients dead on waiting list for heart, classified according to four age groups (2003-2005)

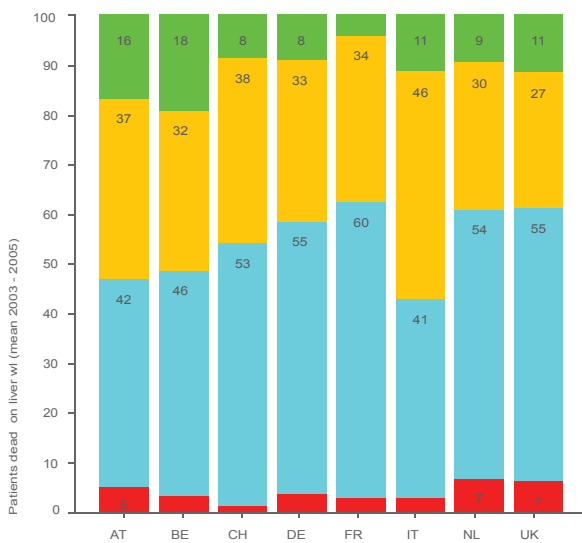
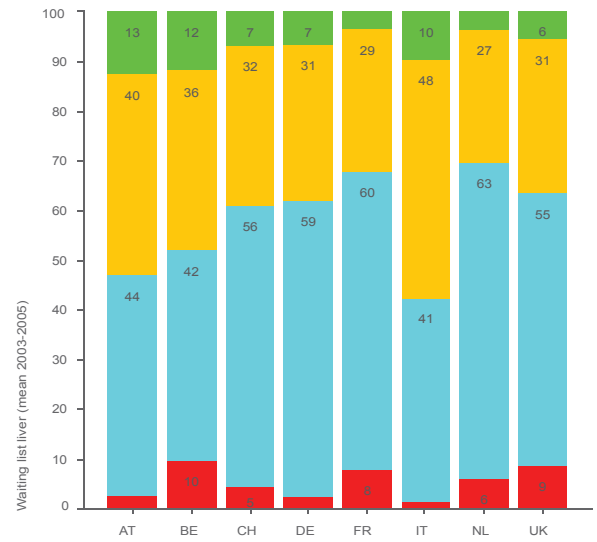
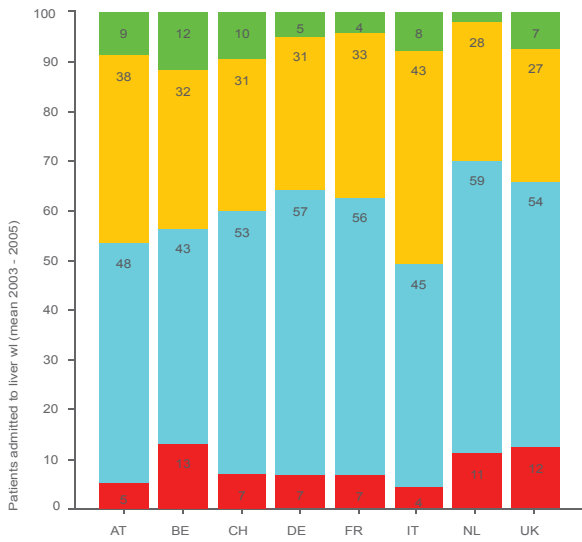
(related with [transplantation and waiting list](#))



■ <= 15 Years
 ■ 16-54 Years
 ■ 55-64 Years
 ■ >= 65 Years

Figures 10 a-c:  
 Number of patients on the waiting list, new admitted patients and patients dead on waiting list for kidney, classified according to four age groups (2003-2005)

(related with [transplantation and waiting list](#))



■ <= 15 Years    
 ■ 16-54 Years    
 ■ 55-64 Years    
 ■ >= 65 Years

Figures 11 a-c:  
 Number of patients on the waiting list, new admitted patients and patients dead on waiting list for liver, classified according to four age groups (2003-2005)

(related with [transplantation and waiting list](#))







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European Group for Coordination of National Research Programmes on Organ Donation and Transplantation.

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#### [ALEA JACTA EST](#)

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Organ transplantation: Ethical Legal and Psychological aspects. Towards a Common European Policy 2007 Conference.

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Heart Failure and Repair

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Clinical Experience with Bone Marrow Cells and Myoblasts Transplantation for Myocardial Repair.

### Events

[XXII International Congress of the Transplantation Society](#)

[American Transplant Congress 2008](#)

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[11th Annual Congress The British Transplantation Society](#)

[2008 EDTNA/ERCA Congress](#)

**German Congress of Anaesthesiology 2008**

[dac@mcnag.info](mailto:dac@mcnag.info)

**Seminar on Legal-Medical Issues**

[etener@CruisersParadise.com](mailto:etener@CruisersParadise.com)

[15th ESOT Congress Glasgow](#)

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[Annual Scientific Meeting - Canadian Society of Transplantation](#)

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**Annual Meeting in Conjunction with the ASA Meeting**

[ascca@asahq.org](mailto:ascca@asahq.org)

**ASA 2008 Annual Meeting**

[mail@asahq.org](mailto:mail@asahq.org)

### Publications

[Transplant Newsletter September 2006](#)