Consent for organ donation

A. Vincent1* and L. Logan2

1 Department of Anaesthesia, Royal Victoria Infirmary, Newcastle upon Tyne NE1 4LP, UK
2 Donor Care and Coordination, NHS Blood and Transplant, UK
* Corresponding author. E-mail: angus.vincent@nuth.nhs.uk

Editor’s key points
- There is wide international variation in rates of consent.
- Only 28% of the UK population are registered on the organ donor register.
- Increasing UK consent rates beyond the current 60% is a realistic aim.
- Many factors can improve the rates of consent; each needs to be addressed in a systematic fashion.

Summary. Improving the consent rate for solid organ donation from deceased donors is a key component of strategies in the UK and other countries to increase the availability of organs for transplantation. In the UK, the law is currently clear on what forms consent may take, with views of the individual expressed previously in life taking priority. Such views may have been expressed prospectively, via membership of the Organ Donor Register or by talking to family members. The factors determining such actions include both positive altruistic motives and negative psychological responses. Studies have examined why some families of potential donors refuse consent, while others have demonstrated a key set of ‘modifiable’ factors relating to the family approach. These include ensuring the right timing of a request in an appropriate setting, providing emotional support, and imparting specific information, particularly concerning the nature of brain death. If these are optimized and the right personnel with adequate training are involved in a planned process, then consent rates may be improved as reported in other countries with organized donation systems.

Keywords: consent; donation attitudes; organ donation

The comparatively low rate of consent for solid organ donation in the UK is the single largest factor limiting the so-called ‘conversion rate’ of identified potential, to actual organ donors. Published data from the potential donor audit of deaths in the UK, from 2003 to 2005, demonstrated a consent rate of 59% for donation after brain death (DBD), and this figure remains largely unchanged with a consent rate of 63% for DBD and 57% for donation after circulatory death (DCD) for the period 2007–9. As a result, the goal of improving consent/authorization rates was identified by the UK’s NHS Blood and Transplantation authority as the first of their six ‘Strategic Big Wins’ aimed at increasing the number of organs for transplantation. Suggesting that rates of consent can be improved implies that there are factors within our current practice of seeking assent from the family, which, if done differently, could be more likely to lead to the family agreeing to organ donation. Before considering this assertion, an understanding of the relevant legislation and sometimes confusing and overlapping terminology is necessary.

Consent, organ donation, and the law

In England, Wales, and Northern Ireland, the relevant legislation relates to the Human Tissue Act 2004 and the Mental Capacity Act 2005. In Scotland, the equivalent acts are the Human Tissue (Scotland) Act 2006 and the Adults with Incapacity Act (Scotland) 2000. Of interest in this context is the use of the word ‘consent’, which is the actual term used in the England, Wales, and Northern Ireland Human Tissue Act. The term usually implies adherence to principles of informed medical consent related to normal clinical practice, and this forms the foundation of much of the act relating to, for example, tissue use and storage. However, for the purposes of organ donation, there appears implicit acknowledgement that consent in this form is impossible or difficult to achieve in many scenarios due to loss of capacity and differing levels of consent expressed earlier in life. It is for this reason that in the Scottish Act, the term ‘authorization’ is used to differentiate the process from what may be understood by ‘usual’ consent.

Occasionally, in the setting of proposed DCD, where brain injury is not a feature and capacity is retained, direct consent from the patient may be taken before planned withdrawal of life-sustaining treatments. However, in all cases of proposed DBD and in the vast majority of proposed DCD cases, this is not possible and consent must be obtained by other means. Valid and legal forms of consent for the purpose of organ donation, with regard to a deceased patient or a patient who lacks capacity, are detailed in the Human Tissue Authority code of practice. These include:

- a listing on the organ donor register (ODR), or another applicable advanced directive;
- consent from a properly appointed nominated representative, who is acting on the patient’s behalf by prior agreement;

© The Author [2012]. Published by Oxford University Press on behalf of the British Journal of Anaesthesia. All rights reserved.

For Permissions, please email: journals.permissions@oup.com
to joining an ODR and suggests that these may be the most important barriers to address.\textsuperscript{17–19} In particular, a set of so-called ‘non-cognitive’ variables (beliefs and attitudes less amenable to change by rational argument) were identified by Morgan and colleagues\textsuperscript{18} in the USA as being key. These include:

- the ‘ick’ factor—a disgust response to organ procurement;
- the jinx factor—a belief that by registering on an ODR, an individual will hasten their own death;
- medical mistrust—often media-driven. This includes attitudes that if on the ODR, doctors will not try as hard to save the patient’s life, so allowing the opportunity to harvest organs;
- body integrity—serious afterlife consequences will be faced if integrity is breached.

This study was replicated in the UK by O’Carroll and colleagues\textsuperscript{19}, who similarly found these variables to be a far greater discriminator between those on, or not on the UK ODR. They and others\textsuperscript{17} suggest that addressing such negative beliefs should be an important part of public campaigns to increase registration.

\subsection*{Family discussions}

It is a consistent finding in the USA and Europe that only around 50\% of those who would wish to donate after death have discussed this with family members.\textsuperscript{20} This also holds true for those on an ODR.\textsuperscript{16} Given that families ultimately authorize donation, it may be argued that such communication is even more important than registering on the ODR, and it is clear that prior family discussion strongly predicts consent for donation from family members.\textsuperscript{21} Such discussions are made difficult by social taboos regarding death,\textsuperscript{15} and an unwillingness to discuss donation is very likely to have reasons much in common with those above for not joining the ODR.\textsuperscript{22} Prior knowledge regarding donation, holding a positive attitude towards donation, and holding altruistic views all predict the likelihood of having held a family discussion and willingness to do so.\textsuperscript{11} Publicity campaigns should target family communications, for example, the successful ‘Share your life. Share your decision’ campaign, which was run nationally in the USA in the 1990s. Such initiatives should provide detailed factual information on donation and dispelling the many myths surrounding it.

While it is acknowledged that ascertaining the views of the potential donor are important, ultimately it is for the relatives to authorize donation in most cases. This process has been studied in some detail.

\subsection*{Patient characteristics and other features associated with consent}

Although not wholly consistent, there appear to be certain patient characteristic and other unmodifiable characteristics which are associated with a higher likelihood of family consent. The evidence is clear that where a potential
Why do families refuse to give consent for donation?

Understanding this complex question is a key issue if low consent rates are to be increased. Some work has attempted to address this as a primary research goal. Methodologies included:

(i) structured interviews with donor and non-donor families either face to face, by telephone, or postal questionnaire;\(^23\) 28–36
(ii) interviews with donor coordinators and healthcare professionals;\(^25\) 37 38
(iii) prospectively collected registry data have also been examined.\(^1\) 39

By their nature, most studies are observational and qualitatively in design.

Although grounds for refusal may have a basis in strong local cultural and religious beliefs in certain countries,\(^28\) 39 there are many common themes to be found worldwide. The most frequent reasons that emerge, but by no means an exhaustive list, are shown in Table 1.

Other groups have attempted to describe the complex and conflicting emotional responses to death and requests for organ donation in a different way, concentrating on innate psychological responses and the modelling thereof.\(^40\)–\(^42\) Sque and colleagues\(^40\) performed a fascinating interview study of the family members of 23 potential organ donors who had all declined consent. They identified an essential conflict between the ‘gift of life’ (the prevailing view of healthcare professionals and perhaps society) and the ‘sacrifice’ required at both a personal emotional (relief of ‘guardianship’) and physical (perceived mutilation to an otherwise viable looking body) level. In the case of DBD, this group describes an emotional ‘dissonance’ set up by a failure to resolve a poor understanding of brain death and the proposed donation procedure.\(^41\)

Other important innate responses include the perceived relation between ‘body’ and ‘self’ (strong belief in some that the physical body is inherently part of identity),\(^42\) and common ‘death anxiety defences’ including the ‘feeling of immortality’ reinforced by the appearance of a still warm well-perfused potential brain-dead donor.\(^42\) It is suggested that in some individuals, such responses overcome the more rational or altruistic motives necessary for consent.

<table>
<thead>
<tr>
<th>Reason</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relatives not wishing surgery to the body/ concerns regarding disfigurement</td>
<td>1,23,25,29–33,37</td>
</tr>
<tr>
<td>Feelings that the patient had suffered enough</td>
<td>1,25,37</td>
</tr>
<tr>
<td>Uncertainty regarding the patient’s wishes</td>
<td>1,23,28,32,34,37,39</td>
</tr>
<tr>
<td>Disagreements among the family group</td>
<td>1,23,29,32,34,36,37</td>
</tr>
<tr>
<td>Religious/cultural reasons</td>
<td>1,28,32,37</td>
</tr>
<tr>
<td>Dissatisfaction with healthcare staff and process</td>
<td>25,28,31,32,34,35</td>
</tr>
<tr>
<td>Concerns over delay to funeral/burial process</td>
<td>28,30,38</td>
</tr>
<tr>
<td>Unable to accept death, lack of understanding of brain death</td>
<td>29–32,34,37,39</td>
</tr>
<tr>
<td>Concerns regarding integrity of process, e.g. unfair organ allocation, organ selling</td>
<td>29,32,37</td>
</tr>
<tr>
<td>Relatives had decided on their own that organs would not be suitable</td>
<td>25,33</td>
</tr>
<tr>
<td>Longstanding negative views on organ donation</td>
<td>1,25,34</td>
</tr>
<tr>
<td>Relatives were emotionally exhausted</td>
<td>25</td>
</tr>
</tbody>
</table>

Modifiable factors within the family approach, which influence consent

It is accepted that the above responses may not be overcome in some individuals. There does although appear to be a strong signal from the evidence base that there are factors relating to the consent process, including the relatives’ experience and their interaction with staff, which correlate strongly with a decision to consent or refuse. The assumption made is that optimizing the relative experience with regard to these factors is likely to lead to better consent rates. Perhaps the strongest evidence for this assertion comes from the US’ ‘Organ Donation Breakthrough Collaborative’, launched in 2003 by the Department of Health. This initiative was based on the principles of implementing best practice with regard to likely modifiable factors (amongst other interventions), and resulted in a 10% increase in conversion of potential to actual donors compared with control hospitals in the first 2 yr,\(^43\) with more than one-third of participating hospitals achieving a conversion rate of 75% or more by the second year.\(^44\)

In addition to the benefits to wider society, there is some evidence that this increase may also benefit donor families in the longer term, with studies generally demonstrating higher levels of later regret about donation decisions, among families who refused consent.\(^45\) 35 46 47 Concerns about requesting strategies becoming coercive in nature have been raised, particularly in the USA.\(^48\) However, many would consider that the important modifiable factors in fact represent principles of good medical practice, regardless
of their effect on consent, namely being sensitive to the family needs, giving them time and privacy and ensuring they have sufficient information in an understandable format to allow them to make an informed decision.

A recent systematic review of this topic identified 20 studies that reported on modifiable components of the consent process relating to potential DBD donors, and were associated with a statistically positive or negative effect on consent. This work, and that by others, identifies broad categories for intervention, as outlined below.

Understanding brain death
Follow-up studies of the families of potential donors have consistently shown that poor knowledge and understanding of brain death is common among both donor and non-donor families. This is present to a remarkable degree, despite presumably some form of medical explanation, and is even more prevalent among the general public. It is a consistent finding that those families with a good understanding of brain death are more likely to consent.21 24 35 53 54

It appears (and is intuitive) that those relatives who truly understand that their loved one is dead can more easily consent. Sque and colleagues observed that for some, being unable to ‘witness the observable ending of life’ was a barrier to consent. Some studies show a higher rate of consent in the DCD setting and relate this to greater family ease with the concept of cardiorespiratory death, although this is not confirmed by the UK potential donor audit. Suggestions to improve a family’s understanding of brain death include allowing them to witness tests or providing imaging or diagrams to explain concepts.

Information imparted during the consent process
Both structured interview and qualitative studies have shown the importance of the inclusion of specific issues within the consent discussion.

- Description of the what the organ donation process actually involves.
- Emphasis on the benefits of donation and the potential to help others.
- Reassurances regarding funeral and burial arrangements.
- Reassurances regarding the fairness of organ allocation.
- In the USA, reassurances that becoming a donor does not require payment from family.

Time factors and setting
The timing of the request may be important. Separation of the request for donation from the discussion informing of the development of brain death or the inevitability of death (so-called ‘decoupling’) in particular has been examined. Although certain experts believe this to be unnecessary, the majority of studies examining this question show that consent is more likely if requested at a time separate to the discussion informing of brain death. In practice, decoupling may be difficult, if after being informed of their relative’s death, the family immediately wish to know what happens next.

Many studies also demonstrate an association between consent being granted and the family being given sufficient time in an unpressurized manner to absorb the information they have been given, and then consider their response. Unsurprisingly, consent is also associated with a private and appropriate setting for these sensitive and difficult discussions.

Emotional support and empathy
Although subjective and difficult to quantify, a number of studies draw attention to the effect of the wider aspects of care for the family itself, both in terms of emotional and physical support and the manner in which interviews are conducted. In one of the best recent studies, Jacoby and Jaccard in a telephone interview study with 199 families from across the USA showed consent being positively associated with:

- families who felt they had been treated with respect and dignity;
- staff who were available and showed empathy, understanding, and reassurance;
- provision of physical support in the form of accommodation, toiletries, and so forth.

It is a consistent finding among other work that a sensitive and empathetic manner (or lack of) during family discussions is a discriminator between donor and non-donor families, and that those families who feel pressurized or feel that staff are uncaring are less likely to donate.

Who should request consent for organ donation?
This question has been extensively studied and at its core is whether the approach is best made by a specialist donor coordinator, the healthcare professionals caring for the patient, or by a combination (collaborative requesting). It is intuitive that a specialist coordinator, with systematic training, a defined skill set including knowledge of modifiable factors and grief reactions, and day-to-day experience in performing requests, may perform better than a physician, who may be involved with donation infrequently and be lacking in certain skills and knowledge.

A number of US studies seemed to demonstrate the beneficial presence of a specialist coordinator. In a prospective observational study of 707 donation consultations, Gortmaker and colleagues found that the presence of the coordinator was one of three independent variables associated with consent and that a collaborative approach achieved the highest consent rate.

The UK ACRE trial (Assessment of Collaborative REquesting) undertaken in 2007/8 sought to determine any increase in consent/authorization rates for organ donation after brain death when collaborative requesting was used in place
of routine requesting by the patient’s physician. This unblinded, randomized multicentre trial was stopped after recruitment of 201 patients showed no demonstrable difference between the groups. By methodology, it stands alone in the field and yet its negative findings, which contradict much other work, remain contentious. The authors conclusion is that ‘collaborative requesting confers little or no advantage in request for organ donation’ and cite the trial as an example of a topic where observational data send a strong signal, which is subsequently negated in a randomized trial. Criticisms however include:

- 14 large UK hospitals where collaborative approaching was already maturing and undertaken as a matter of routine were excluded;
- no proper definition of collaborative requesting was given (for pragmatic reasons) other than the presence of the coordinator in the request room. Thus, the request was unlikely to have followed a true collaborative model with a process of prior planning and due attention to timing and other modifiable factors;
- 116 relatives were excluded from the analysis, more than half of whom had been approached by the healthcare team before randomization;
- there was no control for registration on the ODR. Ten per cent fewer patients in the collaborative group were registered or had expressed a prior positive wish.

Ultimately, regardless of job title, the evidence supports that whoever is approaching the family is more likely to receive consent if they have the appropriate expertise and training.

### The long contact and in-house coordinator model

‘Long Contact’ describes family involvement with the donor coordinator or specialist nurse before requests for donation, and there is evidence for this approach from the USA. Shafer and colleagues described the daily presence of organ procurement organization staff in level I trauma centres. Early contact with families and interaction before any conversation about donation increased consent/authorization rates with the highest rates of consent (75%) in a group that had had prior contact with the coordinator for more than 3 h.

An ‘in-house’ coordinator describes the situation where an individual or small group is attached to one particular clinical area giving the advantages of relationship building with the clinical team, easy availability, time for planning an approach, education, and staff support. Since 2009, the UK has expanded its pool of coordinators from 100 to 250 specialist nurses for organ donation (SNOD) with this aim in mind. With the advent of specialist nurses partially resident in all UK intensive care units, it is anticipated that their value and expertise in requesting conversations will become more accepted over time, in those areas where this model is not already embraced.

Initial figures from NHS Blood and Transplant after year 1 of implementation of this model are suggestive that the presence of the SNOD is significantly associated with consent (Table 2).

### Summary of practical steps

While acknowledging imperfections and inconsistencies within a very large body of work, the evidence would suggest a best practice model of family consent should include:

- an approach pre-planned by the coordinator/specialist nurse and healthcare team to consider specific individual circumstances—the ‘team huddle’;
- requesting by individuals known to the family;
- requesting by team members with the required training and expertise to provide the right information in a sensitive and empathic manner. In the UK, this should be the SNOD and a senior doctor;
- requesting at a time separate to that when the family are informed of the death or its inevitability, in an unhurried manner in an appropriate setting;
- use of unapologetic and positive language, emphasizing the benefits of donation;
- ensuring the family are given specific information as detailed above and that in particular, concerning DBD, that the concept of brain death has been fully explained.

A National Institute for Health and Clinical Excellence (NICE) guideline in the UK aims to assist teams in implementing such a model.
**International perspectives**

Consent rates vary significantly between countries\textsuperscript{71} (Table 3).

The reasons for such wide variation are not fully understood. In addition to the impact of cultural and patient characteristic differences, it may be seen that countries with highly organized donation systems such as Spain and Italy have among the highest consent rates.

**Financial and other incentives to consent including directed donation**

The arguments for a system which financially compensates a donor or their family are well rehearsed;\textsuperscript{72} \textsuperscript{73} it is, however, only in Iran that a legal, centralized system for payment to living donors exists. The debate primarily engages with the issue of payment (or equivalent incentives such as lifelong medical insurance) to a living unrelated kidney donor, yet work has also gone into studying the effect of a financial incentive on the families of deceased potential donors.

The Ethics Committee of the American Society of Transplant Surgeons concluded that direct cash payment to families violated the ideal standard of altruism upon which donation should be based; however, payment of funeral expenses or to a chosen charity was deemed acceptable and compatible with the concept of donation as a gift.\textsuperscript{74} In an interview study of 155 next of kin (102 donors, 53 non-donors), 12% of non-donor families stated that they would have consented if an incentive had been offered, although interestingly 6% of donor families stated that they would have refused donation if an incentive had been offered, implying that it may offend some.\textsuperscript{75}

The Nuffield Council on Bioethics is conducting a UK consultation regarding attitudes to this question and expects to report in autumn 2011.\textsuperscript{76} Israel has recently introduced legislation\textsuperscript{77} that offers a non-financial incentive to consent, namely preferential access to transplantation for individuals who join the ODR, the first-degree relatives of individuals who are on the ODR, living donors, and the family members of deceased donors. Introduced in 2009, the Israeli authorities plan to assess the impact of these changes after 2 yr in use.

**Table 3** International consent rates for deceased organ donation in 2009\textsuperscript{71}

<table>
<thead>
<tr>
<th>Country</th>
<th>Total no. of donation requests</th>
<th>Total no. of assents</th>
<th>% consent rate</th>
<th>Total no. of donation requests</th>
<th>Total no. of assents</th>
<th>% consent rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estonia</td>
<td>63</td>
<td>33</td>
<td>52.4</td>
<td>Estonia</td>
<td>63</td>
<td>33</td>
</tr>
<tr>
<td>Greece</td>
<td>110</td>
<td>92</td>
<td>83.6</td>
<td>Greece</td>
<td>110</td>
<td>92</td>
</tr>
<tr>
<td>Ireland</td>
<td>127</td>
<td>105</td>
<td>82.7</td>
<td>Ireland</td>
<td>127</td>
<td>105</td>
</tr>
<tr>
<td>Italy</td>
<td>2328</td>
<td>1621</td>
<td>69.6</td>
<td>Italy</td>
<td>2328</td>
<td>1621</td>
</tr>
<tr>
<td>Latvia</td>
<td>24</td>
<td>13</td>
<td>54.2</td>
<td>Latvia</td>
<td>24</td>
<td>13</td>
</tr>
<tr>
<td>Lithuania</td>
<td>79</td>
<td>55</td>
<td>69.6</td>
<td>Lithuania</td>
<td>79</td>
<td>55</td>
</tr>
<tr>
<td>Malta</td>
<td>10</td>
<td>9</td>
<td>90</td>
<td>Malta</td>
<td>10</td>
<td>9</td>
</tr>
<tr>
<td>The Netherlands</td>
<td>518</td>
<td>274</td>
<td>52.9</td>
<td>The Netherlands</td>
<td>518</td>
<td>274</td>
</tr>
</tbody>
</table>

In the UK and other areas,\textsuperscript{78} \textsuperscript{79} there has been careful consideration of so-called directed donation or requested organ allocation. In certain unusual circumstances, family members may request an allocation of a deceased donor organ to a close relative or friend. A policy document drawn up by NHS Blood and Transplantation and the Human Tissue Authority\textsuperscript{78} was adopted by the UK Health Administrations, which accepts in certain circumstances that this can be considered. It is made clear however that the fundamental principles that underpin UK organ donation, namely absence of conditionality and equity, must be respected. A requested allocation would not take priority over a potential recipient in urgent clinical need, for example, a patient on the super urgent liver list. NHSBT has established a ‘Requested Allocation Oversight Group’, which should be consulted by the medical and specialist nurse teams on every occasion that such a request arises.

**Summary**

By its nature, consent for organ donation has greater complexity than that for most medical procedures. Although some aspects remain contentious, the law is clear on what formats consent can take, and the sequence in which these should be considered, with priority given to views expressed by the individual in prior life. Although not wholly consistent, a large body of work suggests that teams can improve consent rates by attention to key aspects of the family approach. Increasing consent rates in the UK beyond the current rate of 60% is a realistic aim and would be a major step in addressing unmet transplantation needs.

**Declaration of interests**

A.V. is the clinical lead for organ donation at Newcastle upon Tyne Hospitals and was a member of the NICE short guideline development group ‘Improving donor identification and consent rates for cadaveric organ donation’, 2011. L.L. is a regional manager for Donor Care and Coordination for Scotland and Northern England, overseeing hospital and regional teams practice and performance relating to deceased organ donation.
References


5 Bell MDD. The UK Human Tissue Act and consent: surrendering a fundamental principle to transplantation needs? J Med Ethics 2006; 32: 283–6


9 Price DPT. Legal framework governing deceased organ donation in the UK. Br J Anaesth 2012; 108 (Suppl. 1): i68–i72


12 Murphy PG. Optimizing donor potential in the UK. Clin Ethics 2011; 6: 127–33

13 Morgan SE, Miller JK. Beyond the organ donor card: the effect of knowledge, attitudes, and values on willingness to communicate about organ donation to family members. Health Commun 2001; 14: 121–34


16 Morgan SE, Harrison TR, Afifi WA, Long SD, Stephenson MT. In their own words: the reasons why people will (not) sign an organ donor card. Health Commun 2008; 23: 23–33


25 Siminoff LA, Lawrence RH. Knowing patients preferences about organ donation: does it make a difference? J Trauma 2002; 53: 754–60


42 Sanner MA. People’s attitudes and reactions to organ donation. Mortality 2006; 11: 133–50
43 Haddow G. Donor and nondonor families’ accounts of communication and relations with healthcare professionals. Prog Transplant 2004; 14: 41–8


46 Ormrod JA, Ryder T, Chadwick RJ, Bonner SM. Experiences of families when a relative is diagnosed brain stem dead: understanding of death, observation of brain stem death testing and attitudes to organ donation. Anaesthesia 2005; 60: 1002–8

47 Rodrigue JR, Cornell DL, Howard RJ. The instability of organ donation decisions by next of kin and factors that predict it. Am J Transplant 2008; 8: 2661–7


53 Burroughes TE, Hong BA, Kappel DF, Freedman BK. The stability of family decisions to consent or refuse organ donation: would you do it again? Psychosom Med 1998; 60: 156–62


56 Jacoby LH, Breitkopf CR, Pease EA. A qualitative examination of the needs of families faced with the option of organ donation. Dimens Crit Care Nurs 2005; 24: 183–9


61 Niles PA, Mattice BJ. The timing factor in the consent process. J Transpl Coord 1996; 6: 84–7


63 Douglass GE, Daly M. Donor families’ experience of organ donation. Anaesth Intensive Care 1995; 23: 96–8

64 The ACRE Trial Collaborators. Effect of ‘collaborative requesting’ on consent rate for organ donation: randomised controlled trial (ACRE trial). Br Med J 2009; 339: b3911

65 Hogan M. Collaborative requesting for organ donation of no benefit in UK study, but implications of finding unclear. Nephrol Times 2010; 3: 12–3


71 Council of Europe. Transplant Newsletter 2010; 15: 38


73 Hippen B, Ross LF, Sade RM. Saving lives is more important than abstract moral concerns: financial incentive should be used to increase organ donation. Ann Thorac Surg 2009; 88: 1053–61


