European Overview & Challenges in Donation after Cardiac Death

NATCO 32nd Annual Meeting
August 2007, New York, NY

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European Union/
European Communities

- Began 1950 with six member states
  Belgium, Germany, France, Italy, Luxembourg, Netherlands
- 25 countries + two candidates - Bulgaria, Romania
- 40% of the size of the USA
- EU pop. equivalent to world’s 3rd largest nation
- Over 459 million inhabitants
Organ Allocation & Mediation Agencies in Western Europe

- Eurotransplant
  Belgium, Netherlands, Luxembourg, Germany, Austria, Slovenia, Croatia

- Swisstransplant

- France Transplant

Organ Allocation & Mediation Agencies in Western Europe

- United Kingdom Transplant

- ScandiaTransplant
  Denmark, Finland, Iceland, Norway, Sweden

Organ Allocation & Mediation Agencies in Southern Europe

- Associazione Italiana Donatori Organi (AiDO)
  Italy

- Organizacion Nacional De Trasplantes
  Spain
Number of Donors PMP 2006:
International Comparison

Provided by Deutsche Stiftung fuer Organspende / DSO, Germany

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Developmental Changes in Organ Donation

- NHBD are primary source of donors in the past
- Increase of HBD
  - 1968 – Harvard Medical Committee, 1976 – BD testing
- Change in donor clientele/ profile
- Development of organ protection strategies

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Numbers of NHBD, 2005

Provided by ETCO Newsletter, 2006
### Maastricht DCD Classification

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I (uncontrolled)</td>
<td>Dead on arrival</td>
</tr>
<tr>
<td>II (uncontrolled)</td>
<td>Unsuccessful resuscitation</td>
</tr>
<tr>
<td>III (controlled)</td>
<td>Awaiting cardiac arrest</td>
</tr>
<tr>
<td>IV (controlled)</td>
<td>Cardiac arrest after brain-stem death</td>
</tr>
<tr>
<td>V (uncontrolled)</td>
<td>Sudden cardiac arrest in a hospital inpatient (new category, 2003)</td>
</tr>
</tbody>
</table>

### Donation After Cardiac Death/DCD Survey

- Profession of coordinator
- DCD/NHBD in their country
- Maastricht classification
- Location of DCD/NHBD
- Location of extubation
- DCD/NHBD team
- Death certification
- Wait period after full arrest
- Cannulation & anticoagulation
- Family views body afterwards
- Family pays for donation
- Family can meet recipient
Population of Surveyed Countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Population (millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belgium</td>
<td>10.3</td>
</tr>
<tr>
<td>Poland</td>
<td>38.6</td>
</tr>
<tr>
<td>Turkey</td>
<td>67.3</td>
</tr>
<tr>
<td>Spain</td>
<td>45.0</td>
</tr>
<tr>
<td>Germany</td>
<td>83.0</td>
</tr>
<tr>
<td>UK</td>
<td>59.7</td>
</tr>
</tbody>
</table>

Countries & Maastricht Classifications

<table>
<thead>
<tr>
<th>Country</th>
<th>DCD</th>
<th>Maastricht I</th>
<th>Maastricht II</th>
<th>Maastricht III</th>
<th>Maastricht IV</th>
<th>Maastricht V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belgium</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Poland</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Turkey</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Spain</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Germany</td>
<td>No</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>Yes</td>
<td>NA</td>
</tr>
<tr>
<td>UK</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

DCD Survey Summary

- **Profession:** 5/6 are MD's, 1/6 RN's
- **Maastricht:**
  - Class II: 4/6
  - Class IV: 5/6
  - Class V: 2/6
- **DCD Process:**
  - 3/6 Extubates in the OR/Other
  - 3/6 MD declares/writes death certificate
  - 3/6 cannulate + give anticoagulants
  - 2/6 family can meet recipient
  - 0/6 donor family pays for donation
  - 3/6 wait 0-5 min after arrest + declaration of death
- **DCD Team:**
  - 5/6 OR nurse, 5/6 MD, 4/6 Donor Representative, 3/6 RN, 2/6 Other

Data obtained from Belgium, Poland, Turkey, Spain, Germany, and UK.
Challenges Within the EU

- 10 people die every day waiting for a transplant
- Wide variations in donation rates
  (Spain 34.6 donors/pmp vs. Romania 0.5 donors/pmp)
- Exchange of organs between member states not common
  (only in areas with int'l agreements, ET, ST, etc.)
- no EU standards for Quality & Safety in organ donation and transplantation
- no EU standards regarding OPO collaboration
- Impaired availability of trained OPO/transplant personnel

www.eubusiness.com/Health/organ-donation-eu/

Challenges Within the EU

- Different societal attitude re: organ donation
  (wide range in family refusal to donation: Portugal 6%, UK 42%)
- Level of public awareness of organ donation and ethical issues varies
- Variations in the legal procedures for donor consent and different practices on donor registration and allocation influences public perception of donation

www.eubusiness.com/Health/organ-donation-eu/

Challenges in Those Countries

- Ethical controversy and morally complex: category III, NHBD (general),
- Religious and cultural reservations
- Legislative restrictions
European Council
Supports Organ Donation

2004:  
Standardization for organ donation across EU  
Authorization of donation and procurement standards, establishment and programs  
Maintenance of donor records  
Exchange of good practices

2007:  
Cooperation of member states in the field of organ donation and transplantation

>2008:  
EU directive on quality and safety of organ donation

Acknowledgements

• Gia Tomadze, MD, Ph.D., FICS, ETCO/NKM-Georgia, President, Georgian Association of Transplantologists  
• Dirk Van Hees, RN, CETC, ETCO/NKM-Belgium University Hospital Leuven, Belgium  
• Andrew Broderick, RN, CETC, ETCO/NKM-UK, United Kingdom  
• Jose R. Nunez, MD, Hospital Clinico de San Carlos, Madrid, Spain  
• Levent Yucelgin, MD, ETCO/NKM-Turkey, Akdeniz University Transplant Center, Turkey  
• Eleni Mitropoulou, MD, CETC, ETCO/NKM-Greece, Hellenic Transplant Organization  
• Helena Zakliczynska, MD, CETC, ETCO/NKM-Poland, Centrum Organizacyjno-Koordynacyjne ds. Transplantacji Poltransplant, Warsaw, Poland

Acknowledgements (cont’d)

• Carl-Ludwig Fischer-Froehlich, MD, CETC, DSO-Stuttgart, Germany  
• Charlotte Loven, RN, CETC, ETCO/NKM-Sweden, Sahlgrenska University Hospital/Sahlgrenska, Goeteborg, Sweden  
• Dorthe Mathiasen, RN, CETC, ETCO/NKM – Denmark,  
• Stein Foss, RN, CETC, ETCO/NKM-Norway  
• Leena Tavonen, RN, ETCO/NKM-Finland, Helsinki University Hospital, Helsinki, Finland  
• ETCO/European Transplant Coordinator Organization  
• Jose Teixeira, President of ETCO  
• Franz Schaub, DSO – Germany, Neuenburg
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