Donation After Cardiac Death

- Barriers to increasing organ donations after cardiac death
- Key lessons learned from previous and ongoing efforts/next steps
- Uncontrolled Category II DCD

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Key Barriers to Increasing DCD
Controversies and Questions

• Whether the patients are dead?
• Whether the practice constitutes active euthanasia?
• Whether there is a prohibitive conflict of interest for professionals and institutions?
• Whether there is adequate social support of dying patients and their families?
• Whether unethical and illegal practice is preventable?

Ethics Committee
Society of Critical Care Medicine
Crit Care Med 2001; 29:1826-1831
Key Barriers to Increasing DCD
Ethical Arguments

• Nonmaleficience
  • Physician prejudice
  • Potential increase in physical suffering
    • Procedure related/transfer to OR
    • Deny the presence and support of loved ones
  • Manipulation of care of dying patient
    • Withholding sedation analgesia to avoid appearance of active euthanasia
    • Hasten death if patient fails to succumb after withdrawal of life support
    • Potential to jeopardize “double effect” principle

• Pragmatic slippery slopes
  • Manipulation of timing of death
  • Defining irreversible cardiopulmonary arrest
  • Criteria for DCD

• Potential conflicts of interest

Van Norman Anesthesiology 2003; 98:763-773
Key Barriers to Increasing DCD

- Earlier recognition of futility → withdrawal of support → removes potential DCD donors from donor pool
- Perceived needs of the transplant recipient/team supplant the needs of the critically ill patient
- Failure to understand brain death
- Failure to include donation into Living Wills and Advanced Health Care Directives
- Approach to the neurologically impaired vs neurologically intact potential DCD population
- Use of medications and interventions **NOT** relevant to the withdrawal of support prior to declaration
110 institutions with critical care training (74,502 patients)

8.5% mortality (6303)
- 6.2% Brain death (393)
- 26% full resuscitation failed CPR (1544)
  range 4% - 79%
- 93.8% end of life decisions (5910)
  - 14% withhold (797)
    range 0% - 67%
  - 24% DNR (1430)
    range 0-83%
  - 36% withdrawal (2139)
    range 0%-79%

Prendergast Am J Respir CCM 1998; 158:1163-67
## End of Life Care MICU

**Global Cerebral Ischemia Post CPR**

<table>
<thead>
<tr>
<th></th>
<th>Retrospective</th>
<th>Proactive</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Length of Stay</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hospital LOS</td>
<td>8.6 ± 1.6 days</td>
<td>4.7 ± 0.6 days*</td>
</tr>
<tr>
<td>MICU LOS</td>
<td>7.1 ± 1.4 days</td>
<td>3.7 ± 0.4 days*</td>
</tr>
<tr>
<td>Admit → DNR</td>
<td>3.5 ± 0.5 days</td>
<td>2.8 ± 0.4 days</td>
</tr>
<tr>
<td>Admit → Comfort</td>
<td>6.3 ± 1.2 days</td>
<td>3.5 ± 0.4 days*</td>
</tr>
<tr>
<td>DNR → Death</td>
<td>3.1 ± 1.0 days</td>
<td>2.2 ± 0.4 days</td>
</tr>
<tr>
<td><strong>Spared Cost</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Withhold</td>
<td>$1341 ± 697</td>
<td>$1516 ± 791</td>
</tr>
<tr>
<td>Comfort</td>
<td>$6790 ± 1437</td>
<td>$5390 ± 993</td>
</tr>
</tbody>
</table>

**All Died → No Donors**

Campbell CHEST 2003: 123:266-271
Key Barriers to Increasing DCD

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Donation as an Integral Part of End of Life Care

“Discharging patients from Critical Care units is as important as admitting them.”
Key Lesson Learned/Ongoing Efforts and Next Steps

• Ensure donation is an integral part of end of life care
• Clear separation of decision to withdraw support and decision for donations
• Clear DCD Policy
• Defined hospital champion and resource
  Education (current)
    • Clinical triggers
    • Timely notification
    • Avert premature withdrawal
    • DCD training programs
    • DCD consultative services
• Education (proposed)
  • Input from major critical care societies (SCCM, ATS, ACCP, ACS)
  • ACGME curriculum requirements
  • Regional symposia
  • National meetings
Key Lessons Learned/Ongoing Efforts and Next Steps

• Research
  • End of life integration
  • Auto-resuscitation
  • Predictive index of death
  • Assessments of ischemic time
  • Cost effective analysis
  • Data collection and outcomes assessment

• Regulatory
  • DCD policy
  • Incorporate donation into Advanced Health Care Directives
  • Accreditation
  • Re-imbursement