

Variability in decisions to limit life support

Scott D. Halpern, M.D., Ph.D.

Assistant Professor of Medicine, Epidemiology, and Medical Ethics & Health Policy

Director, Fostering Improvement in End-of-Life Decision Science (FIELDS) program

Deputy Director, Center for Health Incentives and Behavioral Economics (CHIBE)



CENTER *for* HEALTH INCENTIVES *and* BEHAVIORAL ECONOMICS
at the LEONARD DAVIS INSTITUTE *of* HEALTH ECONOMICS

Institutional variability in end-of-life care

- Admission to the ICU of patients with pre-existing limitations on life support
- Provision of life support to ICU patients admitted with such limitations
- New decisions to forgo life sustaining therapy (DFLST) during the ICU stay

Institutional variability in end-of-life care

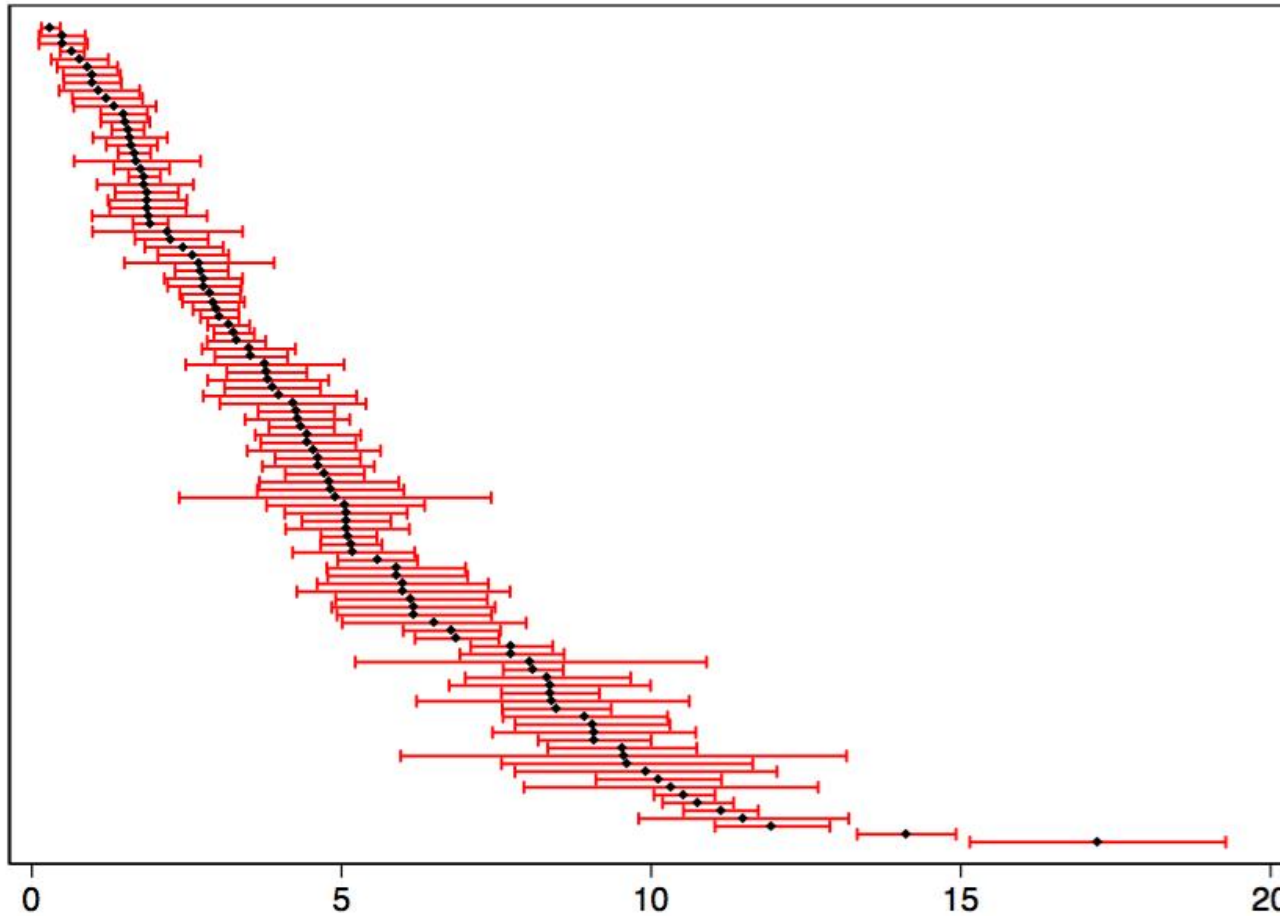
- Admission to the ICU of patients with pre-existing limitations on life support
- Provision of life support to ICU patients admitted with such limitations
- New decisions to forgo life sustaining therapy (DFLST) during the ICU stay

Cardiopulmonary resuscitation directives on admission to intensive-care unit: an international observational study

Deborah J Cook, Gordon Guyatt, Graeme Rocker, Peter Sjokvist, Bruce Weaver, Peter Dodek, John Marshall, David Leasa, Mitchell Levy, Joseph Varon, Malcolm Fisher, Richard Cook, for the Canadian Critical Care Trials Group

	Resuscitate	Do-not-resuscitate	p
	odds ratio (95% CI)	odds ratio (95% CI)	
Canadian centres			
5	3.3 (1.5–7.2)	4.9 (2.5–9.4)	0.4311
6	0.2 (0.1–1.1)	1.8 (0.9–3.6)	0.0144
7	0.4 (0.1–1.9)	1.5 (0.6–3.4)	0.1638
8	3.2 (1.1–9.3)	4.3 (1.7–10.4)	0.6673
9	0.3 (0.1–1.1)	0.5 (0.2–1.5)	0.4172
10	1.7 (0.8–3.4)	1.3 (0.6–2.6)	0.6226
11	2.6 (1.1–5.9)	1.1 (0.4–3.0)	0.1784
12	0.7 (0.2–2.1)	1.4 (0.7–3.2)	0.2851
13	0.9 (0.3–2.7)	2.6 (1.3–5.4)	0.1082
14	1.3 (0.5–3.2)	0.5 (0.1–1.6)	0.1835
15	1.0	1.0	

U.S. hospital variability in ICU admission for patients with pre-existing limits on life support



Limitations = do not resuscitate, limits on one or more other forms of life support, or comfort-care only

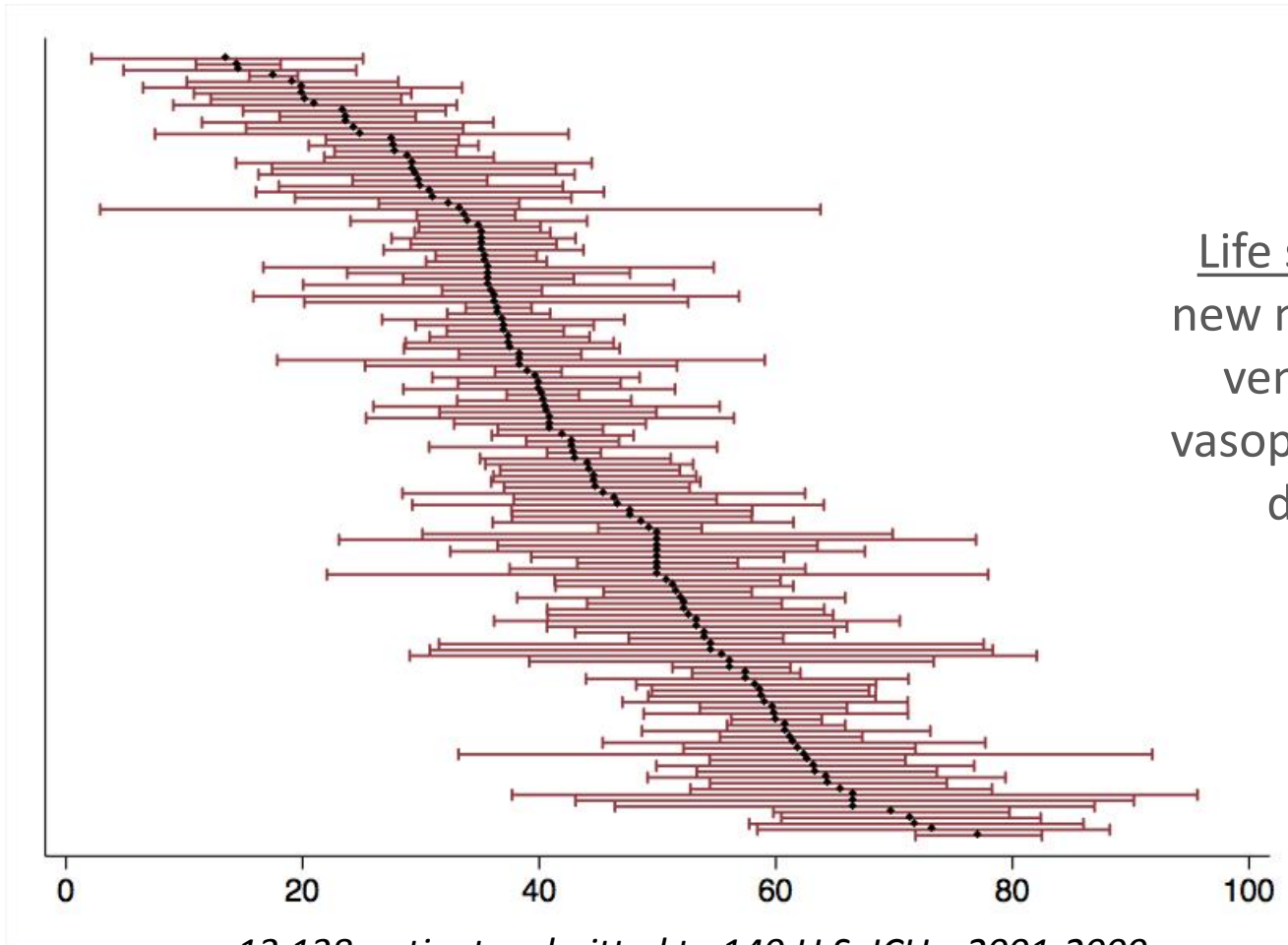
Adjusted for >30 patient factors that together discriminated with 90% accuracy

272,320 patients admitted to 105 U.S. Hospitals, 2001-2009

Institutional variability in end-of-life care

- Admission to the ICU of patients with pre-existing limitations on life support
- Provision of life support to ICU patients admitted with such limitations
- New decision to forgo life sustaining therapy (DFLST) during the ICU stay

ICU variability in providing life support to patients with pre-existing limits



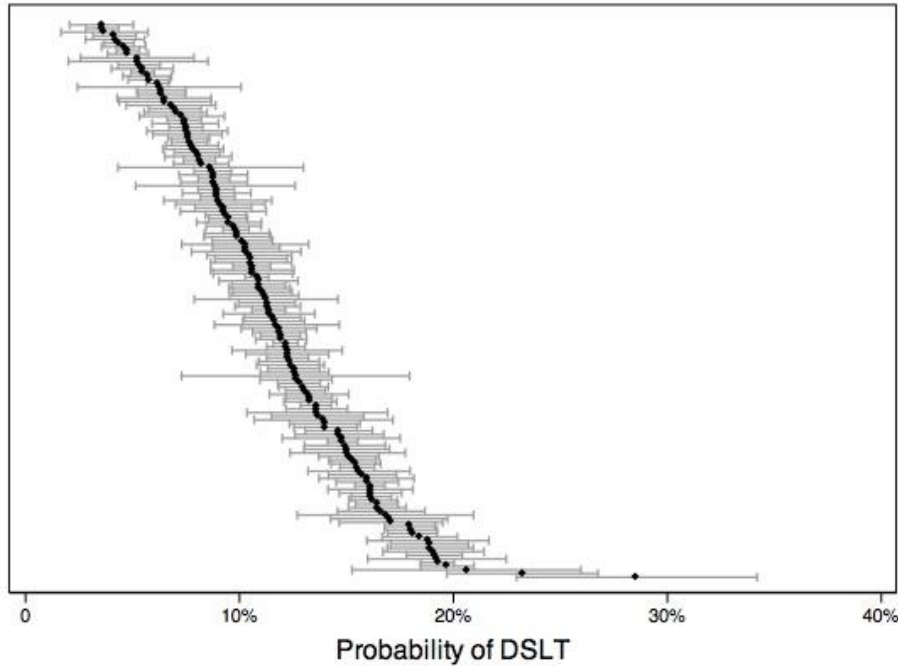
Life support =
new mechanical
ventilation,
vasopressors, or
dialysis

13,138 patients admitted to 140 U.S. ICUs, 2001-2009

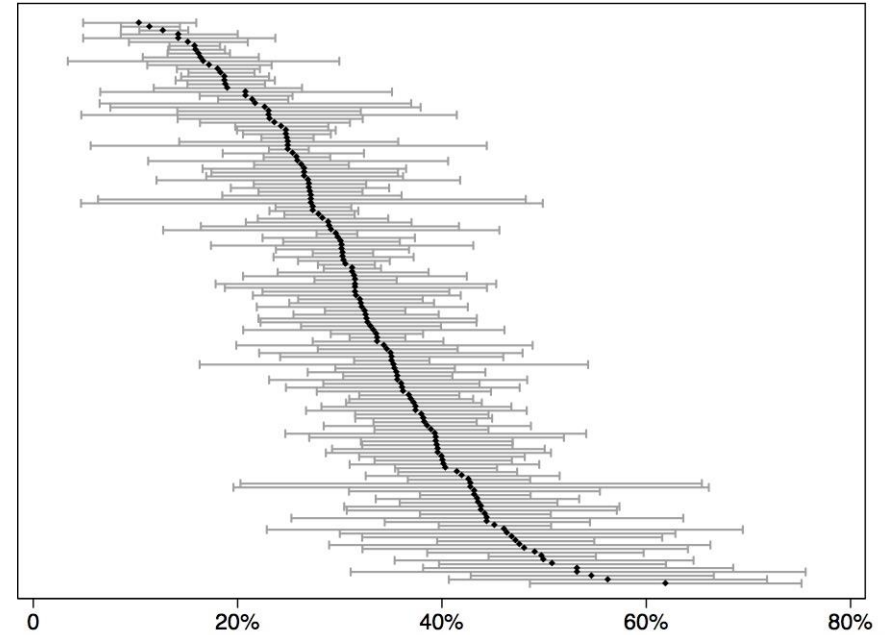
Institutional variability in end-of-life care

- Admission to the ICU of patients with pre-existing limitations on life support
- Provision of life support to ICU patients admitted with such limitations
- New decision to forgo life sustaining therapy (DFLST) during the ICU stay

U.S. ICU variability in limiting life support

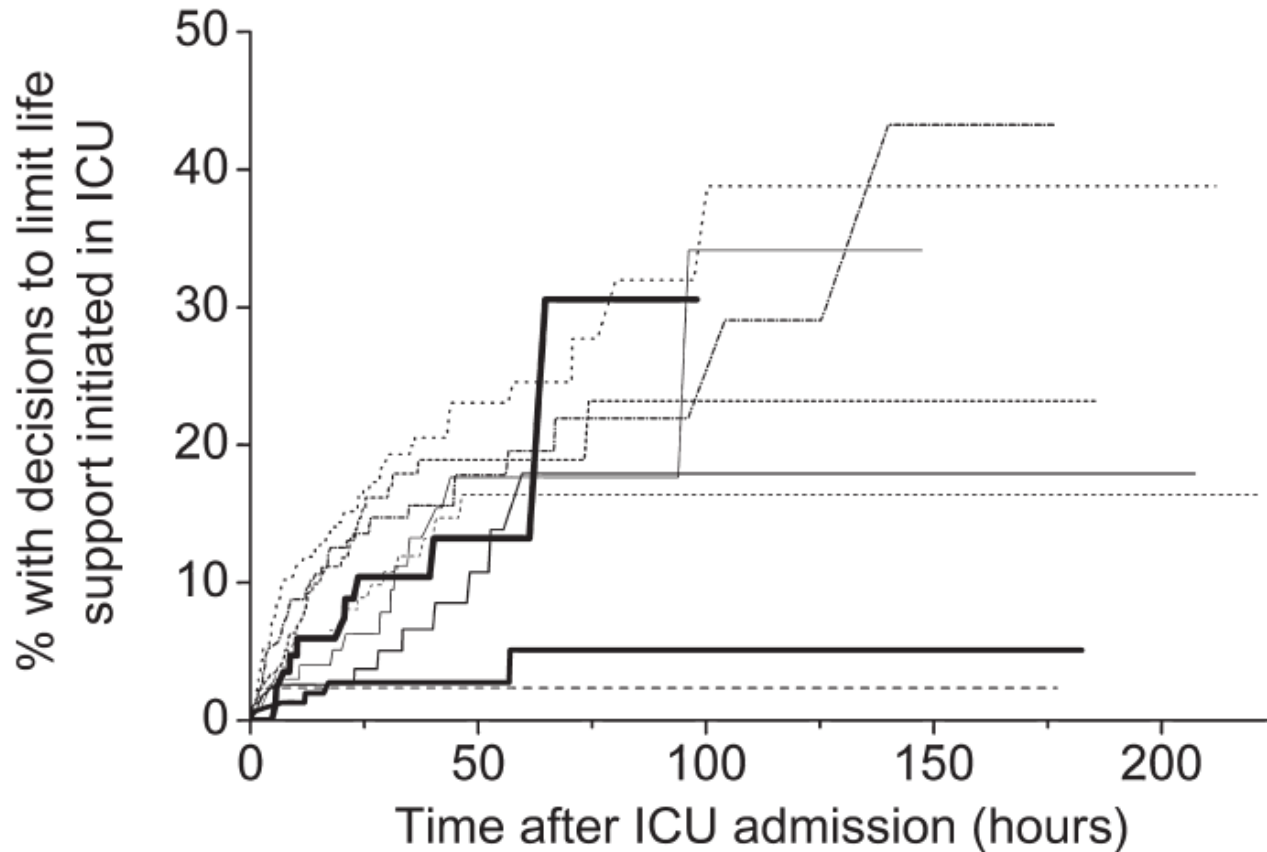


269,002 patients admitted to 153 U.S. ICUs, 2001-2009



27,030 patients with prolonged (≥ 4 days) mechanical ventilation admitted to 153 U.S. ICUs, 2001-2009

Physician variability in limiting life support



9 intensivists caring for 1,363 ICU patients admitted to Case Western from 2002-2005

Yael Schenker
 Greer A. Tiver
 Seo Yeon Hong
 Douglas B. White

Association between physicians' beliefs and the option of comfort care for critically ill patients

Among 72 audiorecorded family meetings in SF, physicians offered the option of comfort care 56% of the time (72% in-hospital mortality in this cohort)

Table 4 Predictors of presentation of comfort care as an option

	Unadjusted OR [95 % CI] ^a	<i>p</i> value	MV-adjusted OR [95 % CI] ^b	<i>p</i> value
Strength of physician belief that life support should be withdrawn, per 1-pt increase on 0–10 scale	1.33 [1.13–1.57]	0.01	1.38 [1.14–1.66]	0.01
APACHE II score	1.05 [0.97–1.15]	0.22	1.04 [0.94–1.15]	0.41
Number of days in ICU prior to conference	1.03 [0.98–1.09]	0.25	1.04 [0.97–1.11]	0.27

Recommendations to Limit Life Support

A National Survey of Critical Care Physicians

David R. Brush^{1,2}, Kenneth A. Rasinski³, Jesse B. Hall¹, and G. Caleb Alexander^{2,3,4,5}

608 of 922 (66%) ICU physicians sampled from AMA Master File

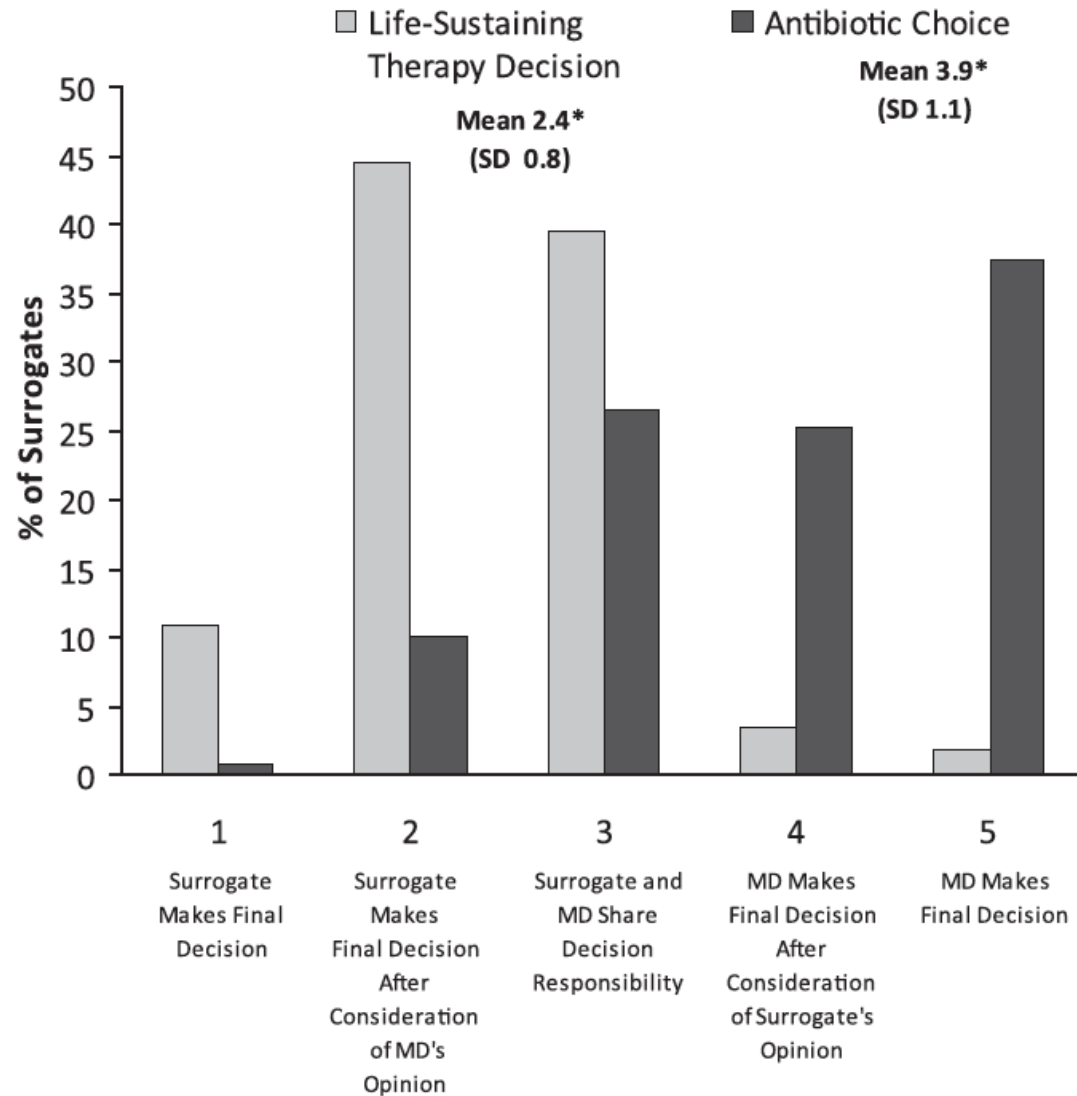
TABLE 2. REPORTED PRACTICES AND ATTITUDES REGARDING RECOMMENDATIONS ABOUT LIFE-SUSTAINING CARE

	%
2. How often, if at all, do you make a specific recommendation about whether to continue or limit life support?	
Always	21
Often	38
Sometimes	29
Rarely or never	12

41% of ICU physicians reported that providing recommendations was only appropriate when requested by surrogates

Surrogates prefer sharing decision-making with physicians

Even for value-laden choices



'Big Nat'

- 60 year-old with refractory leukemia and a large, never-say-never family
- Admitted to ICU with septic shock in setting of pancytopenia
- After 60 hours of maximal resuscitative efforts:
 - 3 vasopressors and 2 antidysrhythmics
 - oliguric → anuric renal failure
 - ventilator-dependent hypoxemic respiratory failure
 - loss of decisional capacity

Options for discussing CPR

- A. “In situations like this, there is a risk that his heart may stop. If it did, would he want us to do chest compressions to try to restart it?”

- B. “In situations like this, there is a risk that his heart may stop. If it did, our natural response, as critical care doctors, would be to do chest compressions to try to restart it. Would he want that?”

- c. “In situations like this, there is a risk that his heart may stop. If it did, we would not routinely do chest compressions because they would be unlikely to restart his heart in this situation. Does this seem reasonable?”

Framing influences surrogates' choices

a simulation study

“People have different thoughts on this, but in my experience, most people want CPR”

vs.

“People have different thoughts on this, but in my experience, most people **do not** want CPR”

Experimental Condition	CPR, <i>n</i> (%)
Overall	141 (56)
Unaroused, or “cold” emotional manipulation	70 (56)
Aroused, or “hot” emotional manipulation	71 (56)
MD does not attend to emotion	75 (59)
MD attends to emotion	66 (53)
MD frames CPR as the norm	81 (64)
MD frames no CPR as the norm	60 (48)
MD frames the CPR decision as the surrogate's	70 (56)
MD frames the CPR decision as the patient's	71 (56)
MD frames the alternative to CPR as “do-not-resuscitate order”	80 (61)
MD frames the alternative to CPR as “allow natural death”	61 (49)

Conclusions

- There exists considerable among-ICU and among-provider (within-ICU) variability in end-of-life communication
- Provider communication styles and 'ICU culture' contribute to the aggressiveness of care provided to seriously ill patients
- Need to identify which choice-architecture strategies optimally influence patient- and family-centered outcomes