

# Warning: You Are About to be Nudged

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- ▶ Applications of behavioral economics to policy often takes the form of “Nudges” (Thaler and Sunstein, 2008)
- ▶ Desirable intervention: cheap, effective across domains, not heavy-handed (Madrian and Shea, 2001; Thaler and Benartzi, 2004; Behavioural Insights Team, 2012)
- ▶ Default options shown to be effective in end-of-life care decisions (Halpern et al., 2013)

- ▶ Ethical question remains: are people being “tricked?” (Bovens, 2009)

*The psychological mechanisms that are exploited in Cafeteria and in Save More Tomorrow typically work better in the dark. If we tell students that the order of the food in the Cafeteria is rearranged for dietary purposes, then the intervention may be less successful. If we explain the endowment effect to employees, they may be less inclined to Save More Tomorrow.*

- ▶ Can be resolved by informing people about the nudge—but that may render it ineffective (The House of Lords, 2011)

*Are nudges effective with full transparency?*

- ▶ Effectiveness of defaults after informing participants about defaults
- ▶ Psychological reactance (Wortman and Brehm, 1975)
  - ▶ A priori information: Resistance?
  - ▶ Post hoc information: Backlash?
- ▶ Full disclosure is ethically, politically preferable
- ▶ Specific context: end-of-life care

- ▶ Participants recruited via e-mail from NYT readers (n=216) and CMU alumni (n=543). Similar demographics, mean age around 50.
- ▶ Hypothetical “advance directive” via Qualtrics
- ▶ 6 questions:
  - ▶ Overall goal for care
  - ▶ Cardiopulmonary resuscitation (CPR), dialysis, feeding tube insertion, intensive care unit (ICU), mechanical ventilator use
- ▶ Choice between minimizing pain (“comfort”), living as long as possible (“prolong”), or leaving decision to another agent (e.g. family member)
- ▶ Participants fill out the advance directive twice. First time with defaults, second time without.

- ▶ Answer Choices:
  1. I want my health care providers and agent to pursue treatments that help me to live as long as possible, even if that means I might have more pain or suffering.
  2. I want my health care providers and agent to pursue treatments that help relieve my pain and suffering, even if that means I might not live as long.
  3. I do not want to specify one of the above goals. My health care providers and agent may direct the overall goals of my care.
- ▶ Default option is listed first
- ▶ To change default, enter initials

# Information

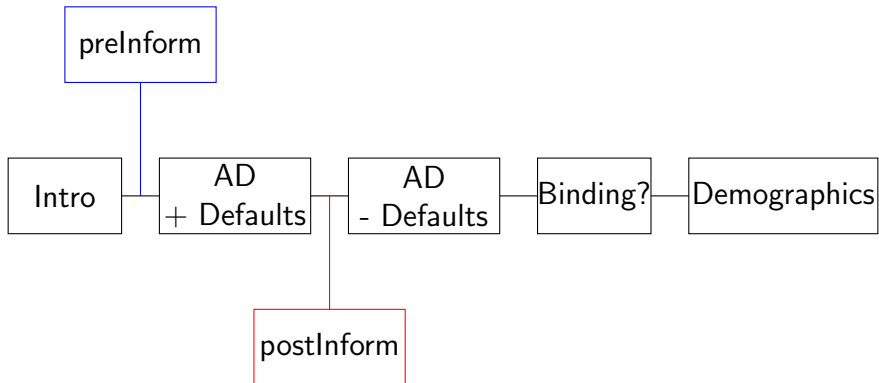
The specific focus of this research is on default decisions that go into effect if people don't take actions to do something different. Participants in this research project have been divided into two experimental groups.

If you have been assigned to one group, the Advance Directive you complete will have answers to questions checked that will direct health care providers to help relieve pain and suffering even if it means not living as long. If you want to choose different options, you will be asked to check off different option and place your initials beside the different option you select.

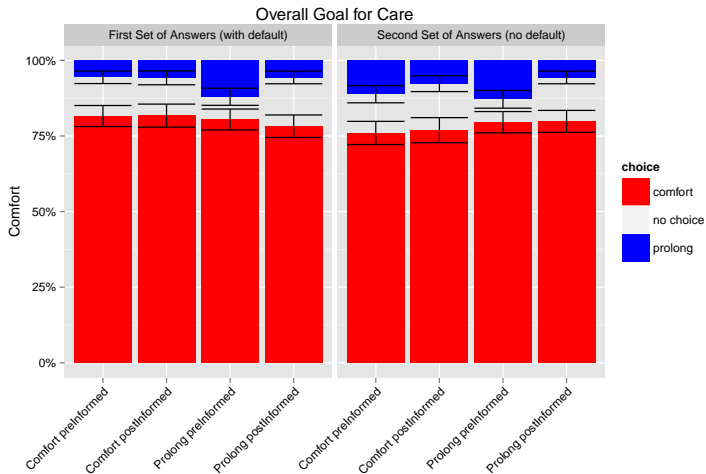
If you have been assigned to the other group, the Advance Directive you complete will have answers to questions checked that will direct health care providers to prolong your life as much as possible, even if it means you may experience greater pain and suffering.

- ▶  $2 \times 2$  design:
  - ▶ Defaulted into “comfort” or “prolong” option
  - ▶ Disclosure stating that this is research on “defaults” either before filling out the AD for the first time (“preInformed”) or before filling it out the second time (“postInformed”)
- ▶ Disclosure states that participants are defaulted into either condition—no informational content from default
- ▶ Participants record whether they want their decisions to be “binding” or “guidelines”

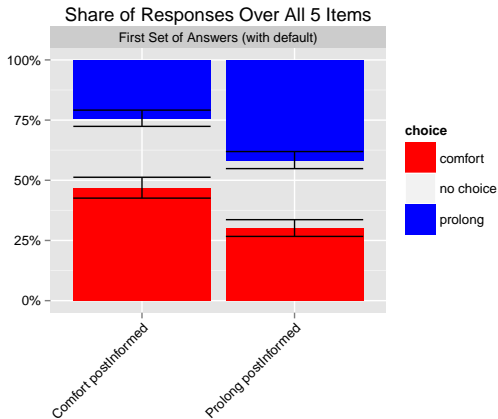




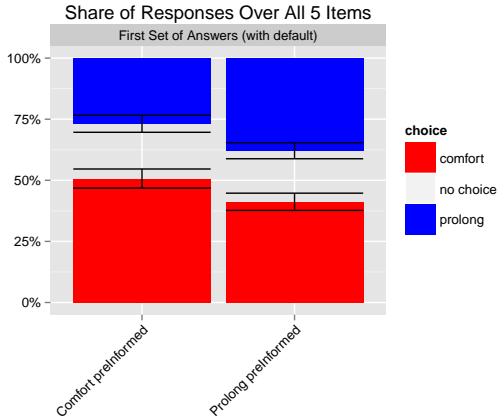
# General Preferences



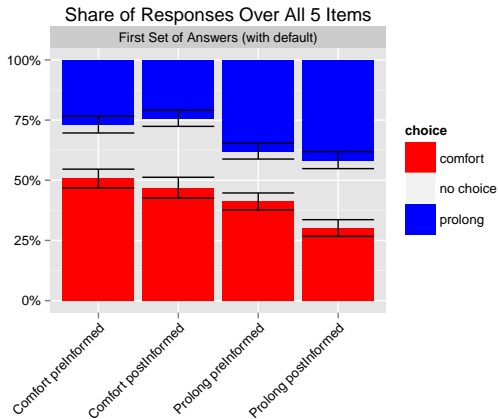
# Classic Default Effect



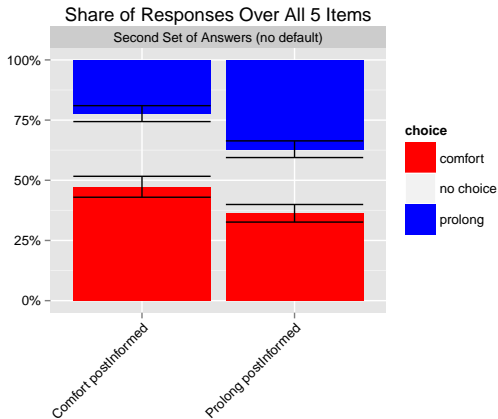
# Default Effect after Pre-Informing



# Pre-Informing vs. Post-Informing



# Persistence of Default Effect



# 5 Items Combined

$Y = P(\text{comfort})$	1 <sup>st</sup> Stage & postInformed		2 <sup>nd</sup> Stage & postInformed		1 <sup>st</sup> Stage & preInformed	
	prolong	no choice	prolong	no choice	prolong	no choice
Comfort Default	-2.032** (0.708)	-2.050* (0.922)	-1.100*** (0.317)	0.333 (0.520)	-1.553** (0.488)	-0.389 (0.371)
Marginal Effect (comfort = 0)	0.361** (0.112)		0.175** (0.068)		0.329** (0.111)	

Table: Multinomial Logit on probability of choosing “comfort” option. Fixed effects for each item, random effects at subject level. With controls for the population (CMU vs. NYT), gender, age, age squared, race, and religion.

# Individual Items: 2nd stage

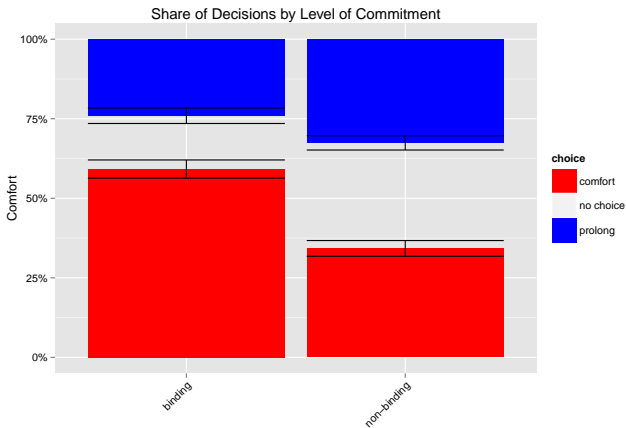
	CPR		ICU		Ventilator		Dialysis		Feeding Tube	
	prolong	no choice	prolong	no choice	prolong	no choice	prolong	no choice	prolong	no choice
comfort	-0.084** (0.351)	-0.339 (0.361)	-1.111** (0.361)	-0.260 (0.348)	-0.870* (0.398)	-0.166 (0.317)	-0.431 (0.333)	-0.209 (0.340)	-0.394 (0.400)	-0.146 (0.314)
preInformed	-0.675* (0.322)	-0.803 (0.367)	-0.455 (0.329)	-0.401 (0.347)	-0.354 (0.338)	-0.519+ (0.313)	-0.015 (0.306)	-0.275 (0.331)	0.058 (0.342)	-0.494 (0.319)
preInformed × comfort	0.597 (0.466)	0.484 (0.494)	0.546 (0.478)	-0.085 (0.476)	0.319 (0.538)	0.179 (0.441)	-0.363 (0.459)	0.101 (0.465)	-0.312 (0.541)	0.009 (0.444)
Marginal Effect (comfort = 1)	0.146* (0.060)		0.163* (0.060)		0.096 (0.065)		0.075 (0.065)		0.007 (0.065)	
Marginal Effect (preInformed = 0)	0.044 (0.063)		0.049 (0.063)		0.056 (0.065)		0.064 (0.065)		0.095 (0.064)	

Table: Multinomial Logit on probability of choosing “comfort” option. Random effects at subject level. With controls for the population (CMU vs. NYT), gender, age, age squared, race, and religion.



# Binding Decisions Favor Comfort

- ▶ 46% of Participants want their decision to be binding



# Conclusion

- ▶ Supporting evidence that defaults are effective in end-of-life care choices
- ▶ Pre-informing people does not appear eliminate the default effect
- ▶ No evidence for resistance (backlash) when pre-informed (post-informed).
- ▶ Hence, policymakers should provide full transparency about behavioral interventions—transparency should be “default.”