

Differences by Race, Religiosity, and Mental Health in Preferences for Life-Prolonging Treatment Among Medicare Beneficiaries



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INTRODUCTION

Patient preferences ought to guide clinical decision-making, particularly in serious illnesses where disease-directed therapies are not always effective and may cause additional suffering. Yet, clinicians commonly struggle to engage seriously ill patients and their families in conversations about treatment preferences,¹ and may leave these conversations still unaware of patients' wishes.² When compared to Whites, African Americans may have different end-of-life (EOL) care preferences, which may impact the degree to which they are honored.³ We lack understanding about how widespread differences in preferences are. Better population-level data on patient preferences may help prepare clinicians for such discussions about goals of care.

METHODS

We used the National Health and Aging Trends Study (NHATS) to assess predictors of EOL treatment preference in two hypothetical scenarios.⁴ NHATS, a longitudinal cohort study of a nationally representative sample of Medicare beneficiaries aged 65 and older, oversamples non-Hispanic blacks and those aged 90 and older. Our cross-sectional analysis focused on a supplemental module on end-of-life planning fielded to a random one-third of samples from round 2 participants ($n = 2015$; response rate 84%).

The primary outcomes were dichotomous responses—"receive life prolonging treatments" or "stop all treatments"—to a question about EOL care preferences in two hypothetical scenarios: (1) "What if you could speak, walk, and recognize others, but you were in constant, severe physical pain" ("severe pain"); and (2) "What if you were not in pain, but could not speak, walk, or recognize others?" ("severe disability"). We used descriptive statistics to characterize the sample population using a

priori-determined sociodemographic and health-related covariates. We used chi-square test statistics to compare proportions of those who indicated preference to receive or stop life-prolonging treatments in both scenarios. Using a model informed by the literature, we then used multivariable logistic regression to determine predicted prevalence of factors associated with accepting life-prolonging treatment in both scenarios. We analyzed data using STATA 15.1 (StataCorp, College Station, TX).

RESULTS

Table 1 highlights sociodemographic and health characteristics of those who said they would either receive or stop all life-prolonging treatments in *both* scenarios (therefore showing a strong preference either for or against aggressive treatment near end of life). We detected significant differences by race and ethnicity, religiosity, education status, income, and self-reported depression. In total, 90.3% of non-Hispanic Whites said they would stop life-prolonging treatments in the setting of severe pain and disability compared to 64.4% of Black respondents ($p < 0.001$). In addition, greater religiosity, less education, and lower income all predicted a preference for more aggressive treatment. These differences all persisted in the multivariable logistic regression (Table 2).

DISCUSSION

In this nationally representative sample of Medicare beneficiaries, a majority of respondents in all groups indicated a preference to stop all treatments in the hypothetical setting of severe pain or disability. However, being Black or Hispanic, considering religion to be of somewhat or high importance, having less than a high school education, and having an annual income of \$25,000 or less each independently predicted willingness to undergo life-prolonging treatment in both scenarios. Our study demonstrates independent association between low education levels and low annual income with preference to

Table 1 Characteristics of Those Who Hypothetically Stop or Receive Life-Prolonging Treatments in Both Settings of Constant and Severe Pain and Inability To Walk, Talk, or Recognize Others (Weighted Percentages)

Characteristic	Stop all life-prolonging treatments % of total sample	Receive all life-prolonging treatments % of total sample	<i>p</i> value
Sex			0.09
Male	45.8	53.4	
Female	54.2	46.6	
Age ≥ 85	10.3	13.3	0.15
Age categories			0.35
65–74	57.2	57.2	
75–84	32.5	29.5	
≥ 85	10.3	13.3	
Marital status			0.08
Married	51.1	52.9	
Living with partner	4.1	5.2	
Separated	0.8	2.7	
Divorced	12.3	9.6	
Widowed	28.7	24.4	
Never married	3.1	5.2	
Race and ethnicity			< 0.001
White, non-Hispanic	85.0	55.5	
Black, non-Hispanic	6.0	20.2	
Hispanic	5.9	16.7	
Other	2.1	7.4	
Religiosity			0.003
Very important	48.1	61.3	
Somewhat important	19.5	21.7	
Not so important	32.4	17.0	
Educational status			0.001
Less than high school	19.4	32.2	
High school or more	80.6	67.8	
Annual income			0.001
≤ \$25,000	38.6	58.5	
> \$25,000	61.4	41.5	
Self-reported health			0.08
Fair or poor	22.1	29.0	
Good, very good, or excellent	77.9	71.0	
Cancer diagnosis	5.9	7.0	0.59
Dementia diagnosis	0.6	1.2	0.15
History of stroke	2.8	1.5	0.25
Painful condition	26.3	28.1	0.68
Shortness of breath	54.2	45.1	0.42
ADLS			0.17
0	90.1	88.9	
1–2	8.4	7.8	
≥ 3	1.5	3.4	
Nervous or anxious			0.45
Not at all	65.7	65.1	
Several days per week	26.9	23.9	
More than half the days	3.9	5.4	
Down, depressed, or hopeless			0.02
Not at all	72.7	71.5	
Several days per week	21.2	15.7	
More than half the days	3.6	8.4	
Nearly every day	2.6	4.5	

Variables that obtained statistical significance are italicized

accept life-sustaining treatment. These findings support other evidence that most individuals prefer comfort-focused care in the setting of severe pain or severe disability, and that sociodemographic differences reflective of underserved communities make one more likely to express preference for life-sustaining treatment.^{5,6} They suggest that people view suffering differently.

Table 2. Association Between Sociodemographic Variables, Health Variables, and Predicted Prevalence of Preference To Receive All Life-Prolonging Treatments in the Settings of Both Severe Pain and Disability

	Predicted prevalence (% [95% CI]) ¹	<i>p</i> values ²
Gender		
Female	12.3 (8.6–16.0)	–
Male	17.3 (13.5–21.1)	0.07
Age		
< 85	14.9 (12.0–17.9)	–
≥ 85	12.5 (7.3–17.7)	0.96
Race/ethnicity		
White	9.9 (7.4–12.4)	–
Black/African American	32.7 (26.6–38.8)	< 0.001
Hispanic/Latino	30.6 (15.6–45.6)	0.001
Other	34.3 (9.1–59.5)	< 0.001
Education		
Greater than HS	14.1 (11.4–16.8)	–
HS diploma or less	16.2 (10.6–21.8)	0.56
Annual income		
\$25,000 or more	11.6 (8.4–14.8)	–
Less than \$25,000	18.3 (14.1–22.5)	0.01
Religion		
Not so important	8.1 (4.2–12.0)	–
Somewhat important	19.5 (11.3–27.7)	0.01
Very important	16.9 (13.0–20.9)	0.02
Depressed		
Not at all	15.4 (11.9–18.9)	–
Several days	11.2 (5.9–16.6)	0.05
More than half the days	20.5 (5.6–35.4)	0.27
Nearly every day	14.8 (1.2–28.3)	0.98

Sample represents a population size: 4,208,898, with 898 observations, 56 strata, and 112 PSUs. Variables that obtained statistical significance are italicized

¹Predicted prevalence values are the predicted probabilities calculated using the post-estimation margins command following multivariable logistic regression analysis

²Compares results for the specific subgroup to the reference group on the basis of the multivariable logistic regression model. The reference group is the first specified subgroup for each independent variable

The hypothetical questions from the NHATS survey tell us something about group differences but nothing about personal preference, especially in real circumstances. In the absence of better explanations for why individual preferences differ independently by race, income, or education, clinicians leading advance care planning discussions should cultivate awareness that social determinants may substantially impact the EOL decision-making process. Advance care planning and goals of care discussions should reflect the unique circumstances of the patient with a focus on the personal context surrounding their illness and their experience of suffering. Clinicians can effectively utilize this data not to make assumptions about a given patient, but to prepare themselves to discuss the meaning of different health states with patients by developing effective communication skills.

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Compliance with Ethical Standards:

Conflict of Interest: The authors declare that they do not have a conflict of interest.

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