

Advance care planning for cognitively impaired residents within the nursing home setting

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BACKGROUND

- Nursing home (NH) residents often experience burdensome and unnecessary care at the end of life (EOL)
- Advance care planning (ACP) can help NH residents and their surrogate decision-makers prepare for EOL and document what kind of care they would like to receive
- The objective of this study was to examine patient characteristics associated with being offered and shown a novel ACP video education tool within a week of admission in the Pragmatic trial of Video Education in Nursing Homes (PROVEN)
- The intervention tested in this study is a video to help residents and their family members understand the likely outcomes of various treatments, and per study protocol should be offered to all short-stay residents or their representative or family member regardless of cognitive impairment

METHODS

Study Design:

- Data used include Minimum Data Set (MDS) and internal trial data from 119 nursing homes from March 2016 through June 2017 for 20,986 new admissions

Measures:

- Outcomes of being offered and shown a video were dichotomous
- MDS assessments within the first week of admission were used to measure diagnosis of dementia, cognitive impairment using the cognitive function scale (CFS), family participation in care assessment, age, race/ethnicity, marital status, sex, Activities of Daily Living and other patient/facility characteristics

Statistical Analysis

- Hierarchical logistic regression was used to control for NH level differences in video offer and show practices
- Video show regression was subset to the residents offered the video (N=13,017)
- Marginal effects were computed and can be interpreted as percentage point changes
- Intra-class correlation (ICC) was computed to assess the variation between NHs

RESULTS

- Black and Hispanic non-white residents, conditional on being offered a video, were more likely to view the video compared to white residents
- Residents who had moderate to severe cognitive impairment were less likely to be offered and shown the video compared to residents who are cognitively intact
- Residents with a family member or representative involved in care planning were more likely to be offered the video but less likely to be shown
- 50% of variation between NHs remains unexplained

Table 1. ACP video offer regression results⁺

	Percentage	
Mean of outcome = 62%	Point	95% CI
Demographics		
Female	0.01	[-0.01,0.02]
Age		
Under 65	-0.01	[-0.03,0.01]
65-75	Ref.	Ref.
75-85	0.00	[-0.02,0.01]
85+	0.00	[-0.01,0.02]
Race		
White	Ref.	Ref.
Black	0.01	[-0.01,0.03]
Hispanic, non-white	0.02	[-0.01,0.06]
Other	0.01	[-0.05,0.06]
CFS		
No impairment	Ref.	Ref.
Mild impairment	-0.01	[-0.03,0.01]
Moderate impairment	-0.02 [*]	[-0.04,-0.00]
Severe impairment	-0.06 ^{**}	[-0.09,-0.02]
Married	-0.01	[-0.02,0.01]
ADL Dependencies (#)	-0.03 ^{**}	[-0.05,-0.01]
Family/rep in care planning	0.04 ^{***}	[0.02, 0.06]
Alzheimer's or Dementia	0.01	[-0.01, 0.03]
NH characteristics		
NH System indicator	0.28 ^{***}	[0.15, 0.42]
ACP Turnover	-0.07 ^{**}	[-0.11, -0.03]
Conference call attendance	0.01 [*]	[0.00, 0.03]
Social worker per 100	0.07	[-0.02, 0.16]
ICC	0.50	

Table 2. ACP video show regression results⁺

	Percentage	
Mean of outcome = 25%	Point	95% CI
Demographics		
Female	0.00	[-0.02,0.01]
Age		
Under 65	0.01	[-0.01,0.02]
65-75	Ref.	
75-85	0.00	[-0.01,0.02]
85+	-0.02	[-0.03,0.00]
Race		
White	Ref.	
Black	0.03 ^{**}	[0.01,0.05]
Hispanic, non-white	0.04 [*]	[0.00,0.08]
Other	0.02	[-0.05,0.09]
CFS		
No impairment	Ref.	
Mild impairment	-0.03 [*]	[-0.05,-0.01]
Moderate impairment	-0.04 ^{***}	[-0.06,-0.02]
Severe impairment	-0.10 ^{***}	[-0.15,-0.06]
Married	0.01 [*]	[0.00,0.03]
ADL Dependencies (#)	-0.04 ^{***}	[-0.06,-0.02]
Family/rep in care planning	-0.02 [*]	[-0.05,-0.00]
Alzheimer's or Dementia	-0.01	[-0.02,0.01]
NH characteristics		
NH system indicator	-0.19 ^{**}	[-0.32, -0.06]
ACP turnover	-0.02	[-0.06, 0.02]
Conference call attendance	0.01	[-0.01, 0.02]
Social worker per 100	-0.01	[-0.11, 0.06]
ICC	0.50	

⁺ Regression was also controlled for other patient and facility characteristics * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

CONCLUSIONS

- NH admission presents an opportunity to address racial differences in ACP, as previous research suggests minorities are less likely to engage in ACP
- Engaging decision-makers of residents with cognitive impairment at NH admission could improve ACP for this vulnerable group