Facility Characteristics Associated with Implementation of an Advance Care Planning Video Intervention 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 NH characteristics associated with successful modification of NH ACP processes using a novel video education tool within 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
- Per the study protocol, this intervention should be offered to all long and short stay residents
- Each NH had at least one champion for the project
- Routine coaching calls with the study team encouraged and supported participation in the intervention

METHODS

Study Design:

- Data used include Online Survey Certification and Reporting data, Nursing Home Compare and internal trial data from 98 facilities in Chain 1 and 21 facilities in Chain 2 from March 2016 through March 2018.

Measures:

- Offer rate: number of residents offered a video divided by the number residents in the NH multiplied by 100.
- Show rate: number of residents shown a video divided by the number residents in the NH multiplied by 100
- Facility characteristics are categorized as structural (e.g. social workers/100), PROVEN engagement (e.g. conference call attendance), resident composition (e.g. admissions per bed) and quality (e.g. 5-star ratings).

Statistical Analysis

- Multivariate linear regression was used
- Offer and show rates were logit transformed

RESULTS

Figure 1. Offer and Show Rates

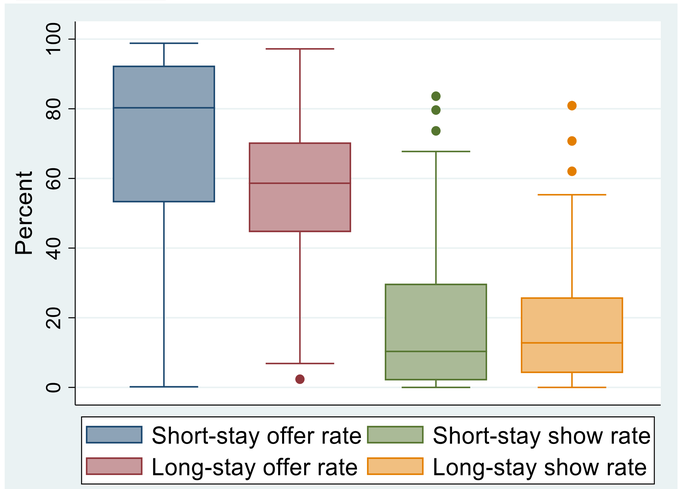

Table 1. Offer rate regression results [+]

Outcome: Video offer rate	Short-stay Coef. [95% CI]	Long-stay Coef. [95% CI]
Structural		
Social workers/100	0.28 [-0.40,0.96]	-0.03 [-0.45,0.38]
PROVEN Engagement		
Conference call attendance	0.08 [-0.01,0.16]	0.09** [0.04,0.14]
Resident composition		
Admissions per bed	0.04 [-0.48,0.56]	0.07 [-0.24,0.39]
Quality		
Star rating (Ref=1)		
2-star	1.64** [0.58,2.70]	0.60 [-0.05,1.25]
3-star	1.96*** [0.87,3.05]	0.79* [0.12,1.45]
4-star	1.32* [0.21,2.44]	0.63 [-0.05,1.32]
5-star	2.32** [0.83,3.80]	1.35** [0.44,2.26]

Table 2. Show rate regression results [+]

Outcome: Video show rate	Short-stay Coef. [95% CI]	Long-stay Coef. [95% CI]
Structural		
Social workers/100	0.20 [-0.79,1.19]	0.11 [-0.81,1.03]
PROVEN Engagement		
Conference call attendance	0.09 [-0.03,0.21]	0.15** [0.04,0.26]
Resident composition		
Admissions per bed	-0.25 [-1.01,0.50]	-0.17 [-0.88,0.53]
Quality		
Star rating (Ref=1)		
2-star	0.21 [-1.33,1.75]	0.52 [-0.92,1.95]
3-star	0.57 [-1.01,2.15]	0.28 [-1.20,1.75]
4-star	0.50 [-1.12,2.11]	0.23 [-1.28,1.73]
5-star	1.83 [-0.33,3.98]	1.76 [-0.25,3.77]

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. [+] Tables 1 and 2, regressions were also controlled for bed size, resident cognitive status composition, occupancy %, Medicaid %, Hospitalizations per year, penalties in 2016 and were not statistically significant.

CONCLUSIONS

- Conference call participation was associated with higher offer and show rates for long stay residents.
- Nursing homes with higher star ratings had higher offer-rates and may have more resources and experience implementing a new intervention
- Despite variation in offer and show, few of the facility-level characteristics we hypothesized to be related to these outcomes were significant
- Engaging nursing homes on an ongoing basis throughout the implementation of an intervention is important for success of a pragmatic trial

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