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Prevalence of advanced directives in the geriatric population with in long-term care facilities in the United States

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Abstract

Advanced directives, such as Living Wills and *Do Not Resuscitate* (DNR) orders, provide the ability to identify, respect, and implement an individual's wishes for medical care during serious illness or end-of-life care. The aim of this study was to evaluate the prevalence of advanced directives amongst the residents of long-term care facilities in the United States. A total of 527 cases were extracted from 2018 National Study of Long-Term Care Providers, which was collected by the National Center for Health Statistics through the surveys of residential care communities and adult day services centers. Advanced directive rates were higher in patients 90 years of age and above as compared to other age groups. Nursing home residents were more likely to have advanced directives than other long term care facilities. There was no significant difference among males and females in the rate of advanced directives. Nursing home and Hospice residents had more advanced directives compared to other facilities. The Black population had the highest rate of advanced directive preparedness. Overall, the finding of this study revealed that there was a significant difference in the preparedness of DNR orders and Living Wills by patient demographics and the type of long-term care facility. Offering advanced directive services at public health/social services facilities can enhance the rate of advanced directive preparedness. Advanced directives ease the stress and anxiety of patients, family, and friends during difficult times.

Keywords: Advanced directives; Do Not Resuscitate; Living Will; Elderly; Nursing homes; Hospice care

1. Introduction

An Advanced directive allows patients to communicate about health care preferences in the event that they are unable to make those decisions. The most common advanced directive used for nursing home residents is the *Do Not Resuscitate* (DNR) and Living Wills [1]. The completion rates of advanced directives vary by age, race, and sex. Racial and ethnic minorities are less likely to complete advanced directives as compared to other races and ethnicities. About 25% of U.S. adults have never thought about end-of-life care and advanced directive preparations [2].

Advanced directives guide healthcare professionals with legal documentation on how to prioritize preference for end-of-life care. It is a method that provides an insight into patient needs in situations like terminal illness, coma or memory loss. Although a Living Will and DNR order prepares for situations in later stages of life, it is equally relevant for patients across all ages to prepare and have it accessible. A Living Will normally has instructions on how the medical team should approach certain treatments to allow the patient to be alive [3]. This includes breathing tubes, feeding tubes, cardiopulmonary resuscitation (CPR), and other life-prolonging interventions. On the contrary, a DNR order is a legal

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document that explains what a healthcare provider should not do, such as performing resuscitation if the patient's heart stops pumping [3].

In the U.S, the most common age group to utilize long-term care services are from 85 years and older. More women, non-Hispanic Whites utilized long-term care services than non-Hispanic blacks [4]. Over the half-discharged hospice care patients and nursing home residents have at least one advanced directive on record. Nursing home patients under 65 years of age and Black residents are less likely to have an advanced directive than those 85 years and older. The age and race difference are seen more drastically in the nursing home and home health care populations than in hospice populations [4].

Nursing homes are a primary health care institution for end-of-life care: about 25% of all deaths in the U.S. take place in nursing homes. End-of-life care in nursing homes has the most drastic disparity amongst Black residents, who are less likely to use hospice care before death [5].

About 45-70% of older adults that face end-of-life situations are incapable of making healthcare decisions by themselves [6]. An advanced directive typically comprises a Living Will and *Durable Power of Attorney for Health Care* designation. Advanced care planning is largely undertaken by older socially-integrated White adults of higher socioeconomic status. Advanced care planning rates have increased sharply since 1990s: written advanced directives more than doubled from 16% in 1990 to 35% in 2013, which is attributed to the passage of the Patient Self-Determination Act (1990) [6]. Higher completion rates of advanced directives amongst geriatric population are correlated with fewer in-hospital deaths, more hospice use, and lower Medicare costs [7,8].

Cognitive impairment is common among older adults approaching the end of life, whether they live in the community or a nursing home. Nearly 30% of patients with severe dementia continue staying in the community until death. Advanced directives in form of a Living Will reduce the need for a more aggressive end-of-life care [9]. Religious and cultural beliefs of patients have also shown to have an impact on the advanced care planning [10].

The goal of this study was to determine patterns in geriatric patients with advanced directives for the year of 2017 and determine if there is a trend between age, race, sex, and type of long-term care facility and the utilization of advanced care services.

2. Material and methods

In this retrospective, secondary database analysis research, the prevalence of advanced directives, such as DNR orders and Living Wills, were assessed among various patient demographics by virtue of their residents at different types of long-term care facilities. Patient demographics studied were sex, age, and race. The type of facility was defined as hospice care, nursing homes, assisted living, continuous care retirement community, independent living, or other facilities. A total of 527 cases were extracted from 2018 National Study of Long-Term Care Providers (NSLTCP) database, which is collected by the National Center for Health Statistics (NCHS) through the surveys of residential care communities and adult day services centers. The NSLTCP interviews utilized survey protocol via mail, phone interview, and computer assisted interviews [11].

Relevant inclusion/exclusion criteria were utilized to obtain the sample, which was tested for missing cases and data integrity. The final data was exported into the Statistical Package for Social Sciences (SPSS®) version 27.0 for statistical analysis. The data were analyzed using descriptive analysis and Chi-Square test at a significance alpha level of 0.05. The extracted data set was checked for integrity, equality, and distribution of the number of surveys for every demographic variable.

3. Results

The findings of this study revealed that there was a significant difference in the preparedness of DNR orders and Living Wills among various patient demographics and the type of long-term care facility. Advanced directive rates were higher in patients 90 years of age and above, as compared to other age groups. The age group of 75 and younger had the highest rate of Living Wills (62.3%), followed by the age group of 90 years and above. The age group of 75-80 had the highest rate of DNR orders (57.9%), followed by the age group of 90 and above. (Figure 1)

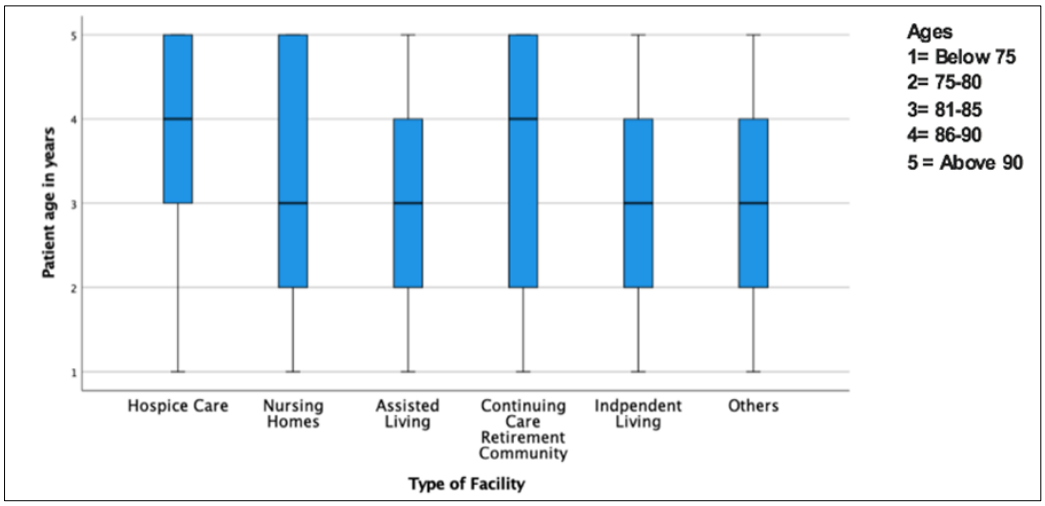

Figure 1 Type of Long-Term Care Facility by Age in Years

The Black population had the highest rate of advanced directive preparedness with Living Wills at 54.5% and DNR orders at 52.8%. The Asian population had the second highest rate of Living Wills (36.7%), followed by the White population (36.5%). The White population had the highest rate of DNR orders (45.7%), followed by the Asian population (45.0%). The Hispanic population had the lowest rate of obtaining both the Living Will (36.7%) and DNR orders (12.4%). Continuing Care Retirement Community had the lowest rate of Living Will and DNR orders. (Table 1).

Table 1 Demographics

Characteristics	**Frequency (n=527)**	**Percentage (%)**
Sex		
Female	293	55.6
Male	234	44.4
Race		
White	219	41.6
Black	123	23.3
Asian	60	11.4
Hispanic	89	16.9
Other	36	6.8
Age		
Below 75	53	10.1
75-80	107	20.3
81-85	110	20.9
86-90	120	22.8
Above 90	137	26.0
Facility		
Hospice Care	146	27.7
Nursing Homes	161	30.6
Assisted Living	42	8.0
Continuing Care Retirement Community	109	20.7
Independent Living	21	4.0
Other	48	9.1

Nursing home residents were more likely to have advanced directives than other long-term care facility patients. There was no significant difference among males and females with regards to the rate of advanced directives. The presence of advanced directives differed significantly across different long-term care facilities. Nursing home and Hospice residents had more advanced directives completed, as compared to other facilities. There was a significant difference among various age groups that were advanced directive ready with the highest numbers amongst the age group of 90 and above. There was a significant difference among the different types of races in the prevalence of advanced directives. (Table 2).

Table 2 Presence of DNR and Living Will by Demographics-Chi Square

Demographics	Living Will Present			DNR Present		
	N	Percent	Chi Square Significance (*p*) *Denotes statistical significance	N	Percent	Chi Square Significance (*p*) *Denotes statistical significance
Sex						
Female	127	43.3%	0.152	120	41.0%	0.435
Male	87	37.2%		88	37.6%	
Race						
White	80	36.5%	0.012*	100	45.7%	0.001*
Black	67	54.5%		65	52.8%	
Asian	22	36.7%		27	45.0%	
Hispanic	32	36.0%		11	12.4%	
Other	13	36.1%		5	13.9%	
Age						
Below 75	33	62.3%	0.001*	13	24.5%	0.001*
75-80	49	45.8%		62	57.9%	
81-85	28	25.5%		37	33.6%	
86-90	39	32.5%		42	35.0%	
Above 90	65	47.4%		54	39.4%	
Facility						
Hospice Care	58	39.7%	0.001*	70	48.0%	0.001*
Nursing Homes	88	54.7%		67	41.6%	
Assisted Living	28	66.7%		19	45.2%	
Continuing	32	29.4%		39	35.8%	
Care Retirement	8	38.1%		12	57.1%	
Community	0	0.1%		1	2.1%	
Independent Living						
Other						

4. Discussion

This study investigated the trends and prevalence of Advanced Directives by age groups, races, and long-term care facilities. Religion and culture can have an impact on the decision of having advanced directives, which support earlier findings that advanced directive preparation is considered a taboo amongst certain ethnicities and religious groups. In some cultures, especially among Asians and Hispanics, people do not feel comfortable discussing end-of-life, death, and

after-death situations. This explains the lack of advanced directives in these groups, whereas other cultures view end of life as inevitable and a calling from the above, which is illustrated by higher rates advanced directives [12].

The findings of this study depicted that patient below 75 years of age had higher rates of Living Will as compared to those above 90. There was no significant difference among males and females in the rate of advanced directives. Communication barriers among non-White patients may be a factor which plays a role in lower rates of DNR orders. For nearly five decades, advanced directives have been promoted as the primary tool for people to communicate their wishes regarding end-of-life care. A systematic review suggests that approximately one in three US adults has completed some type of advanced directive and that similar proportions of patients with chronic diseases and presumably healthy adults have completed advanced directives [5,13]. In current study, Black patients had higher rates of advanced directives, as compared to other races. Studies found that African Americans were nearly three times more likely to prefer aggressive treatment than Whites, even after adjusting for patients' perceived quality of life [14]. Asian adults feel a responsibility to reverently care for aging parents, which makes it difficult for relatives to admit them into a long-term care facility and prepare advanced directives. Similarly, elderly Asian parents may experience a reciprocal obligation to continue living with their adult children for their emotional well-being, thus communication and cultural barriers impact the rates of advanced directives.

Physicians need to establish better relationships and better education strategies and support tools for their patients on the importance of advanced directives. Instead of using different phrasing to affect the patients' choices, providers could use other methods to educate patients about end-of-life care, including video decision support tools or palliative care consult teams [15]. Providing further education about the importance of advanced directives to physicians and nursing home staff is also very important in making sure each patient is able to address their desires without any limitations or barriers. Physicians play a critical role in encouraging and implementing advanced directives in a timely and accurate manner amongst their patients [16]. The Covid-19 pandemic immensely affected advanced care planning. A study of 963 nursing home residents between April and May 2020 concluded that advanced directives increased proactive conversations, reduced hospitalizations of nursing home residents by 25% to 50% [17]. Programs should be established in long-term facilities to educate and guide patients in the preparation of advanced directives in an appropriate manner. The present study findings were limited to residents of long-term care facilities in 2018 and by the operational definitions. Another limitation was the number of surveys collected during the year of 2018, as the variable selection was based on the available NSLTCP database. Policies and interventions should focus on population with low rates of advanced directive and high risk for poor end-of-life care outcomes.

5. Conclusion

It is proposed to offer advanced directive preparation workshops, resources, and education in long-term care facilities to increase the rate of advanced directive preparedness. Offering advanced directive services at the Department of Motor Vehicles (DMV), voter registration, social security offices, and other public health/social services facilities can enhance the rate of advanced directive preparedness. Advanced directives ease the stress and anxiety of patients, family, and friends during difficult times.

Through these research findings, we found that some people do not feel comfortable discussing end-of-life care, and near-death situations, but advanced directives remain a key component of high-quality advanced care planning. Technology could be utilized as a tool to help patients with language barriers or help those that are not familiar with the process to increase the rates of advanced directives.

Further research should be conducted to assess the savings to the healthcare system from advanced directives. Additionally, patients with dementia should be studied regarding their understanding and capability of effectively communicating their wishes. Future studies should also explore the role physicians in the proper implementation and application of advanced directives.

Compliance with ethical standards

Acknowledgments

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Disclosure of conflict of interest

There is no conflict of interest among the authors in this paper.

Statement of ethical approval

The present research work does not contain any studies performed on animals/human subjects by any of the authors.

Statement of informed consent

Informed consent disclosure is not applicable to the present study as a secondary database was utilized.

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