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Characteristics of Mexican American Elders Admitted to Skilled Nursing Facilities in the United States: Data from the Hispanic EPESE Study

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Abstract

Objectives—The purpose of the current study is to describe the factors associated with Mexican American elders who have spent time in a SNF compared to those who have not in the Southwestern United States.

Design—Data were collected on the Mexican American elders who reported a SNF stay within 10 years of baseline.

Participants—A probability sample of 3050 Mexican American elders from five Southwestern states followed from 1993 to 2005 were examined.

Measures—Variables examined included socio-demographics, language of interview, disabilities with Instrumental Activities of Daily Living (IADLs), Activities of Daily Living (ADLs), selfreported health, cognitive status and depression.

Results—A total of 78 (3.9%) out of 2020 subjects resided in SNF's. Using univariate analyses older age, English-language interview, poorer cognitive status, and functional disabilities were independently associated with Skilled Nursing Facility (SNF) admissions. Logistic regression analyses controlling for age reveal that SNF patients were older (OR =1.08, p=0.001), have an ADL disability (OR=4.94, p<0.001), scored in the Geriatric Depression Scale depressed range (OR=2.72, p=0.001) and were more likely to interview in English (OR=1.95, p=0.042), when compared to community counterparts.

Conclusions—Mexican American elders resided in a SNF at some point in the previous ten years were older and more likely to be functionally impaired. They also were more likely to prefer English as their primary language indicating they were more likely to agree to a SNF stay than their Spanish speaking counterparts.

Keywords

Long Term Care; Disparities; Skilled Nursing Facilities

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Introduction

The Hispanic elder population in the United States (U.S.) is growing at a rate exceeding the general population. It has been estimated that, while the overall U.S. elder population will increase 93% over the next three decades, the older Hispanic population will increase by 555%¹. As a result, the need for long term care will also increase exponentially for this ethnic group.

It has also been predicted that Hispanic nursing home admissions will continue to be lower than for non-Hispanic Whites in the foreseeable future.^{2,3} Information is limited on Hispanic elder use of long term care facilities in general and skilled nursing facilities (SNF) in particular. A host of cultural and structural factors have been offered to explain the lower use of nursing homes by Hispanics.⁴ Hispanic families likely view the nursing home as a choice of last resort with high levels of stress introduced into the family unit with the decision to institutionalize a relative or parent.^{5,6,7} Frail and disabled Hispanics are more likely than non-Hispanic Whites to remain in their own homes, expressing a strong reluctance to nursing home.^{8,2} Also, long term care quality issues for Hispanics might also contribute to the concern for institutionalization, even for limited time periods. Gerardo and colleagues found that pressure sores were more prevalent in predominantly Hispanic nursing facilities indicating that, for at least some older Hispanics, the perceptions may have a basis in reality.⁹ More evidence emerges which suggests a lack of geographically available nursing homes in many Mexican-American communities offer culturally and linguistically appropriate supportive services.¹⁰ Issues of affordability and meager resources also create a barrier for Hispanics in need of nursing home care. The Mexican-origin population in particular tends to have low incomes, few assets, and no Medigap or private, long term care insurance in retirement that constrain decisions to enter an institution directly from home.^{11,12,13}

As a result, poor families may have no other choice but to keep their aging parents at home, and because there is such a low demand for in Hispanic communities, providers may be discouraged from offering nursing home or other types of long term care.¹⁴

Data remain limited on long term care use in general and specifically on the use of skilled nursing facilities (SNF) by Mexican American elders. The purpose of the study is to describe demographic, functional and/or cognitive variables associated with those community-dwelling elder Mexican Americans who spent time in the SNF compared with those who did not across the Southwestern United States. Specifically, it is expected that those subjects who have spent time in the SNF are more cognitively and functionally disabled when compared to communitydwelling Older Mexican Americans who had not been in the SNF.

Methods

Sample

This investigation makes use of data from the Hispanic Established Populations for Epidemiologic Studies of the Elderly (Hispanic EPESE) which is a population-based study of Mexican-Americans aged 65 years and older covering the region of the United States containing 90% of all Mexican Americans. An area probability sample design was used in order to draw a representative sample of all older Mexican Americans in the United States. Bilingual interviewers conducted a 90-minute in-home interview in the subjects' language of preference with a significant percentage interviewed in Spanish (72%). In this study, baseline data were obtained during 1993–1994. Subsequent contacts occurred in 1995–1996

(Wave II), 1998–1999 (Wave III), 2000–2001 (Wave IV), 2004–2005 (Wave V), 2006–2007 (Wave VII), and 2010–2011 (Wave VII) respectively. Participant retention across all waves was excellent.¹⁵ Participants who were identified as having had a nursing home stay at any time during the ten years since the first interview prior to the fifth interview and were not residing in a long term care institution, or an assisted living facility comprised the SNF cohort.

Variables

Demographic information is routinely included in nursing home datasets.¹⁶ Demographic variables analyzed for this study include age, years of formal education, language of interview in either English or Spanish, and whether the subjects had a partner living in the same household.

Functional Status—Difficulties in performing Instrumental Activities of Daily Living (IADL) and Activities of Daily living (ADL) are frequently used to assess functionality in SNF patients¹⁷. Basic Activities of Daily Living have been used previously in examining skilled nursing facility disposition outcomes.¹⁸ ADL function as measured using the modified Katz Scale was dichotomized as not needing assistance with any activity versus needing help with at least one activity. IADL disability was dichotomized as needing no help with any activity versus needing help with at least one activity.¹⁹ Self-described general health status has been used previously to contrast between community dwelling and nursing home facility subjects.²⁰ Subjects were asked to rate their current self-perceived health status as excellent, good, fair or poor. Health status was then dichotomized into excellent/good versus fair/poor.²¹

Cognitive/Affective Status—Folstein's Mini-Mental State Examination (MMSE) as in other SNF studies was used to assess cognitive status.²² Given the ethnic bias associated with the MMSE, the conventional MMSE cutoff score of 18 was used to delineate definite cognitive impairment.^{23, 24} Depressive symptomatology was measured using the Center for Epidemiologic Studies Depression Scale (CES-D), with a score of 16 as a cutoff score.²⁵

Analysis

Subject characteristics were screened individually for their association with a SNF admission. Those measures whose associations had a statistical significance of less than 0.2 were selected into a series of multiple variable logistic regression analyses. They consisted of nine measures including age, gender, Mexican American ethnicity, ADL/IADL, self-reported health, MMSE and CES-D. These measures were evaluated simultaneously and the least significant of them were omitted in a backwards stepwise manner until all remaining terms in the regression model had *p* values of 0.05 or less.

Results

The mean age of the sample was 85.9 years. About 4.2% were female, 4.7% were single, divorced or widowed. The majority reported 8 years or less of education. A significant proportion of the sample chose to take the interview in Spanish (3.4%). No association was found with participants having been in a SNF and the presence or lack of health insurance (*p*=0.93). A total of 3.9% (*n*=78) of elder Mexican Americans had resided in a SNF at any time prior to survey. Univariate analysis (Table 1) revealed a statistically significant (*p*<0.05) relationship with Mexican American SNF subjects who were older, single or without a partner (*p*<0.001), more likely to speak English and less capable of taking care of themselves than those who had not resided in a SNF. Results from logistic regression models (Table 2) indicate that SNF subjects indeed were older (OR =1.08, *p*=0.001), have at

least one ADL impairment (OR=4.94, $p<0.001$), have CES-D scores indicating depression (OR=2.72, $p=0.001$) and prefer English as their primary language (OR 1.95, $p=0.042$) when compared to those older Mexican Americans who were not admitted to a SNF during the same time period.

Discussion

The proportion of Hispanics age sixty-five and older who are living in nursing homes rose from 5 percent in 2000 to 6.4 percent in 2005.¹² This is the first study to describe the characteristics of community-dwelling older Mexican Americans who have spent time in a SNF. Older Mexican Americans who have resided in a SNF for some length of time in the previous two years prior to interview were: (a) more likely to use English as their primary language, (b) more likely to have depressive symptoms, (c) more likely to be older and more functionally impaired.

English language proficiency among older Mexican Americans using SNFs appears to be a key factor in the decision to access SNF services. Generally, older Mexican Americans are less likely to have command of English when compared to younger Mexican Americans, indicating that older Mexican Americans might utilize SNF services if the language barrier was addressed earlier in the discharge process.

Higher rates of depression have been noted in Hispanics when compared to non-Hispanic Whites in SNFs for post stroke rehabilitation.²⁶ There is evidence to suggest that Hispanics tend to use sub-standard nursing facilities due to residual depressive effects from having been in a SNF environment compared to going home directly from a hospitalization.¹² Although segregation in nursing homes seems to have declined slightly, elderly Hispanics are more likely than their non- Hispanic white peers to reside in nursing homes that are characterized by severe deficiencies in performance, understaffing, and poor care¹².

Old age and functional disability is also associated with the use of SNF services in previous studies.^{27, 28} Together with language issues and depressive symptoms, these factors could well contribute to the increased SNF re-hospitalization rate seen in this ethnic population.²⁶

Limitations

Study limitations include issues associated with the small H-EPESE weighted sample subset of SNF subjects. The study examined factors related specific to those Mexican Americans who had spent time in a SNF and was not designed to look at factors leading to the SNF admission itself. Also, the H-EPESE sample represents primarily ambulatory older Mexican Americans, excluding nursing home subjects who were returned to their nursing homes after using the SNF benefit. More importantly, the issue of language is potentially clinically relevant, however further studies are needed to directly link language to SNF service disparities.

Conclusions

As increasing numbers of older Mexican Americans begin to use their SNF benefit, attention to hospitalized Spanish speaking older Mexican Americans might improve their use of the SNF Medicare benefit. Also, older Mexican Americans who are admitted to the SNF should be evaluated more carefully for depression. Consideration of these factors might result in decreased transfers from SNF to hospital for this elder subgroup.

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TABLE 1

Sample Characteristics Associated with Time Spent in a Skilled Nursing Facility for Older Mexican Americans in the Southwestern U.S. from 1993–2007

	Never in SNF	In SNF	Odds Ratio ^I & Confidence Interval	p value
Age				
Mean	81.7	85.9	1.131 (10.91–1.173)	<0.001
Std error	0.113	0.718		
Sex N (%)				
Female	1186(95.8%)	52 (4.2%)		0.320
Male	756 (96.7%)	26 (3.3%)	0.784 (0.486–1.267)	
Years of Education				
Mean Std error	6.29 (0.150)	7.53 (0.810)	1.079 (0.954–1.220)	0.228
Interview Language N(%)				
Spanish	1574 (96.6%)	55 (3.4%)		0.021
English	368 (94.1%)	23 (5.9%)	1.789 (1.085–2.948)	
Marital Status N(%)				
Single, Divorced, Widow	1097 (95.3%)	54 (4.7%)		
Married or Partner	840 (97.2%)	24 (2.8%)	0.580 (0.356–0.947)	0.028
Cognitive Impairment				
MMSE more than 18	1363 (98.4%)	22 (1.6%)	3.1847 (1.776–5.682)	<0.001
MMSE 18 or less	487 (95.1%)	25 (4.9%)		
Indication of Depression N(%)				
None	1531 (98.2%)	28 (1.8%)		<0.001
CESD > 16	337 (93.1%)	325 (6.9%)	4.056 (2.335–7.045)	
Self-rated Health N(%)				
Good to Excellent	673 (98.4%)	11 (1.6%)		<0.001
Poor to fair	1258 (95.3%)	62 (4.7%)	3.015 (1.577–5.765)	
BMI				
Mean Std error	27.5 (0.124)	26.9 (0.807)	0.979 (0.906–1.059)	0.603
Any ADL disability N(%)				
None	1284 (99.1%)	12 (0.9%)	10.749 (5.769–20.03)	<0.001
1 or more	657 (96.1%)	66 (9.1%)		
Any I-ADL disability N(%)				
None	527 (100%)	0 (0%)		<0.001
1 or more	1415 (94.8%)	78 (3.9%)	1.055 (1.034–1.068)	

^IOdds ratios are not adjusted

TABLE 2

Predictors of SNF Admission for Older Mexican Americans in the Southwestern U. S. from 1994–2006

	Odds Ratio^I & Confidence Interval	p value
Age	1.082 (1.033 – 1.133)	0.001
English Language Interview	1.954 (1.024 – 3.729)	0.042
Depressive Symptomatology	2.717 (1.528 – 4.83)	0.001
Any ADL Disability	4.941 (2.491 – 9.799)	<0.001

^IOdds ratios adjusted for all terms in the model.

Nagelkerke R square = 0.159