

**ETHNOGERIATRIC CURRICULUM MODULE**

*Health and Health Care of*  
***HISPANIC/LATINO AMERICAN ELDERS***

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**Table of Contents**

Description .....	2
Learning Objectives .....	2
Content	
I. Introduction and Overview .....	3
II. Patterns of Health Risk .....	13
III. Culturally Appropriate Geriatric Care: Fund of Knowledge .....	22
IV. Culturally Appropriate Geriatric Care: Assessment .....	26
V. Culturally Appropriate Geriatric Care: Interventions .....	31
VI. Access and Utilization .....	43
Instructional Strategies.....	46
Student Evaluation .....	47
References and Resources .....	49

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# ***HEALTH AND HEALTH CARE OF HISPANIC/LATINO AMERICAN ELDERS***

## **DESCRIPTION**

This module in the Ethnogeriatric Curriculum for Hispanic/Latino elders is designed to introduce health care trainees to important issues in the care of older Americans from Hispanic/Latino backgrounds. Included are: explanations of the terms used to describe the populations; demographic data and sources of data available; a review of mortality and morbidity data; background information on (1) historical background on the specific ethnic groups; and (2) cultural traditions, health beliefs and values, including complementary and alternative medicine and end-of-life care; background and skills needed to provide a culturally competent geriatric assessment; treatment issues with Hispanic/Latino elders; and review of access and utilization of health care. The module is designed for use in conjunction with the Core Curriculum in Ethnogeriatrics. Information in the content section is based on evidence from research, and citations to the published studies are included.

## **LEARNING OBJECTIVES**

After completion of this module, learners will be able to perform the following in relation Hispanic/Latino elders:

- 1) Define the terms Hispanic/Latino as used in its broad form to describe Mexican American, Puerto Rican, and Cuban elderly; discuss the use of the terms and describe the populations;
- 2) Identify demographics and the major sources of information on the growth patterns available for the above ethnic elder groups;
- 3) Identify the major risks of diseases that face older Hispanic/Latino elders and their implications;
- 4) Recognize the important role that history plays in the lives of Hispanic/Latino elders;
- 5) Describe culturally based traditions, health beliefs, values, attitudes and behaviors;
- 6) Describe end-of-life health care decision-making;
- 7) Conduct a culturally appropriate ethnogeriatric health assessment for Hispanic/Latino elders and their families using methods and strategies recommended in the Ethnogeriatric Core Curriculum;
- 8) Describe strategies for development of culturally appropriate verbal and nonverbal communication skills;
- 9) Identify validated assessment instruments;
- 10) Recognize cultural issues that affect treatment plans;
- 11) Describe influences on health care access and patterns of utilization;
- 12) Describe health promotion and disease prevention strategies for Hispanic/Latino elderly;
- 13) Identify types of medication use including traditional folk remedies for various illnesses;
- 14) Discuss treatment issues, working with families, caregiving and social support issues characteristic of this population;
- 15) Present information on access and utilization of services, including long term care.

# CONTENT

## I. INTRODUCTION AND OVERVIEW

### **A. Terminology**

The diverse use of the terms “Hispanic and Latino” in the literature can be attributed to the diversity of the subgroups of Mexican American, Cuban American and Puerto Rican populations within a broader context. State and or Regional differences in the use of terms are frequently noted in the Southwest. For example, in Texas where there is a large Mexican American population, the identifiers Hispanic or Mexican American are primarily used. New Mexicans usually self-identify as Hispanic or Hispanos. In California, Latino or Latina is typically the favored term. The term “Latino” emphasizes Latin American origin.

The U.S. Bureau of the Census uses the term “Hispanic” as an ethnicity category referring to persons who trace their origin or descent to Mexico, Puerto Rico, Cuba, Central or South America, or Spain. Since 1980, according to the Census Bureau, Hispanics can be of any race. In an order mandated by the Executive Office of the President, revisions were made to the Statistical Policy Directive No. 15, Race and Ethnic Standards for Federal Statistics and Administrative Reporting by the Office of Management and Budget (OMB) and the Office of Information and Regulatory Affairs. In the 2000 census the term Hispanic was changed to “Spanish, Hispanic or Latino” and “Not Spanish, Hispanic or Latino”. The definition is as follows: “A person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish Culture or origin, regardless of race.” The term, “Spanish origin” in addition to “Hispanic” or “Latino” can be used. The OMB’s justification for the change was that the regional use of the terms differs, with the eastern region using the term “Hispanic” more frequently and the Western region using the term “Latino” more often. For a discussion on biases in using the various terminologies see Hayes-Bautista & Chapa (1987). *Latino Terminology: Conceptual bases for standardized terminology*. For information on current census terminology, consult <<http://www.whitehouse.gov/OMB/fedreg>> or contact Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity, OMB Publications Office, 725 17<sup>th</sup> St, NW, NEOB, Room 2200, Washington D.C. 20503. For purposes of this curriculum, when a specific ethnic group is not identified, Hispanic and Latino will be used interchangeably.

### **B. Geographic Distribution**

There is substantial heterogeneity among the various Hispanic/Latino elder groups. They carry a unique historical and sociopolitical reality, which impacts who they are today. The subgroups vary by their patterns of geographic distribution in the United States. The Mexican American population tends to reside in the Southwestern states of California, Arizona, Colorado, and Texas; the Hispanic population resides in New Mexico. The Cuban population predominantly resides in Florida, and the Puerto Rican population lives mostly in the Northeast with growing concentrations in New York, New Jersey and in major Midwestern cities such as Chicago.

### C. Population Size and Trends

Americans age 65 and over who identify themselves as Hispanic or Latino comprise 5.6% of all older Americans. There were an estimated 1,938,000 elders in this category in 2000.

The population of Hispanic/Latino elderly is expected to grow 3.9 % per year from 1990 to 2050. By 2020 they are expected to be 9% of all people 65 and older in the U.S., and by 2050 they will increase to 16.4% ([www.agingstats.gov/chartbook2000/tables-population.html](http://www.agingstats.gov/chartbook2000/tables-population.html)). The older Hispanic/Latino population is expected to grow more quickly than other ethnic minority groups so by 2028, it is projected that the 65 and older population will surpass the non-Hispanic Black population in that age category. However, there are no projections available for the separate Hispanic/Latino elder ethnic subgroups.

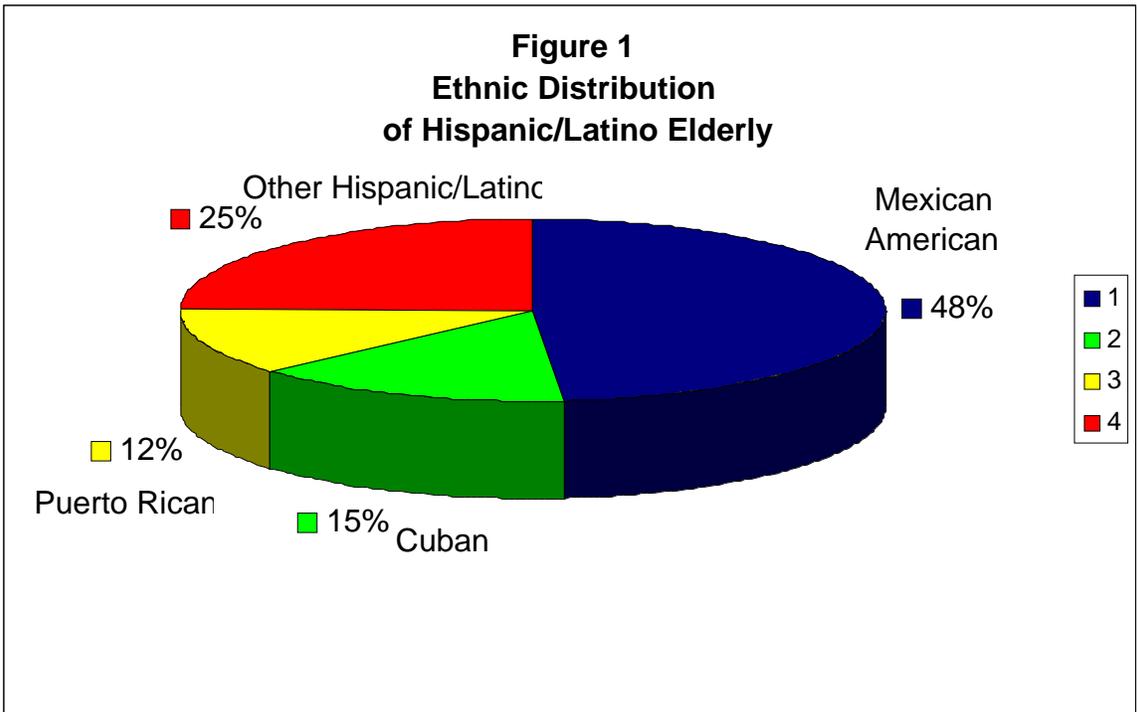
There are census estimates of the proportion of the older Hispanic populations in the various ethnic groups from 1993. See Figure 1 (U.S. Bureau of the Census, 1993). The “Other Hispanic/Latino” category can be from South or Central American or from New Mexico, where ancestors of the current population immigrated from Spain in the 17<sup>th</sup> and 18<sup>th</sup> centuries, before there was a Mexico.

Table 1 and Figure 2 compare the percentage of each of the total ethnic populations that are 65 and over. The current Cuban elder population represents an older cohort compared to the other subgroups and makes up a higher percentage of elderly over 65 compared to the overall elder population.

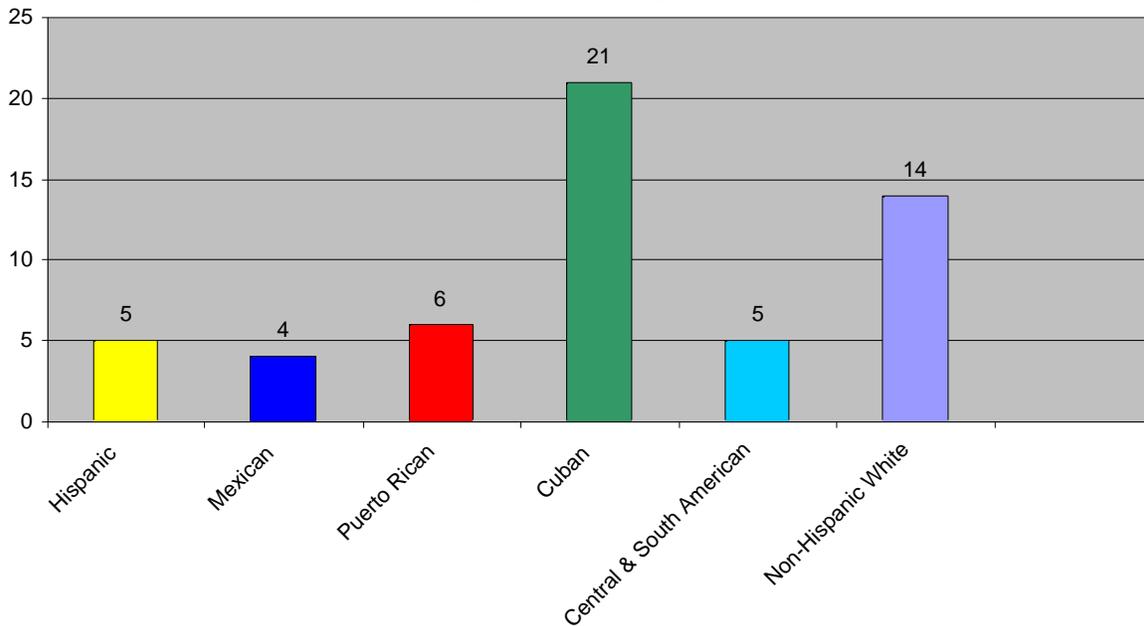
The Hispanic/Latino population 80 and older is expected to increase from 3% in 1990 to 14% in 2050. The Parent Support Ratio (PSR) represents the number of persons 80 years and over per 100 persons aged 50-64 years of a specific racial/ethnic group. By mid-century, the PSR for the Hispanic population is expected to triple from 11.3 to 36.4 (U.S. Bureau of the Census, 1993).

In 1990 the population of Hispanic/Latino elders over the age of 100 -- or the centenarians —comprised less than 1% of the total centenarians of all races and ethnic groups. The percent of Hispanic/Latino centenarians is expected to significantly increase by the year 2050 to over 19%. Table 2 illustrates the growth of this population compared to other ethnic/racial groups. This aging cohort may have significant disabilities requiring more care, and family caregivers may require more support and resources.

The overall Hispanic/Latino population is relatively young compared to other ethnic groups with the exception of the Cuban population. The median age of the various Hispanic/Latino groups reflect the differences in fertility rates and immigration patterns. The median age of Mexican Americans is 23.6, followed by Puerto Ricans with a median age of 26.8 and Central/South Americans with 28.4. Cubans have the highest median age, 41.1. A significant demographic trend is that the proportion of the Mexican American population under the age of 18 is significantly larger than all other Hispanic/Latino ethnic groups, and also larger than non-Hispanic whites (Villa, Cuellar, Gamel, Yeo, 1993,). This demographic trend has future implications for caregiving dependency ratios.



**Figure 2. Percent of Population Aged 65 and Over  
by Ethnic Group**



Source: Current Population Survey, March 2000, PGP-4

**Table 1**  
**Hispanic Origin Population by Gender, Age and Ethnicity**

Gender and Age	Total Hispanic		Hispanic Origin Type			
			Mexican American	Puerto Rican	Cuban	Central /South American
Female	Number	%				
55-64	12,250	8.7	4.5	7.2	9.7	7.5
65-74	9,747	7.0	3.3	4.9	12.3	4.0
75-84	6,889	4.9	1.4	2.3	9.6	1.4
85 +	2,099	1.5	0.3	--	1.7	--
<b>Male</b>						
55-64	11,137	8.3	4.1	7.1	11.5	.5
65-74	8,049	6.0	2.3	3.1	12.1	--
75-84	4,796	3.6	1.1	1.6	4.5	--
85+	1,041	0.8	1.7	0.2	0.2	--

Source: U.S. Census Bureau, Current Population Survey, March 2000, Ethnic and Hispanic Status

**Table 2**  
**Projected Number of Centenarians in the United States**  
**by Race, and Hispanic Origin: 2000 to 2050<sup>1</sup>**

Year	Total (lowest series) <sup>2</sup>	Total (middle series)	Total (highest series) <sup>3</sup>	Percent <sup>4</sup> Hispanic <sup>5</sup>	Percent Non-Hispanic			
					White	Black	American Indian, Eskimo, Aleut	Asian and Pacific Islander
2000	69,000	72,000	81,000	5.6	77.8	12.5	1.4	2.8
2010	106,000	131,000	214,000	7.6	72.5	14.5	2.3	2.3
2020	135,000	214,000	515,000	9.8	69.2	13.1	2.8	4.7
2030	159,000	324,000	1,074,000	14.5	62.3	12.7	2.8	8.0
2040	174,000	447,000	1,902,000	17.7	56.2	13.2	2.7	10.5
2050	265,000	834,000	4,218,000	19.2	55.4	12.7	2.2	10.6

<sup>1</sup>Projections are based on a July 1, 1994 estimate of the resident population, which is based on the enumerated 1990 census population modified by age and race. As a result of these modifications, the April 1, 1990 population of centenarians is assumed to be 36,000. For a detailed description of the age modification procedures, see publication CPH-L-74, *Age, Sex, and Hispanic Origin Information from the 1990 Census: A Comparison of Census Results with Results Where Age and Race have been Modified*.

<sup>2</sup>Assumes low fertility, low life expectancy, and low net migration in comparison to the middle series values.

<sup>3</sup>Assumes high fertility, high life expectancy, and high net migration in comparison to the middle series values.

<sup>4</sup>Percentage values are based on middle series projections.

<sup>5</sup>Persons of Hispanic origin may be of any race.

Source: Day, J.C., 1996. *Population Projections of the United States by Age, Sex, Race and Hispanic Origin: 1995 to 2050*, U.S. Bureau of the Census, Current Population Reports, P25-1130, U.S. Government Printing Office, Washington, D.C.

#### **D. Gender, Marital Status, and Living Arrangements**

Similar to the non-Hispanic white elder groups and the other minority ethnic groups, Hispanic/Latino elders include more women than men over the age of 65. Table 1 illustrates the distribution of population for gender, age and Hispanic origin by percentage of the age groups in the total ethnic groups. There is an increased older population of men and women within the Cuban population compared to the other elder groups. There are also more Cuban men in the 55-64 age group compared to Cuban women. There are smaller proportions of older Mexican American men and women in all age categories, with the exception of the Central/South American male category where there were too few to report.

In *Older Americans 2000: Key Indicators of Well-Being*, the Federal Interagency Forum on Aging Related Statistics chose marital status as one of the 31 indicators of the lives of older adults and their families. Marital status has been found to affect a person's emotional and economic well-being because of living arrangements and caregiver availability. Over half of the male Hispanic/Latino 65 and older population are married, and about 38% of the women are married. See Table 3. Data from the Hispanic Epidemiological Studies of the elderly (H-EPESE), a large multistage probability sample of Mexican Americans 65 and older residing in the Southwestern states of Texas, California, New Mexico and Arizona (Markides, Rudkin, Angel, & Espino, 1997) show that more married native born Mexican American elders live with a spouse alone than do married foreign born elders. Foreign born are more likely to live with others, with someone else in the household as the head. In this data there were more unmarried, native-born Mexican American women living alone as the head the household than foreign-born Mexican American women.

The Census population survey shows Hispanic/Latino elders to be second only to Asian/Pacific Islanders in living with relatives (U.S. Census Bureau, 2000). Preferences for living with others has been well documented in the literature for all Hispanic/Latino ethnic groups (Aranda & Miranda, 1997; Sotomayor & Applewhite, 1988; Sanchez-Ayendez, 1988; Cubillos, 1987; Delgado, 1982). An ongoing debate in the literature is whether more Hispanic/Latino elders live with family as a result of health or economic necessity or because of culturally bound expectations governed by norms of mutual reciprocity among families (Gratton, 1987) (Angel & Tienda, 1987).

In the H-EPESE study, a sample of 3,046 Mexican American elderly over 65 were assessed on their preferences for living arrangements and comparisons were made between foreign-born elders and native born (Angel & Angel, McClellan & Markides, 1996). There were many differences between the native and foreign-born groups in terms of reasons for living with family. More foreign-born elders lived with their adult children because these elders were providing their adult children with financial or child care assistance. However, the primary reason given by the Mexican American elders for living with their children was: "Because my child wants me to live with him/her" and/or "it is best for everyone if parents live with their children." Foreign born Mexican American elders had less education, less personal income, and had increased mobility and instrumental activity of daily living problems compared to native born Mexican American elders (Angel, Angel, McClellan, & Markides, 1996).

**Table 3**  
**MARITAL STATUS OF HISPANIC AND TOTAL POPULATION 65 AND OVER**

<u>Marital Status</u>	<u>Hispanic Origin</u>		<u>Total Population</u>	
	<u>Men</u>	<u>Women</u>	<u>Men</u>	<u>Women</u>
	%	%	%	%
Never married	6.6	8.2	4.7	5.0
Married, spouse present	65.6	37.6	74.3	40.1
Married, spouse absent	7.7	2.5	2.7	1.6
Widowed	15.1	43.6	14.0	48.7
Divorced	5.0	8.1	4.3	4.5

Source: Villa, Cuellar, Gamel Yeo, 1993, adapted from U.S. Senate Special Committee on Aging, 1992

**Table 4**  
**Living Arrangements of Hispanic/Latino Elders**  
**by Age, 1998**

		Number in	%
		1000's	
65 - 74			
	All	17,874	100.0
	Living Alone	4,098	22.9
	Living With Spouse	11,328	63.4
	Living With Other Relatives	2,006	11.2
	Living With Non- Relatives	442	2.5
75 and over			
	All	14,210	100.0
	Living Alone	5,824	41.0
	Living With Spouse	6,054	42.6
	Living With Other Relatives	2,061	14.5
	Living With Non- Relatives	271	1.9

Source: Phyllis J. Chappell, U.S. Census Bureau, Current Population Survey, 1998

Table 4 compares living arrangements of Hispanic/Latino elders by age. In the majority of cases, when Mexican Americans lived with “Other Relatives”, the “others” tended to be their adult children.

Hispanic/Latino elders are less likely to live in long-term care facilities. Studies have shown that when Mexican American elders do live in nursing homes their levels of impairment both cognitively and functionally are greater than non-Hispanic whites (Chiodo, Kanten, Gerety, Mulrow, Cornell, 1994). A South Texas study showed that Mexican American elders in nursing homes had significantly worse Activities of Daily Living (ADL) scores and were more dependent on ADL's than the non-Hispanic white comparison group. Although this sample of Mexican Americans was younger, subjects had a greater number of conditions (recent infections, hypertension, cerebrovascular disease, diabetes, and anemia that were found more frequently compared to the non-Hispanic group (Mulrow, Chiodo, Gerety, Basu, & Nelson, 1996). One interesting finding was that prior to admission to the nursing home facility, these Mexican American elders were not living alone; rather they were with family members, which was not the case for the non-Hispanic white elder group. This may suggest that the family members care for their frail elders with significant disease as long as they can until nursing home placement is the only option.

#### **E. Language, Literacy, and Education**

Perhaps one of the most common shared characteristics among the diverse Hispanic/Latino elder groups is their affinity for the retention and the use of the Spanish language. Factors that influence English language proficiency are multilevel and can be attributed to immigration or nativity history, cohort effects, education level, economic background, residence and geographic area.

Limited English proficiency has been reported as a barrier to accessing medical and social services (Mutchler & Brallier, 1999). Use of Spanish by Hispanic/Latino elders can also serve as a benefit to their quality of life and sense of ethnic identity. The U.S. census uses the term “linguistically isolated” to categorize those living in a household where no person aged 14 or above speaks English very well. According to the U.S. Census almost 2 in 5 elderly Hispanic/Latinos who speak Spanish only are linguistically isolated (U.S. Bureau of the Census, Summary Tape File 3C). Table 5 illustrates English language proficiency and linguistic isolation by Hispanic/Latino elder groups.

Cuban elders are the least likely to be proficient in English and are therefore the most isolated linguistically at 54%, compared to the Puerto Rican elders at 36% and Mexican American elders at 28%. Interestingly, Cuban elders have higher levels of education than any other group. Hispanic/Latino elders who speak English poorly or not at all tend to live in more Hispanic/Latino geographically concentrated areas. For example, many older Cubans have lived in the same ethnically cohesive geographic area (Miami-Dade, FL) since the time they immigrated to this country. For all Hispanic/Latino elder groups, linguistic isolation can pose barriers to access.

**Table 5**  
**ENGLISH LANGUAGE PROFICIENCY AND LINGUISTIC ISOLATION BY**  
**NATIONAL ORIGIN GROUP,**  
**HISPANIC POPULATIONS AGED 60 AND OLDER IN THE UNITED STATES**

<u>Proficiency</u> <u>in English</u>	<u>Mexican</u> <u>American</u> (n=66,061)		<u>Puerto</u> <u>Rican</u> (n=11,733)		<u>Cuban</u> <u>American</u> (n=18,436)		<u>Other</u> <u>Hispanic</u> (n=28,543)	
	Total	Ling. Isol. <sup>a</sup>	Total	Ling. Isol.	Total	Ling. Isol.	Total	Ling. Isol.
Speaks English only	12%	n/a	10%	n/a	6%	n/a	23%	n/a
Speaks English Very Well	35%	n/a	28%	n/a	13%	n/a	30%	n/a
Speaks English Well	21%	50%	26%	54%	18%	61%	16%	51%
Speaks English Not Well	18%	53%	24%	61%	30%	66%	16%	52%
Speaks No English	14%	56%	12%	64%	33%	70%	15%	54%
<b>TOTAL</b>		<b>28%</b>		<b>36%</b>		<b>54%</b>		<b>25%</b>

NOTES: <sup>a</sup>Ling. Isol. = Linguistically Isolated.

Linguistic isolation is not defined for individuals speaking English only or very well.

Source: Mutchler & Brillier, 1999

The education levels among the Hispanic/Latino elder groups vary significantly. Table 6 shows that, compared to the other ethnic/racial groups, Hispanic/Latinos have the least number of years of education. However, there are striking differences within the ethnic groups. As previously mentioned, the Cuban elders have achieved the highest level of education (Hernandez, 1992) compared to the Mexican American and Puerto Rican elders. Historically, many of the older Cuban cohort were established, well educated professionals when they arrived in the U.S (Fligstein & Fernandez, 1994). Having little or no education can become a barrier for accessing health education information and accessing needed care.

## **F. Employment, Income, and Retirement**

**1. Employment** and labor force participation tends to mirror those rates of the non-Hispanic white elder and African American elder groups. In 1990, there were 29.7% Hispanic/Latino men aged 65-69 in the work force compared to 28.3% non-Hispanic white males. Hispanic/ Latino women in this same age category participated less in the work force at 15% compared non-Hispanic white women at 16.8%. Almost 10% of Hispanic/Latino men over the age of 80 were in the labor force in 1990 compared to 9.6% of non-Hispanic white males. There were more Hispanic/Latino women over the age of 80 in the labor force (5.2%) compared to 2.9% non-Hispanic white women. Most Mexican American and Puerto Rican elders have held occupations in the skilled blue collar and unskilled and laborer positions compared to Cuban elders who have held professional and technical positions (Villa et al., 1993).

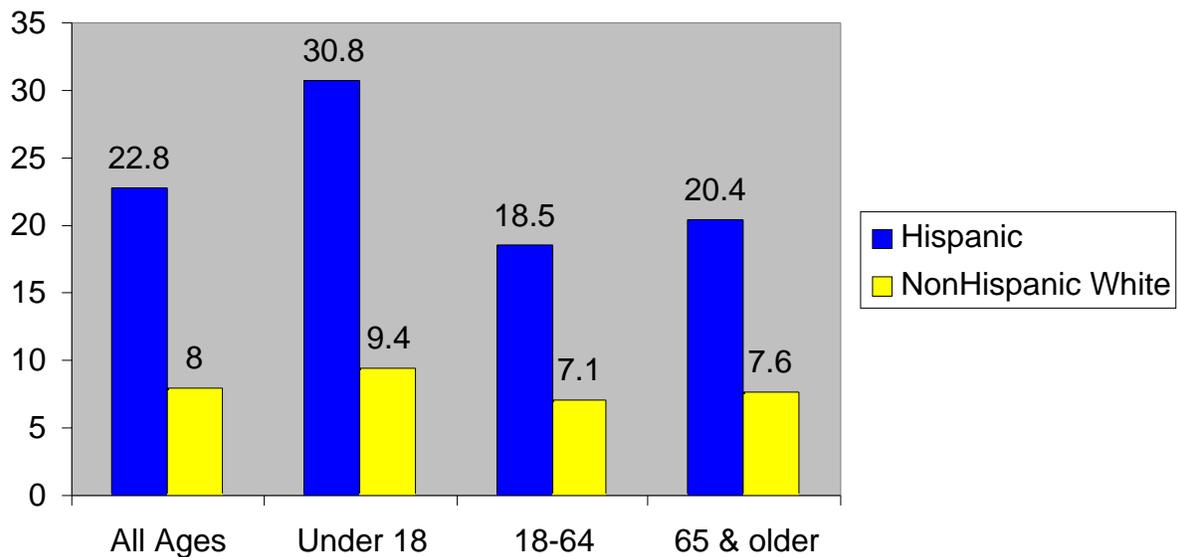
**2. Income** sources for elderly Hispanic/Latinos are primarily from Social Security. The Census reported in 1992 that the median income reported for male Hispanic/Latino elderly over 65 was \$9,253 and for female elderly the median income was \$5,968. Hispanic/Latino elderly received 19% of their income from private pensions or retirement according to the Current Population Survey (Grad, 1992). Often because of the low retirement incomes, elderly Hispanic/Latinos continue to work after 65 to supplement their income. It is evident that many Hispanic elders live well below the poverty level as illustrated in Figure 3 below. Older Hispanic/Latino women tend to experience poverty more than Hispanic men at 26.6% compared to 19.6%. This poses a serious threat to the quality of life older Hispanic/Latina women face and suggests they struggle economically in their old age. For many Hispanic/Latino elders, retirement may not an option. The types of occupations they have experienced have not allowed these elders to obtain sufficient retirement pensions, if any. Many (23%) do not receive Social Security benefits and thus must continue to work to supplement their incomes (Villa, et al, 1993).

**TABLE 6  
POPULATION AGE 65 AND OLDER WITH A HIGH SCHOOL DIPLOMA OR HIGHER AND BACHELOR'S DEGREE OR HIGHER  
BY RACE AND HISPANIC ORIGIN, 1998**

	<b>HIGH SCHOOL DIPLOMA OR HIGHER</b>	<b>BACHELOR'S DEGREE OR HIGHER</b>
<b>TOTAL</b>	67.0	14.8
<b>NON-HISPANIC WHITE</b>	71.6	16.0
<b>NON-HISPANIC BLACK</b>	43.7	7.0
<b>NON-HISPANIC ASIAN AND PACIFIC ISLANDER</b>	65.1	22.2
<b>HISPANIC</b>	29.4	5.4

Notes: Hispanics may be of any race. Data refer to the civilian non-institutional population.  
Source: March Current Population Survey.

**Figure 3. Percent Below Poverty Level in 1999  
by Age and Hispanic Origin**



Source: Current Population Survey, March 2000, PGP-4

## **II. PATTERNS OF HEALTH RISK**

### **A. General Health Status**

Our knowledge of the determinants of healthy aging in the Hispanic/Latino population is expanding because of increased attention to ethnicity in health reporting (Bassford, 1995). Recognizing the heterogeneity of the population reported as “Hispanic”, it is expected that some heterogeneity exists in terms of health status as well as culture, history, and socioeconomic status. Data from the National Health Interview Survey collected between 1992 and 1995 were used to compare several health status outcomes in the Hispanic sub-groups (Hajat, Lucas, & Kingston, 2000). Health indicators for persons of Puerto Rican descent were significantly worse than those of other Hispanic origin sub-groups. For example, 21% of Puerto Rican persons reported having an activity limitation compared to 15% and 14% for Cuban and Mexican persons.

Ethnic differences in self-assessed health may not accurately reflect patterns resulting from objective health measurements. The San Luis Valley Health and Aging Study compared self-rated health in Hispanics and Non-Hispanic Whites (NHW) in southern Colorado (Shetterly, Baxter, Morgenstern, Grigsby, & Hamman, 1996). Illness indicators were strongly correlated with self-rated health in both ethnic groups. After various confounders were controlled for, Hispanics remained much more likely to report fair or poor health as opposed to excellent or good health than NHW (OR 3.6; 95% CI 2.4-5.3). Adjustments for socioeconomic factors accounted for a portion of the Hispanic’s lower health rating, but the strongest explanatory factor was acculturation.

### **B. Mortality**

**1. Mortality from All Causes and Life Expectancy.** Table 7 shows the mortality rates comparing Hispanic/Latinos to non-Hispanic whites in the United States by gender and age group (65-74, 75-84, 85 + years) (Kramarow, Lentzer, Rooks, Weeks, & Saydah, 1999). For these three age groups, the all-cause mortality rates are about one-third lower in Hispanics. National surveys conducted by the U.S. Bureau of Census (Current Population Surveys) were matched to the National Death Index over a 9-year follow-up period; 40,000 Hispanics were included in the 700,000 respondents, age 25 years and older. Hispanics were shown to have a lower mortality from all causes than NHW (standardized rate ratio or SSR = 0.74 for men, and 0.82 for women (Sorlie, Backlund, Johnson, & Rogot, 1993).

These findings are consistent with observations reported from the National Health Interview Study (1986-1990) with 27,000 Hispanics and nearly 300,000 NHW interviewed. Deaths were determined by matching names to the National Death Index for a 5-year period through 1991. Age-adjusted total mortality rates per 100,000 person years were 2,466 for Hispanic men, 3,089 for NHW men, 1,581 for Hispanic women, and 1,897 for NHW women (Liao, et al., 1998). The Hispanic/ non-Hispanic white mortality ratios for men were 1.33, 0.92, and 0.76 for men age 18-44, 45-65, and 65 +, respectively. The mortality ratios for women were 1.22, 0.75, and 0.70, respectively. These findings again suggest all-cause mortality is lower in Hispanics than NHW, especially in those over age 65 years.

**Table 7**  
**All Cause Mortality and Five Leading Causes of Death for**  
**Hispanic and non-Hispanic White Aged 65 and Over**

Mortality Rates per 100,000 Population.

Cause of death	Age group	Hispanic Male	NHW Male	Odds ratio	Hispanic Female	NHW Female	Odds ratio
All causes	65-74	2,252	3,123	0.72	1,382	1,900	0.73
	75-84	4,750	7,086	0.67	3,220	4,786	0.60
	85 +	10,487	17,767	0.59	8,709	14,462	0.60
Diseases of the heart (Ischemic heart disease)	65-74	726	1,015	0.72	392	501	0.78
	75-84	1,689	2,454	0.69	1,102	1,596	0.69
	85 +	4,079	6,830	0.60	3,749	6,108	0.61
Malignant neoplasms Respiratory	65-74	187	414	0.45	68	217	0.31
	75-84	291	559	0.52	103	264	0.39
	85 +	370	574	0.64	119	205	0.58
Breast **	65-74				53	94	0.56
	75-84				72	132	0.55
	85 +				102	200	0.51
Cerebrovascular disease	65-74	135	142	0.95	98	111	0.88
	75-84	304	480	0.63	287	438	0.66
	85 +	788	1,531	0.51	932	1,646	0.57
COPD	65-74	77	208	0.37	39	145	0.27
	75-84	220	481	0.46	119	304	0.39
	85 +	634	940	0.67	322	445	0.72

\*\* Females only

Source: Kramarow, et al. (1999). Health, United States. 1999; Health and Aging Chartbook.

## B. Disease-Specific Mortality Rates

Table 7 also shows the mortality rates for 5 major causes of death comparing Hispanics to non-Hispanic whites in the United States by gender and age group (age 65-74, 75-84, 85 + years) (Kramarow, et al., 1999). Again, each of the disease-specific mortality rates is lower in Hispanics than NHW.

**1. Coronary Heart Disease.** In the Current Population Surveys conducted by the Census Bureau, Hispanics also had a lower mortality from cardiovascular diseases (SRR = 0.65 for men, and 0.80 for women) (Sorlie, et al., 1993).

Results from the National Health Interview Survey indicated that Hispanics had lower mortality for coronary heart disease (CHD), with the Hispanic/ NHW mortality rate ratio (or odds ratio) for men was 0.77 (95% CI 0.64-0.93), and for women was 0.82 (95% CI 0.66-1.01) (Liao, Cooper, Cao, Kaufman, Long, & McGee, 1997). However, the proportion of total deaths due to CHD was similar for the two ethnicities (28.1% in Hispanic men vs. 29.7% in NHW men; 24.1% in Hispanic women vs. 24.9% in NHW women). Another study from the National Center for Health Statistics showed that mortality rates from sudden cardiac death (dying outside of hospital or emergency room) were also lower in Hispanics than non-Hispanic whites (Gillum, 1997). The age-adjusted rates per 100,000 were 75 deaths for Hispanic men vs. 166 for NHW men, and 35 for Hispanic women vs. 74 for NHW women.

These comparisons of CHD mortality between Hispanics and non-Hispanic whites appear to give paradoxical results. Despite their adverse risk profiles, especially the greater risk of diabetes, Mexican Americans (MA), the largest Hispanic ethnic group, have been reported to have lower mortality rates from CHD. However, the Corpus Christi Heart Project performed a community-based surveillance of all death certificates from a county in Texas potentially relating to CHD, and used standardized methods blinded to ethnicity to validate the diagnoses (Pandey, Labarthe Goff, Chan, & Nichaman, 2001). CHD mortality was found to be 40% higher in MA women (RR=1.43, 95% CI 1.12 – 1.82); in men, the risk ratio (RR) was not significant. Findings from Bexar County, Texas, based on retrospective death certificate review of 1989 deaths revealed, however, that MA males had a greater likelihood of dying of myocardial infarction (OR=1.83, 95% CI 1.15-2.90) and coronary heart disease (OR=1.37, 95% CI 1.15-2.90) (Espino, Parra, & Kriehbiel, 1994) than other males.

**2. Cerebrovascular Disease.** In 1990, cerebrovascular disease was the 4<sup>th</sup> leading cause of death in Hispanics in the U.S. At age 65 and over, Hispanics had mortality rates from stroke substantially lower than NHW according to data from the National Center for Health Statistics (Gillum, 1995). Data from national surveys suggest this difference in stroke mortality may be due to lower blood pressures in Hispanics compared to NHW. Between 1985 and 1991 stroke rates in California declined significantly in all ethnic/gender groups except Hispanic men (Karter, Gazzaniga, Cohen, Casper, Davis, & Kaplan, 1998). Hispanics had excess mortality at earlier ages, and NHW's rates were higher after the age 65. Comparisons of stroke mortality also were made in the National Longitudinal Mortality

Study showing that stroke mortality was comparable in younger Hispanics, but marginally lower in older Hispanics (Howard, Anderson, Sorlie, Andrews, Backlund, & Burke, 1994).

**3. Malignancies.** In the Current Population Surveys by the US Census Bureau, Hispanics had a lower mortality from cancer than NHW (SSR=0.69 for men, and 0.61 for women) (Sorlie, Backlund, Johnson, & Rogot, 1993).

### **C. Morbidity**

**1. Coronary Heart Disease (CHD)** Since Mexican Americans have adverse patterns of risk factors for atherosclerotic diseases relative to non-Hispanic Whites; one would anticipate the prevalence and incidence of CHD should be greater among Mexican Americans. The Corpus Christi Heart Project did report a significantly higher incidence rate of hospitalized myocardial infarction in Mexican-American men and women when compared against their NHW counterparts (Goff, Nichaman, Chan, Ramsey, Labarthe, & Ortiz, 1997).

The San Antonio Study, a population-based survey comparing cardiovascular disease and diabetes incidence among Mexican-Americans and non-Hispanic whites in San Antonio, Texas between 1979 and 1988, contrary to expectations, showed the prevalence of angina pectoris was twice as high in Mexican-Americans compared to NHW (RR=2.01, 95% CI 1.13-3.58 in men; RR=1.84, 95% CI 1.26-2.70 in women) (Mitchell, Hazuda, Haffner, Patterson & Stern, 1991). After controlling for age, body mass index, diabetic status, cigarette smoking, and educational level using logistic regression analysis, the prevalence remained higher ( $p < .05$ ) in Mexican-American men, but not women.

CHD incidence and prevalence was compared in the Hispanic and NHW populations of San Luis Valley in rural, southern Colorado (Rewers, Shetterly, Hoag, Baxter, Marshall, & Hamman, 1993). This is a unique sub-group of Hispanics, calling themselves Spanish-Americans, that are descendants of 25,000 Spaniards banished from Spain during the Spanish Inquisition (late 1500s and early 1600s) to look for gold in northern New Mexico and southern Colorado. No evidence was found for a lower incidence, prevalence or mortality due to CHD among Hispanics without diabetes, however, the risk for CHD among diabetic Hispanics was approximately 50% lower than among diabetic NHW, especially men. Whereas the prevalence of CHD in MA with diabetes was not different compared to those without diabetes (RR=1.0, 95% CI 0.6-1.7), NHW with diabetes had significantly higher rates of CHD when compared to NHW without diabetes (RR = 1.9, 95% CI 1.1-3.3). This ethnic pattern persisted after adjustments for various cardiovascular risk factors (age, gender, diabetes, hypertension, smoking, adiposity, and dyslipidemia). A similar pattern of CHD prevalence has been observed in a random sample of community-dwelling Albuquerque, New Mexico residents (Lindeman, Romero, Hundley, Allen, Liang, Baumgartner, Koehler, Schade, & Garry, 1998).

### **2. Cardiovascular (Atherosclerotic) Risk Factors.**

**a. Overview.** The prevalences of a number of cardiovascular risk factors were compared among older Mexican-American and non-Hispanic white women and men during the

NHANES III study (1988-1994) (Sundquist, Winkleby, Pudaric, 2001). Mexican-American women had more diabetes, sedentary life style, and hypertension, but comparable rates of abdominal obesity, current smoking, and high non-HDL cholesterol. Mexican-American men had more diabetes and sedentary life style, less abdominal obesity and current smoking, and comparable rates of hypertension and high non-HDL cholesterol. In a California study there was an alarmingly high prevalence of obesity, sedentary life style, and diabetes in Hispanics compared to NHW, with comparable rates of hypertension and smoking in the two ethnicities (Karter, et al., 1998).

Changes in cardiovascular risk factors over a 10-year period were examined by comparing data from the Hispanic Health and Nutrition Survey (HHANES) (1982-84) with Hispanic EPESE (1993-94) (Stroup-Benham, Markides, Espino, & Goodwin, 1999). The prevalences of obesity and severe obesity increased significantly, as did the prevalence of diagnosed diabetes (20% to 30%) among older Mexican Americans. The percentage of current smokers fell from 28% to 14%.

In the New Mexico Elder Health Survey Lindeman et al. (1999) found the NHW men drink alcohol more frequently than Hispanic men, and very few Hispanic women drink daily, which could increase the risk for CHD in Hispanics.

**b. Dyslipidemias.** Hispanics of both genders in the New Mexico Elder Health Survey had higher serum triglyceride and lower HDL cholesterol levels than non-Hispanic whites (Lindeman, Romero, Hundley, 1998). Because these changes are characteristic of diabetes, most of these differences could be attributed to the higher prevalence of diabetes in Hispanics. After adjustments for the effects of diabetes, Hispanic men still had significantly higher serum triglyceride levels and Hispanic women had lower HDL cholesterol levels than NHW.

**c. Smoking.** An analysis of population-based, cross-sectional surveys conducted in California between 1979 and 1990 paired Hispanic men and women with NHW counterparts (Winkleby, Schooler, Kraemer, Lin, Fortmann, 1995). There were large differences in smoking prevalence rates between Hispanic and NHW pairs with low educational attainment (less than high school education) with NHW more likely to be smokers than Hispanics (46% vs. 21% for women; 53% vs. 30% for men). With higher levels of educational attainment, these differences by ethnicity tended to disappear. Changes in smoking habits over a decade (HHANES data from the early 1980s compared to Hispanic EPESE data from the early 1990s) have shown significant declines in the cigarette smoking rates in the over age 65 years Mexican Americans from the Southwestern United States (Markides, et al., 1999).

**3. Cerebrovascular Disease and Stroke.** A study from a neurological institute in Arizona comparing 242 Hispanic stroke and TIA patients with 1290 NHW patients found that hemorrhagic stroke was more common in Hispanics than NHW (48% vs. 37%), and cardioembolic stroke was less prevalent (9% vs. 16%) (Frey, et al., 1998). Hypertension and diabetes were more often risk factor in Hispanics, who also had a lower mean age of stroke onset (61 vs. 69 years).

**4. Hypertension.** Data from the Hispanic HANES database indicate mean systolic and diastolic blood pressures and the prevalence of hypertension are lower in Mexican Americans compared to non-Hispanic whites. This is despite a higher prevalence of diabetes and obesity, two recognized risk factors for hypertension (Espino, Burge, & Moreno, 1991; Sorel, Ragland, & Syme, 1991). A lower prevalence of both systolic and diastolic hypertension after adjustments for age, body mass index, and type 2 diabetes mellitus also was found in the San Antonio Heart Study in Mexican-Americans when compared to non-Hispanic whites (Haffner, Mitchell, & Stern, 1990).

Data from the NHANES III study showed Mexican American women over age 65 years had a higher prevalence of hypertension than NHW women, whereas there was no difference in men of the two ethnicities (Sundquist, et al., 2001). Other studies have failed to show statistical differences in the ethnic prevalences of hypertension when elderly men and women with and without diabetes are examined separately (Lindeman, et al, 1998; Rewers, Shetterly, & Hamman, 1996). Another analysis of the NHANES III data showed the prevalence of hypertension almost identical between MA and NHW (22.6 vs. 23.3%) (Burt, Whelton, Roccella, Brown, Cutler, Higgins, Horan, & Labarthe, 1995). However, only 35% of MA were being treated and 14% had achieved control, percentages much lower than for NHW.

**5. Type 2 Diabetes Mellitus.** Data from the Hispanic Health and Nutrition Examination Survey (HHANES 1982-84) showed an increased prevalence of diabetes in all Hispanic populations compared to non-Hispanic whites (Flegal, Ezzati, Harris, Haynes, Juarez, Knowler, Perez-Stabler, & Stern, 1991). In men and women, age 45-74 years, diabetes was found in 23.9% of Mexican-Americans, 26.1% of Puerto Ricans, and 15.8% of Cubans compared to 12% of non-Hispanic whites. A subsequent report showed the age-standardized prevalence of diabetes (diagnosed plus previously undiagnosed cases) was 13.4% in Puerto Ricans, 13% in Mexican-Americans, 9.3% in Cubans, and 6.2% in non-Hispanic whites (Harris, 1991). The age-standardized rates of impaired glucose tolerances, interestingly, were very comparable in the 4 populations. Increasing age, obesity, and family history of diabetes were associated with higher rates of diabetes, but gender, physical activity, education, income, and acculturation were not.

There has been a significant increasing trend in the incidence of type 2 diabetes in Mexican-Americans and a borderline significant trend in NHW in the San Antonio Heart study (Burke, Williams, Gaskill, Hazuda, Haffner, & Stern, 1999). Unlike other cardiovascular risk factors, (e.g. lipid levels, smoking, and blood pressure) which are either declining or under progressively better medical management and control, and unlike cardiovascular mortality, which also is declining, obesity and type 2 diabetes show increasing trends.

Carter, Pugh, Monterrosa, (1996) published a comprehensive review of the prevalence and incidence data on diabetes in minority populations including a comparison between Hispanics and non-Hispanic whites. They compared diabetes complication rates and found that Hispanics had more end-stage renal disease (ESRD), albuminuria, and proteinuria, slightly more retinopathy, but comparable rates of lower extremity amputations and coronary artery disease when compared against NHW.

**6. Malignancies.** Cancer incidence rates have been monitored in Hispanic populations using cancer registries and compared to those in NHW whites in Florida, Texas, New Mexico, Illinois, California, Connecticut, and New York City. All have shown remarkably lower incidences of most cancers in Hispanics with the notable exception of cervical cancers in women. In New Mexico Hispanics were found to have lower rates for all cancers except those in the gall bladder, stomach, and cervix.

Cervical cancer incidence rates are about double in Hispanic women compared to NHW women, however the incidence of both invasive cancer and carcinoma in situ have decreased over time in both ethnicities (Becker, Wheeler, Key, & Samet, 1992). Reports from this group also have shown that Hispanics had lower incidence rates of breast cancer in women and prostate cancer in men, but strong temporal trends exist showing increasing rates for both malignancies in Hispanics (Eidson, Becker, Wiggins, Key, & Samet 1993; Gilliland, Becker, Key, & Samet, 1993).

Studies in Florida compared the incidence of cancer between White Hispanic women and Black Hispanic women and their non-Hispanic counterparts in both races. Both white Hispanic and Black Hispanic women had lower cancer incidence rates than their non-Hispanic counterparts with the following exception: White Hispanic women had higher rates of cancer of the liver, gallbladder, and uterine cervix, when compared to NHW women (Trapido, Chen, Davis, Lewis, MacKinnon, & Strait, 1994).

**7. End-stage renal disease (ESRD).** Male Hispanics had substantially higher proportions of ESRD attributed to diabetes than did Blacks or Whites, with notable regional differences. Based on the Medicare ESRD registry, between 1980 and 1990, the incidence of treated renal failure increased more in Hispanics than in Blacks or whites (Chiapella & Feldman, 1995). Once entered onto treatment (dialysis), Mexican Americans appear to have a survival advantage over NHW in most age, disease, and treatment groups (Pugh, Tuley, & Basu, 1994). This survival advantage persisted for all disease etiologies combined, and for diabetic and hypertensive renal disease. The combination of an increased incidence of ESRD in Mexican-Americans and survival advantage means the cost for renal replacement therapy for Hispanics is disproportionately high.

## **D. Cognitive and Emotional Status**

**1. Mental Status and Dementia.** A battery of neuropsychological tests was used to compare performances in the Hispanics and non-Hispanic whites in the New Mexico Elder Health Survey (LaRue, Romero, Ortiz, Liang, & Lindeman, 1999). Considering the educational, language fluency, socioeconomic, and cultural differences between the elderly of these two ethnicities, it was expected that the Hispanics would perform less well compared to the non-Hispanic whites. After adjusting for the effects of age, education, gender, depressive symptoms, and a global measure of medical illness, statistically significant ethnic differences remained.

The largest prevalence research on dementia including Hispanic populations was part of the North Manhattan study which surveyed Medicare beneficiaries in 13 adjacent census tracts in

New York City plus cases in nursing homes in the area (Gurland, Wilder, Lantigua, Mayeaux, Stern, Chen, Cross, & Killeffer, 1997). The 685 subjects who classified themselves as “Hispanic” were primarily from the Dominican Republic with smaller proportions from Puerto Rican and Cuban backgrounds; none were identified as Mexican or Mexican American. Authors in the North Manhattan project found “dramatically” lower rates of dementia in their non-Hispanic white than their Hispanic sample as well as in their African American subjects. Among Hispanics, 12% of those aged 65-74, 29% of those 75-84, and 60% of those 85 and over were classified as having dementia. However, as in some prior studies, they found a major effect of education; in their Hispanic sample over 40% had less than five years of school. In fact the authors state, “With age and education controlled, ethno-racial membership loses its association with rates of dementia” (Gurland et al, 1997).

Contrary to the finding in a Los Angeles area study that equal percentages (38.5%) of their Hispanic sample were diagnosed as having Alzheimer’s Disease and vascular dementia (Fitten, Ortiz, Ponton, 2001), in an analysis of statewide data for over 5000 assessments performed in the nine California Alzheimer’s Disease Diagnostic and Treatment Centers (ADDTC), Yeo et al. (1996) found that only 18% of patients identified as Hispanic were diagnosed as having vascular dementia compared to 47% with Alzheimer’s Disease. This was a slightly smaller percentage with vascular dementia than among non-Hispanic whites (20%) and considerably less than among those identified as Black (31%) or Asian (26%). Higher rates of diabetes among Hispanic elders in that study did not seem to predispose them to higher rates of vascular dementia, as might be expected.

Data from the Hispanic EPESE survey of older Mexican Americans living in Texas, California, Colorado, Arizona, and New Mexico found illiteracy, marital status, advanced age (over 80), levels of depressive symptoms and history of stroke as significant predictors of severe cognitive impairment (Black & Markides, 1998)

**2. Psychological Distress and Depression.** Higher levels of depressive symptoms among older Hispanics, especially women, have been a finding of numerous studies since the 1980s (Villa et al., 1993).

In the San Luis Valley Health and Aging Study, the prevalence of a high number of depressive symptoms was greater in Hispanic women than in NHW women (age-adjusted odds ratio 2.11; 95% CI 1.32-3.38), but there were no ethnic differences in men (Swenson, Baxter, Shetterly, 2000). Chronic disease, dissatisfaction with social support, living alone, and lower income and education were associated with depressive symptoms. After adjustments for multiple sociodemographic and health risk factors, the odds ratio comparing Hispanic to non-Hispanic white women was unchanged. Depressive symptoms in Hispanic women varied by level of acculturation, i.e. low acculturation was associated with more depression.

A study that examined Hispanic subgroup differences among Mexican American, Puerto Ricans and Cuban elders relative to psychological distress also found that language acculturation had a beneficial effect on the positive well being of the elders. The more

acculturated elders experienced less social isolation and had fewer financial problems (Krause & Goldenhar, 1991).

The Massachusetts Elderly Study (MAHES), a representative sample of community-based Hispanic elderly (predominately Puerto Rican and Dominican elders) and a non-Hispanic white (NHW) comparison group, reported a higher prevalence of depression among Puerto Rican elders compared to the Dominican and NHW elders (Falcon, 2000). About 44% of the Puerto Ricans had CES-D scores > 16 compared to 32% of Dominicans, 30% of other Hispanics, and 22% of NHWs.

A study of 1789 Latinos aged 60 and over living in Sacramento, California, and surrounding rural areas found the prevalence of depression was 25.4%; 32.0% of women and 16.3% of men had CES-D scores above 16. It was higher among immigrants, bicultural, and less acculturated participants, compared to U.S.-born and those more acculturated. After adjusting for education, income, psychosocial and health factors, the least acculturated group were still at significantly higher risk of depression (OR=1.56, 95%CI=1.06-2.31) (Gonzales, Haan, & Hinton, 2001).

#### **E. Functional Status.**

The self-reported physical and functional disability questions from NHANES III included: lower extremity function, Activities of Daily Living, Instrumental Activities of Daily Living, needing help with personal and routine daily activities, and use of assistive devices for walking. Mexican-American men and women reported significantly more disability ( $p < .01$ ) than NHW men and women (Ostchega, Harris, Hirsch, Parson, Kington, 2000). Disability was greatest for Mexican-American women suggesting they represent a particularly vulnerable population.

Hispanics from the San Luis Valley Health and Aging Study reported more ADL limitations than NHW, however, there was no excess of observed functional difficulties (Hamman, Mulgrew, & Baxter, 1999). This study also examined Hispanic vs. NHW patterns of needing assistance with instrumental activities of daily living (IADL) and found that Hispanics were 1.6 times more likely to need assistance with at least one task (95% CI 1.25-2.13) (Shetterly, Baxter, & Morgenstern, 1998).

### **III. CULTURALLY APPROPRIATE GERIATRIC CARE:FUND OF KNOWLEDGE**

To work effectively with Hispanic/Latino elders, clinicians need to have some background knowledge about the significant factors affecting the population. Two issues of importance are their historical background and the range of culturally related health beliefs they may bring to the clinical encounter.

#### **A. Historical Background**

Hispanics/Latinos can trace their ancestry back to the indigenous people of North America as well as to Spanish/European, Asian and African roots. The heterogeneity among these groups is significantly based on their historical existence in this country.

**1. Mexican American.** When Mexican Americans elders are discussed as a cohort, it is important to understand that there are many within cohort differences. For example, the ancestors of today's Mexican Americans have resided in the Southwestern region of what is now the U.S. even before there was an independent Mexico, when the region was considered part of New Spain in the 17<sup>th</sup> and 18<sup>th</sup> centuries, and when it was part of Mexico in the 19<sup>th</sup> century. In the 1848 Treaty of Guadalupe-Hidalgo the United States acquired this land and the Mexican inhabitants (Grebler, Moore, Guzman, 1970). Thus the notion of immigration to this country for this cohort of Mexican-Americans of the Southwest is meaningless. Elders that did immigrate in the early 20th century did so during the chaos of the Mexican Revolution in 1910. At this time there were no "barbed wire fences" between the countries, and elders who came as youth during this time period, recall that during the immigration process the only requirement to enter the U.S. was to sign a document book and to "cleanse oneself" in the showers provided by the "officiales" at the border (Talamantes, HD, 1992).

The Bracero period occurred during the 1940's when the U.S. encouraged the entry of Mexicans for agricultural labor under temporary contracts during WWII and the Korean Wars. Not only were there Mexican immigrants working in the fields, but they were also fighting overseas where over 350,00 Mexican Americans served in the armed forces and were recognized with honors for serving the country (Yeo, Hikoyeda, McBride, Chin, Edmonds, Hendrix, 1998). Continued migration of Mexicans into the U.S. has been ongoing for many decades, and reasons for migration have been primarily for economic reasons and family support.

Political, economic and health disparities within the population have prompted the need for civil rights movements within the Hispanic/Latino communities, including the efforts made by Hispanic/Latino soldiers from WWII and the Korean wars when they established the GI forums as a way to organize for civil rights due to discrimination they faced following the wars. The Chicano Movement was marked by Mexican Americans also fighting for civil rights and political power, emphasizing voter registration and recruitment of political candidates. The United Farmworkers was founded by Cesar Chavez, an advocate for the migrant farmworkers, who fought for political, health, and working reforms for this population.

Many Mexican American elders have experienced life long struggles to overcome discrimination and segregation including punishment for speaking Spanish in the schools, restaurant segregation, and job discrimination. Additionally, the Welfare Reform legislation of 1996 brought stressors for many Mexican American elderly who had immigrated to the U.S. at early ages and had never applied for citizenship. These elders were at risk of losing their Medicare/Medicaid and Supplemental Security benefits if they did not meet the deadline for becoming a citizen (Yeo, et al, 1998). For an abbreviated historical version of Mexican American elders in the form of a cohort analysis see the chart in Module 3 of the Core Curriculum in Ethnogeriatrics. The cohort analysis method can be used as a tool for providers to understand the population that is being cared for by becoming aware of their historical and sociopolitical reality (Yeo et al, 1998).

**2. Puerto Rican.** Puerto Ricans immigrated to the mainland as a result of the treaty following the Spanish American War in 1898. In 1917, the island inhabitants became United States citizens (Monge, 1997). During the period from 1948-1960, the United States launched an industrialization program that was intended to change the economy from an agrarian into an industrial model. United States corporations have controlled the newer production industries in most cases. One industry that developed was the sugar plantations, designed to supply the U.S. with cheap sugar. Throughout the decades, migration of Puerto Ricans from the mainland to the U.S. has been fluid and primarily based on the state of the economy in both the island and the U.S. For example during the Depression, 20% of the Puerto Rican population on the mainland returned to the Island. A large number of Puerto Ricans also returned to the island after WWII, during the industrialization period.

Reasons for the large immigration to the U.S. mainland were due to the overcrowding on the island, high rates of unemployment, and the U.S. demand for labor in the areas in services, agriculture, and garment industries (Monge, 1997). In the 1970's many Puerto Ricans on the mainland over age 60 returned to the island (Sanchez-Ayendez, 1988). Culturally, the older Puerto Rican cohort self-identifies themselves as Puerto Ricans and utilizes Spanish as their language of preference.

**3. Cuban.** As a result of Fidel Castro's regime in the 1960's, about 37,000 Cubans immigrated to the United States seeking political asylum between 1959-1961. Unlike the Mexican American and Puerto Rican elders, elderly Cubans received a significant amount of economic and social support during the Eisenhower, Kennedy, and Johnson administrations, including financial assistance for their resettlement process, financial assistance to states and local governments for public services such as education, employment and training costs, and transportation costs from Cuba (Fligstein & Fernandez, 1994). Many of today's Cuban elders were arrivals in this first wave of Cuban immigrants. Among all the Hispanic/Latino elder groups, Cubans are the oldest, and have the highest level of formal education and higher incomes, however, they are the least linguistically assimilated. Following the Bay of Pigs incident, immigration grew substantially (Fligstein & Fernandez, 1994). Subsequent waves of Cuban immigrants came in the 1980's with the Mariel boatlift (Molina & Aguirre-Molina, 1994). The Cuban elder group has maintained their language and culture as a result of their close-knit family and community ties (Hernandez, 1992).

## **B. Cultural Traditions, Beliefs, and Values**

The importance for health and human service providers to work toward cultural competence and cultural proficiency with the population they are caring for cannot be overemphasized. Culture can be identified as one's worldview which includes "experiences, expressions, symbols, materials, customs, behaviors, morals, values, attitudes, and beliefs created and communicated among individuals," and past down from generation as cultural traditions (Villa, et al., 1993). Within these groups there are characteristics which define the use of language, the role of family, religion/spirituality, the definitions of illness, and the use of healing/treatment practices in health provision and seeking behaviors. Although there are unifying cultural themes among the ethnic groups characterized as Hispanic or Latino that are foundations for the patterns of behavior, beliefs, and values related to health seeking, the heterogeneity of the various Hispanic/Latino groups cannot be overemphasized. It would be of value for providers to illicit the elder's worldview and use the explanatory models of illness as outlined in Module Four of the Core Curriculum in Ethnogeriatrics.

Beliefs and values unique to Mexican American and other Hispanic/Latino elderly can be described as cultural themes, which shape their worldview. Table 8 provides an overview of these cultural themes.

## **C. Role of Acculturation**

Acculturation can be defined as a continuum. At one end the retention of values and beliefs from one's own culture of origin is maintained. Moving towards the center of the continuum, one can become bilingual and bicultural easily shifting from traditional practices to adopting practices of the mainstream society. At the end of the continuum, individuals may fully adopt the values and beliefs of the mainstream society thus no longer identifying with their original culture (Valle, 1989). There are several dimensions of acculturation that include use of language, country of origin, length of residence, contact with country of origin, parental expectations, food preferences. Familiarity with the acculturation continuum and dimensions within the continuum may help to facilitate and enhance the communication with elderly Hispanic/Latino patients. Previous studies have shown that higher levels of acculturation at various dimensions increase the likelihood for access to certain screenings or healthcare. For example, in a study of breast screening of Columbian, Ecuadorian, Dominican, and Puerto Rican women ages 18-74, those who were more acculturated had more recently received a breast screening and mammogram than those who were less acculturated (O'Malley, Kerner, Johnson, & Mandelblatt, 1992). Another study examined health practices among a predominantly Mexican American elder population and found that women who were highly acculturated tended to be current smokers and heavy drinkers compared to the less acculturated (Cantero, Richardson, Baezconde-Garbanati, & Marks, 1999). Another interesting finding of this same study was that as acculturation increased, subjects were more likely to participate in regular exercise.

Table 8

**Description of Hispanic/Latino Cultural Themes**

<b>Cultural Theme</b>	<b>Description</b>
Familismo	Importance of family at all levels: nuclear, extended, fictive kin ( <i>compadres</i> ). Needs of family take precedence over individual needs. Mutual reciprocity
Personalismo	Display of mutual respect, trust building
Jerarquismo	Respect for heirarchy
Presentismo	Emphasis on present
Espiritismo	Belief that good/evil spirits can affect well being and spirit of the dead person

## **IV. CULTURALLY APPROPRIATE GERIATRIC CARE: ASSESSMENT**

### **A. Communication and Language Issues**

The assessment of older adults who do not speak or read English well and who have different world views and goals than the health care professional can be a difficult and arduous task. Although many of the communication skills required apply to our interactions with all older adults, social distance, racism, unconscious fears, and similar concerns on the behalf of patients and professionals may contribute to additional problems in assessment and diagnosis of older adults from different ethnic groups (Brangman, 1995). Early attention to building rapport will go a long way to facilitate communication. In many cultures, such as in Mexico, rapport begins through exchange of pleasantries or chit-chat before beginning the business of medical history-taking and physical examination (Gallagher-Thompson, Talamantes, Ramirez, Valverde, 1996; Elliott, 1996) . As previously mentioned, *personalismo* is an essential quality for providers to have when caring for this population. Personalism has been tested in a focus group methodology to evaluate Mexican Americans' perception of culturally competent care and deemed to be a significant indicator (Warda, 2000). Older Hispanic-Americans often expect health care personnel to be warm and personal and express a strong need to be treated with dignity (Villa et al., 1993 ).

Suggestions for respectful communications with elders from Hispanic/Latino backgrounds include the following:

- As a sign of respect, older persons should be addressed by their last name.
- Gesturing should be avoided because seemingly benign body or hand movements may have adverse connotations in other cultures.
- Take care to evaluate whether questions or instructions have been understood, because some persons will nod “yes” but not really comprehend.
- Outright questioning of authority such as a physician is taboo in some cultures, so encourage the patient to ask questions.
- Tell the patient that you realize that some things are not normally discussed, but that it is necessary so that the best care can be planned.

If the clinician and the patient do not speak the same language, the availability and choice of interpreters is crucial to a successful interaction. . There may be clinical consequences as a result of inadequate interpretation, such as gaps in the information obtained from the patient, gaps in information relayed to the patient from the health care provider, or inadequate or incomplete patient education. Other serious concerns about inadequate interpretation are those related to providers either conducting unnecessary testing or missing important cues which would lead the provider to order other needed tests (Woloshin, Bickell, Schwartz, Gany & Welch, 1995). The Department of Health and Human Services (DHHS) Office for Civil Rights considers inadequate interpretation as a form of discrimination (Woloshin et. al., 1995). For a discussion of advantages and disadvantages of different types of interpreters, see the Core Curriculum in Ethnogeriatrics, Module Four. A special issue in use of family members as interpreters among Spanish speaking elders has been the hesitancy of some older Latino women to talk about breast, gynecological, or sometimes gastrointestinal issues in front of younger members of their families, especially males, according to case histories.

## **B. Background Information**

General information that could be helpful in assessing older persons from Hispanic/Latino background includes how they define their ethnicity, and the degree of affiliation they have with their ethnic population, level of acculturation, religion, and formal/informal support. . Several acculturation instruments exist and have been used widely for research with Hispanic/Latino subjects (Cuellar, Harris, Jasso, 1980; Marin, Sabogal, Marin, Otero-Sabogal, Perez-Stable, 1987; Ramirez, Cousins, Santos, Supik, 1986; Deyo, Diehl, Hazuda, & Stern, 1985). These scales may or may not be useful in clinical settings. Although immigration history may be important, it may be difficult to ask directly in populations such as Mexican American who have been subject to periodic sweeps for deportation from Immigration and Naturalization Services.

## **C. Eliciting Patients' Perception of Their Condition.**

When caring for older adults, it is important make an attempt to elicit their own beliefs and attitudes about illness, sometimes called “explanatory models”. Some suggestions to facilitate the process are the following:

- Maintain an accepting attitude.
- Let the family and patient know that their ideas are valued in developing the care plan.
- Ask the patient what they think is wrong or causing the problem.
- Ask if the patient thinks that there may be some ways to get better that doctors may not know about.
- Ask if anyone else has been asked to help with the problem.
- Ask the patient what worries them most about their illness.
- Ask why they think they are ill now.

Getting into the “assumptive world” (Frank, Winkleby, Altman, Rockhill, & Fortmann, 1991) of the patient is time well spent. First, doing so provides useful information about over-the-counter medication or home remedies that might interfere with prescribed medicines. For example, older persons within traveling distance of Mexico obtain pharmacologically active compounds that are not always equivalent to medications bought in the United States (Greene, 1984). In addition, traditional folk remedies play a central role in health for older Mexican-Americans (Espino, 1988). In many cases standard prescriptions may be more acceptable if traditional remedies can continue to be taken.

Assessing cultural beliefs about illness includes asking about diet, especially if dietary prescriptions are components of traditional healing practices in their culture. For example maintaining balance by eating or not eating foods defined as “hot” or “cold” is common in many Hispanic/Latino cultures.

Failure to elicit ideas about illness can result in poor communication, lack of adherence to prescribed therapy, or refusal to undergo tests or therapeutic procedures. For example, the

idea that illness is punishment for past deeds may inhibit participation in preventive or therapeutic procedures . Asking about and listening to the cultural beliefs of the patient helps establish rapport, shows respect for the older person, and can be one of the most interesting aspects of caring for older adults.

#### **D. Use of Standardized Instruments**

Any assessment procedure is subject to error. Error in measurement can arise because the instrument is inconsistent (poor reliability) or because the instrument does not measure what we think it is measuring (poor validity). Neighbors and Lumpkin (1990) questioned the assumption that the same construct is measured when instruments developed among non-Hispanic whites are applied to African-Americans or other minority ethnic groups. At one level, differing idioms and colloquialisms can cause a translated instrument to have different meanings from those intended by the original developers. Even within ethnic groups, older persons who are recent immigrants may interpret items differently from older persons who have lived in the United States for some time. At a more subtle level, some constructs vary so much across cultures as to be quite different or even irrelevant; depressive disorder, for example , has been identified by anthropologists and medical researchers for the heterogeneity of its expression across cultures (Kleinman, 1985; Kleinman, 1980).

Literacy and level of educational attainment may be important considerations in assessing all older adults, but especially older adults from ethnic minorities who historically have had less opportunity to advance in school such as many from Hispanic/Latino backgrounds. (See information on education in the section on Demographics.) Closely tied to educational level attained is literacy, or the ability to understand and use written information. In clinical work, care should be taken to consider the educational level of patients who may not be used to the type of questions that are asked in many functional and cognitive tests. In interpreting results from assessment, clinicians should be aware that the reliability and validity of instruments developed, for example, among urban hospitalized patients in the Northeastern United States may not be applicable to a border community in rural South Texas, even if both speak Spanish.

#### **E. Translation Methodology**

It is essential for providers who are conducting assessments for clinical or research purposes to utilize instruments which have undergone a vigorous translation and are truly adapted and tested for the Spanish language with the target population (Erkut, Alarcon, Garcia-Coll, Tropp & Vasquez Garcia, 1999). This important process is to ensure psychometric equivalencies and cultural constructs, and although it is time intensive, the data obtained can yield more valid and reliable outcomes to learn about cross-cultural influences in health behaviors. Optimally, instruments should be developed simultaneously in English and Spanish which has been described as the “decentering technique” (Marin & Marin, 1991). This technique allows for the use of meaningful constructs for that culture versus using the translated constructs previously developed. Other translation methods are outlined below:

- One-Way translation: a bilingual individual translates the original version into the target language version. This direct translation method has been deemed the most unreliable method because it is dependent on the knowledge of the individual translator, yet it is the most widely used method (Erkut et. al., 1999).
- Translation by Committee: Two or more bilingual individuals translate the text or instrument from the original language to the translated version. The committee by consensus can produce a final translated version or allow an independent observer to select the most appropriate version. Drawbacks to this method are that committee members can have the same worldview or have similar backgrounds thus producing the translated instrument skewed one way (Marin & Marin, 1991).
- Back-Translation Method: Two independent translators are involved in this preferred method. Translator one translates the original version into the target language then the second translator translates it back into the original language. The researcher can consult with the translators to determine discrepancies. Limitations to this method are: 1) that the translators may have the same world view, developing similar versions, or 2) that if experienced translators are used, they may make inferences as to what the other meant resulting in a poorly developed instrument (Marin & Marin, 1991).

Pretesting instrument or assessment tool is necessary to ensure cultural equivalency.

## **F. Clinical Assessment**

(For a list of the domains of assessment with ethnic minority elders and issues involved in each, see the Core Curriculum in Ethnogeriatrics, Module Four.)

**1. Cognitive Status.** Assessing older adults from ethnic minorities for cognitive impairment, dementia, and delirium presents a number of challenges including: finding suitable interpreters when the elder's command of English is poor; the variable beliefs related to cognitive loss with age in different cultures; how to approach the decision to institutionalize; and the ethical issues pertaining to medical decision-making (Yeo, 1996 ). Typically, a cutpoint score is employed as a way to standardize when cognitive impairment is determined to be significant. Two commonly used instruments to assess cognitive status are discussed below in respect to ethnicity: (1) the Mini-Mental State Examination (MMSE); and (2) the Short Portable Mental Status Questionnaire (SPMSQ).

Hispanic Americans and persons with less than 8 years of formal education tend to be falsely identified as possibly cognitively impaired when using the MMSE (Mouton & Esparza, 2001; Mungas, Marshall, Weldon, Haan, & Reed, 1996; Crum, Anthony, Bassett, & Folstein, 1993). Among older African-Americans, Hispanic-Americans, and persons with educational attainment less than high school, a lower threshold score for determination of cognitive impairment has been recommended (less than 18 out of a possible 30 points) to improve sensitivity (82%) and specificity (99%) for the diagnosis of dementia dementia (Bohnstedt, Fox, & Kohatsu, 1994; Baker, 1996; Leveille et al., 1998). A standard cutpoint of 23 or less to determine cognitive impairment tends to overestimate of the number of Hispanics with true impairment of cognitive function. The Hispanic EPESE indicated that when the

standard MMSE threshold score of 23 was used, 22.3% of Mexican-American older adults were classified as cognitively impaired, but this high rate of cognitive impairment may reflect the lack of schooling (Majurin et al., 2000; Marshall, Mungas, Weldon, Reed, & Haan, 1997). The SPMSQ has been specifically validated in older African-American and Hispanic-American samples with excellent sensitivity and specificity (Pfeiffer, 1975; Fillenbaum, Heyman, Williams, Prosnit, & Burchett, 1990; Welsh et al., 1995; Mouton & Esparza., 2001). Spanish language versions are available for both measures. See Mungas, Marshall, Weldon, et al., 1996 and Marshall, Mungas, D., Weldon, M., 1997 for information on the Spanish language version of the MMSE.

In addition to the cognitive screening measures, a Neuropsychological Screening Battery for Hispanics (NeSBHIS) has been developed, standardized, and normed by age for Hispanics. See Pontón, Satz, Herrera et al.(1996).

**2. Depression.** In most cases, there is little information on how standardized assessment instruments for the measure of depression perform for older adults from ethnic minority groups. Two widely used measures are (1) the Centers for Epidemiologic Studies Depression Scale (CES-D) and (2) the Geriatric Depression Scale (GDS).

The CES-D is a 20 item questionnaire designed to measure depressive symptoms in a community-based samples (Radloff, 1977; Golding & Aneshensel, 1989; Golding, Aneshensel, & Hough, 1991). Reliability estimates for the CES-D are high, ranging from 0.84 to 0.92. Samples of African-Americans, Hispanic Americans, and other diverse groups have shown that the CES-D can usefully measure depression (Mouton, Johnson, & Cole, 1995). See Golding & Aneshensel (1989), and Golding, Aneshensel, & Hough (1991) for information on the Spanish language CES-D.

The GDS has good sensitivity and specificity in most samples, although it appears to be have poorer performance among African-Americans and Hispanic Americans when compared to whites (Baker, Espino, Robinson, & et al., 1993). The GDS was also less sensitive to significant depression among Hispanic-Americans (Baker et al., 1993; Baker & Espino, 1997) See Baker and Espino (1997) for information on the Spanish language GDS.

**3. Functional Assessment.** In the domain of functional assessment, we may find that the willingness to report difficulty taking care of oneself may be powerfully related to fear of admitting one's dependence on others by older persons from certain groups. Observed differences in functional status across ethnic groups may represent true differences but could represent measurement error from the instrument used in the assessment of physical function. Physical function assessment generally employ self-report instruments that rely on the subjective response of patients. Performance-based measures provide more objective measures of function, but are harder to carry out in the clinical setting and may not always relate directly to performance at home (Guralnik, Branch, Cummings, & Curb, 1989; Guralnik, Reuben, Buchner, & Ferrucci, 1995). The choice of method generally relates to the time constraints on the clinician, the training of the clinician (and staff), and need for the most reliable and valid information.

### **CASE EXAMPLE: Mrs. R.**

*Ms. R is a 70-year-old female who presents with increasing fatigue, weight loss and poor appetite for the past two months. She was born in Nuevo Laredo and immigrated to the US as a teenager. While she speaks some English, she is more comfortable speaking in Spanish. She brought her 8-year-old granddaughter with her to translate.*

*In gathering the history you find that over the past year she has been taking care of her 75-year-old husband who suffered a massive cerebrovascular accident that left him paralyzed on the left side of his body. Recently he has started to become more combative, but Ms. R just shrugs and says that she must take care of him. You attempt to collect more detail about the caregiving situation but the granddaughter reports that her grandmother says that this is just something she has to do and God will help her.*

*After a thorough physical examination, you suspect she might have an intra-abdominal cancer and suggest a series of tests including laboratory tests, a colonoscopy and possible CT scan of the abdomen. Ms. R. Indicates, "OK" and you make arrangements. A follow-up visit is scheduled two weeks later, and Ms. R returns with her granddaughter. She has not gotten the colonoscopy, and the granddaughter reports that she has been too busy caring for her husband to complete the procedure. She did however have her laboratory tests done which reveal a slight anemia, and you again suggest a colonoscopy. Ms R apparently agrees and the colonoscopy is rescheduled.*

*Ms. R. Misses her next two appointments and returns to the clinic two months later with her 40 year old daughter. You bring in a professional translator to assist with the interview and care plan. Through the translation, it becomes apparent that Ms. R has been having crying spells, difficulty sleeping and feeling generally bad over the past 6 months. Also she thought that her "stomach problem" was "empacho" and that the bowel preparation she was given for the colonoscopy was enough. And if she had a good bowel movement she wouldn't need the "light tube in the rectum."*

*On testing using the Geriatric Depression Scale (Spanish Version)-Short Version, Ms. R scores 8 abnormal responses of a total of 15 questions suggesting depressive symptomatology. Counseling was given for caregiver stress, respite plans made and anti depressant medications begun. Colon endoscopic evaluation reveals a Dukes A colorectal carcinoma.*

#### **Questions for Discussion:**

1. What are the implications of using the 8-year old granddaughter as interpreter?
2. On reviewing the case, what might you have done differently to assist with the assessment?
3. How might you have elicited Mrs. S's own perception of her condition?

## **V. CULTURALLY APPROPRIATE GERIATRIC CARE: INTERVENTIONS**

### **A. Health Promotion and Disease Prevention**

See recommendations for preventive care for all older Americans in Module Five of the Core Curriculum in Ethnogeriatrics. Special issues for Hispanic/Latino elders include the following:

#### **1. Preventive Screening**

**a. Cervical Cancer.** Because of the very high incidence of cervical cancer among Hispanic/Latino women, special attention to appropriate screening is recommended.

**b. Diabetes.** Periodic blood glucose monitoring for Puerto Rican and Mexican American elders is recommended because of the high incidence of diabetes, much of which is undiagnosed.

**c. Depression.** Appropriate assessment of depression is important, especially among less acculturated older women.

**d. Falls and Hip Fracture.** Some studies have found increased risk among Mexican American elders, so special attention is recommended (Espino, Palmer, Miles, et al., 2000; Mouton, Smith, Jarosek et al., 2000).

#### **2. Health Education**

Grassroots outreach educational programs for health promotion can benefit older Hispanic/Latinos. One study showed benefits to the use of a community health worker to conduct diabetes education; it improved knowledge levels, self-care management, and lowered glycohemoglobin levels from 11.7% to 9.9% (Corkery, Palmer, Foley, et al., 1997).

Important considerations for health promotion materials are that they should target appropriate reading levels and should have undergone the rigorous translation/back translation methods and pilot testing procedures prior to dissemination (Talamantes, Gomez, Braun, 2000). (See Section IV). Caution should be taken about solely relying on written materials/brochures for health promotion purposes even when translated into Spanish.

When relying on telephone methods, health providers or outreach workers miss the population of Hispanic/Latino elders that do not have a telephone. Media (television and radio) has been previously reported to be an effective method for outreach (Anson, 1988; Mosca, Jones, King, et al., 2000). More Hispanic women than other ethnic groups reported to have learned about heart disease through a friend or family member (Mosca et al., 2000).

### **3. Physical Activity and Exercise**

According to the Behavioral Risk Factor Surveillance System Report (BRFSS, 1997) from Texas, 65% of Hispanic adults do not participate in regular physical activity. Data are not available for elderly Hispanics, however in a study on older Mexican American women and physical activity, researchers found a high correlation between exercise self-efficacy (confidence in the ability to persist with exercising in various situations) and the stage of readiness for exercise (Laffrey, 2000). With advancing age older Mexican American women decreased both their daily and leisure/sport activities.

## **B. Issues in Treatment**

### **1. Medication**

**a. Prescription and Over-the-Counter Medicine** . A longitudinal study of elderly Mexican Americans in the Southwest revealed that 58.1% of the subjects (2, 895) utilized some type of prescription medicine based on self-report. More women used medications than men, and the type of medicine also differed between genders (Espino, Palmer, Mouton, et al., 2000). Women tended to use more analgesics, non-steroidal anti-inflammatory agents, prescription nutritional supplements, central nervous system and endocrine medications. Men used more hypoglycemic medication compared to women. The over 75-year-old group used more cardiovascular medications, nutritional supplements, ophthalmic preparations and antihistamines. Younger elderly between the ages of 65-74 used more hypoglycemic and endocrine medications. Elders with a higher number of co-morbid conditions were 4.5 more likely to use prescription medication (Espino, et al., 2000).

In the same H-EPESE study, data on the use of over the counter (OTC) medicine used by elderly Mexican Americans revealed that those with lower levels of structural assimilation (Higher structural assimilation = higher English proficiency, greater use of English language in daily life, greater interaction with friends), those with low self-perceived health and those who had more depressive symptoms, used more OTC medication (Espino, et al., 1998)

**b. Border medication.** Due to the increased cost of medication in the United States, increased numbers of elderly who purchase both prescription and over the counter medication in Mexico and Canada (Calvo, 1997; Casner & Guerra; 1992, Conian, 1997). In a study conducted in the border city of El Paso, Texas, where 70% of the population is Hispanic, 81% of respondents who received care from an ambulatory teaching internal medicine clinic reported they had purchased medicine from Mexico at one time or another. About 75% of respondents reported purchasing medicine without a prescription. Reasons provided for purchasing medicine in Mexico included lower cost and not needing a prescription. The most common types of medication purchased by these respondents were blood pressure medications and antibiotics (Casner & Guerra, 1992). Negative repercussions of purchasing medications across the border include: the development of drug resistance to antibiotics, use of drugs not approved for use in the United States, variation in drug dosage and strength, and widespread sales of placebo products (Stoneham, 2000).

### C. Complementary and Alternative Medicine (CAM) and Healers

The subject of CAM is important for this elderly cohort because the use of CAM and traditional healers are often anecdotally mentioned in presentations but frequently not supported by empirical data. The data that is available includes samples of the elder population. About 1 in 3 people in the U.S. are estimated to use some type complementary/alternative medicine for chronic illness, which includes use of herbal medications as well as alternative therapies such as chiropractic, acupuncture, and massage (Eisenberg, Kessler, & Foster, 1993). In a study of CAM use among older Californians, 50% of the 40 Hispanic elders in the sample reported using some type of CAM, but the type was not reported (Astin, Pelletier, Marie, & Haskell, 2000). Hunt, Arar, & Akana (2000) report that when the use of herbal remedies, traditional healers, and the use of health-related religious beliefs, are studied, it is usually only the frequencies of the beliefs and practices that are reported rather than looking at the importance of these treatments or methods to individual health care and how the use affects the utilization of biomedical treatments.

As defined in Villa et al., (1993) within the various Hispanic/Latino groups, healing systems/techniques include: *curanderismo*, *espiritismo*, and *santeria*. Healers within these defined systems include *curanderos* (general practitioners of Mexican folk healing), *espiritistas* (Puerto Rican faith healers), *santeros* (Cuban faith healers), *yerbistas* (herbalists), and *sobadores* (massage therapists). Studies that have discussed the use of these healers and/or systems have not solely studied the aged population of Hispanic/Latinos, however the elderly population have been included in the study cohorts (Higginbotham, Trevino, and Ray, 1990). There continues to be mixed data regarding use of these alternative healers and systems (Villa, et al., 1993). In 1990, the classic HHANES study on the utilization of *curanderos* by Mexican Americans found only 4.2% of this group reported using a *curandero*, *yerbista*, or other folk medicine healer, whereas another study conducted in the metropolitan area of Denver, Colorado found 18.5% used a *curandero* in a 5 year period (Padilla, Gomez, Biggerstaff, Mehler, 2001). Both of the above studies incorporated elderly within their samples.

In a qualitative (N=43) study on type 2 diabetes in San Antonio, and Laredo, Texas, 9% of respondents reported using herbs regularly for treatment of their diabetes (Hunt, et al., 2000). There were no respondents who reported using a *curandero* for their diabetes; however, three mentioned using a *curandero* for other illness (Hunt, et, al., 2000). The specific herbs mentioned in this study for use of treatment of diabetes included: *nopal* (cactus), aloe vera, nispero (loquat leaves), garlic, and *diabetina*. Respondents using these herbs reported never replacing their medical regimens with herbs. Prayer was reported as helping to reduce stress and anxiety. Of the subjects interviewed, 77% reported that prayer helped their diabetes but did not replace the biomedical treatments they currently used (Hunt, 2000). Prayer and faith has been reported to be an important value, belief and coping mechanism used by this cohort of Hispanic/Latino elders (Talamantes, Lawler, Espino, 1995; Villa, 1991).

In an ethnographic study of Mexican American elders in Arizona, Applewhite (1995) explored folk healing and knowledge or use of *curanderos* or other healers. Of the 25 respondents interviewed, 84% reported that they learned about folk medicine in early childhood, adolescence and early adulthood. These elders indicated that they had either

received treatments as children or used folk healers to treat their own children for conditions such as *colico* (colic), *empacho* (locked bowels), *susto* (fright), *mal de ojo* (evil eye), and *caida de la mollera* (fallen fontanel). About 12% indicated their involvement with spiritual cleansing (*barridas* or *limpias*). As they aged, they reported to have less faith in the folk healing methods and reported relying more on “conventional health providers, self-medications, home remedies, or God’s divine will,” (Applewhite, 1995). Due to the high cost of medicine, many preferred home remedies or over the counter drugs. Many (64%) knew about herbalism and 76% believed that herbs were effective in the treatment of simple illnesses ranging from headaches to insomnia (Applewhite, 1995). Half of these respondents indicated that they would consider trying a *curandero* if their physician could no longer treat their illness. However, 43% held negative attitudes regarding folk healing and believed that their illnesses required conventional medicine. Overarching comments throughout the study indicated the elders’ faith in God, which has been described in other studies (Applewhite, 1995; Talamantes, Lawler, Espino, 1995; Villa, 1991).

*Espiritismo* (Spiritism) is rooted in the belief system that the spirit world can intervene in the human world and is widely practiced in Puerto Rico and among Puerto Ricans on the mainland (Nunez-Molina, 1996). In an analysis of Puerto Rican *espiritismo*, Nunez-Molina (1996) indicates that *espiritismo* can function as a religion, as a healing system, or as a philosophy or science for those who are academically oriented. There have not been specific studies on elderly Puerto Rican’s use of *espiritismo*. However in the case study of Mrs.J. on the use of hospice, one Puerto Rican caregiver describes using an *espiritista* for her ill husband (Talamantes, Lawler, Espino, 1995). This case study also reiterates the theme of faith in God and hope of God’s healing presence similar to studies of Mexican American elderly in previous studies (Applewhite, 1995; Hunt et al., 2000; Villa, 1991).

### The Case of Mrs. J.

*Mrs. J. is a 54-year-old Puerto Rican who cares for her 65-year-old husband with end stage Amyotrophic Lateral Sclerosis (Lou Gehrig's Disease). Mr. J. had this disease for about 15 years, however, only in the past four years had his health begun to deteriorate. Throughout the course of his illness, Mr. J. had been seen by several neurologists in Puerto Rico and North America. Mrs. J's relatives brought over an "espiritista" (spiritual healer) to rid Mr. J. of "evil spirits". Mrs. J. said that later these espiritistas realized that her husband did not have evil spirits but rather a serious disease.*

*Mrs. J. had four children, two who lived in Puerto Rico. These adult children provided minimal support: Mrs. J. reported "Tienen sus familias y sus problemas, no pueden ayudar" (They have their families and their problems, they can't help). Although Mr. J. expressed a wish not to be on a respirator and to die at home with his family, they could not comply with his wish when he could no longer breathe and they saw him suffering too much. Eventually, Mr. J.'s lungs collapsed. He was taken to the emergency room and put on a respirator. A neighbor (who had four children of her own) spent the nights with Mrs. J. and provided significant help with the total care he required. "Pedia a Dios que me siguiera ayudando". (I prayed to God to continue to help me) "Dios pide mucho y Dios ayuda mucho)." (God asks for much and God gives much.) Mr. J.'s health worsened and he developed a fever. He was taken to the emergency room and admitted with pneumonia. Mrs. J.'s brother who was a physician advised her to prepare herself for his death. Mrs. J. could not believe that he was in the end stages of death. "Yo creia que el no iba a morir porque tenia el ultimo modelo demaquina para respirar. Yo todavia tenia esperanza que iba a mejorar pero ya estaba muy malo". (I did not believe that he was going to die as he had the newest respirator. I still had hope that he would get better but he was very sick).*

#### Questions for Discussion:

1. What types of interventions could be used in order to provide Mr. and Mrs. J with supportive services? In what ways would a family meeting help out Mr. and Mrs. J?
2. What percent of Hispanic/Latino elders utilize Hospice and home health care services?
3. How could providers have approached Mr. and Mrs. J about hospice, home health and end of life issues?
4. How can providers find out more about *Espiritismo* and the role that *Espiritistas* in the Puerto Rican community?
5. What are some questions that providers can ask their Puerto Rican elders regarding their use of folk healers and folk healing practices?

## **D. Working with Families, Caregiving, and Social Support**

### **1. Social Support**

Social support and family caregiving within the context of the Hispanic/Latino elders can include not only nuclear and extended family, but also fictive (non-relatives) kin, friends, church members, and neighbors who can serve in many roles for these elders. Based on previous studies social support networks appear to be more available for Hispanic/Latino elders (Aranda & Miranda, 1997). Earlier studies report that Mexican American, Cuban American, and Puerto Ricans rely on informal support networks post hospitalization more than formal support (Commonwealth Fund Commission, 1989). Whether or not the traditional extended family can still be viewed as a viable support network for Hispanic/Latino elders, however, has been debated in the literature (Aranda & Miranda, 1997). In contrast, elderly Mexican Americans with numerous chronic conditions and from lower to middle socioeconomic incomes believed they would not have a caregiver available should they become ill (Talamantes, et al., 1996).

Family obligations and the perception of the family changed with level of acculturation in that the higher the level of acculturation, the lower the perception of family obligations and the family as a referent. However, perception of family support did not change due to acculturation (Sabogal, et al., 1987). There were no ethnic differences found among the Mexican American, Cuban American and Puerto Ricans in relationship to their cultural values regarding the family even though there was heterogeneity among groups regarding accessibility to family (Sabogal et al., 1987).

Both earlier and current research emphasize the importance of the family (nuclear and extended) and community (friends & neighbors) as the most important social and supportive entities for Cuban, Puerto Rican and Mexican Americans (COSSMHO, 1995; Gallagher-Thompson, Talamantes, Ramirez, & Valverde, 1996). Some studies have reported that elderly Hispanic/Latinos expect their children to provide support as found (Cox & Monk, 1990; Markides, Boldt, and Ray, 1986). Mutual reciprocity continues to be exhibited by the elders and their families for care provision by well elders and for disabled elders (Sotomayor, 1992; Gallagher-Thompson, Talamantes, Ramirez, Valverde, 1996).

### **2. Family Caregiving**

With the elderly Hispanic/Latino population growing, caring for this population will present numerous challenges for families and opportunities for service provision by the community. A growing body of research provides information on stress, burden and the coping process experienced by Hispanic/Latino caregivers from the various ethnic groups (Aranda, Knight, 1997; John & McMillian, 1998; Delgado & Tennstedt, 1997; Saldana, Dassori, Miller, 1999; Phillips, Torres de Ardon, Komnenich, Killeen & Rusinak, 2000). Aranda et al., (1997) conducted a sociocultural analysis on the influence of ethnicity and culture on stress and the coping process. They reported that Hispanic/Latino caregivers may either experience increased levels of stress and burden resulting in higher levels of depressive symptoms which

was also supported by Friss, Whitlatch, & Yale in 1990. Ethnicity may serve as a protective mechanism for experiencing caregiver burden (Talamantes, Fabrizio, Lichtenstein, Hazuda, 1996). Wallace and Lew-Ting (1992), found that accessibility to family reduced the use of in-home services; however, it is not known whether Latino elders were unaware of available formal services, or whether a distrust of the service network existed.

In a cross-sectional longitudinal study on aging between Mexican Americans (MA) and European Americans (EA), caregiver burden was examined. Results showed that there were no differences in caregiver burden between the two groups. Although among the MAs, those caring for a parent or sibling experienced higher levels of burden compared to elders caring for a spouse or other (Talamantes, et al., 1996).

In a study comparing Cuban American and European American caregiving daughters with similar socioeconomic backgrounds, no significant differences were found in level of depression (Minzter, Rupert, Lowenstein, et al., 1992). Examining Cuban caregiver predictors of positive (satisfaction) and negative (burden) appraisal, researchers found that older caregivers and higher levels of support predicted higher satisfaction (Harwood, Barker, Ownby, 2000). Behavioral disturbances, being female, and perceiving less social support predicted increased levels of burden by the subjects (Harwood, et al., 2000).

More symptoms for depression, however, were found with a small sample of primarily Puerto Rican caregivers as measured by the CESD (Cox & Monk, 1990). In another study Puerto Rican caregivers were found to be providing instrumental and affectional support to their elderly family members. Noteworthy were that only about half of the sample utilized formal resources, and they reported a lack of trust with formal providers (Sanchez-Salgado, 1994). Puerto Rican caregivers have reported that if they were unable to provide care to their elders, other family members would provide the care rather than use formal resources (Delgado & Tennstedt, 1997).

Studies have reported that Hispanic/Latino caregivers find themselves as the sole caregivers despite the “overidealization” of the family support system. Feelings expressed by Mexican American caregivers included a sense of isolation and frustration in focus groups (John & McMillian, 1998). In another study Mexican American caregivers perceived their social support networks as smaller compared to the European American sample of caregivers (Phillips, et al., 2000). In this same study, caregiving spouses perceived more burden than adult children. In many of these studies, the primary caregiver has usually been a daughter, especially if a spouse was not available (Phillips, et al., 1997; Gallagher, et al., 1996)

### **3. Working with Families**

Due to the heterogeneity of the Hispanic/Latino caregivers and their use of formal and informal resources, it is critical for health providers to assess the social and family networks to determine the extent of support that is being provided to the primary caregiver. The following suggestions are recommended for providers:

- Organize a family meeting to help families see the role of the primary caregiver and provide recommendations for how other members can support the primary caregiver and care recipient.

- Help family caregiver(s) identify resources that have bilingual/bicultural staff for the provision of services.
- Link primary caregiver to support groups in their preferred language and if they are not available in the community, link caregiver to another caregiver who is further along in their resource development and support systems.
- Provide family caregivers with several types of educational programs for teaching them about the disease or issues related to their aging parent. Educational programs can consist of video or audiotapes (Spanish language if client is monolingual), simple handouts related to illness and recommendations for care.
- Conduct “call-in” telephone media presentations on aging issues. If they are consistently aired, referrals will increase.

## **E. Ethics and End- of- Life Decision Making**

When faced with difficult, complex, and multiple choices for health care treatment, patients and families draw on their inner resources, which may include cultural expectations of treatment, familial supports, and spiritual or religious beliefs. Along with these strengths patients and families may be faced with barriers to health care or treatment that may include lack of access as a result of language, education, economic deficits or decreased formal and informal support systems. Provider and patient differences in culture, values, spiritual/religious, health beliefs, and worldviews, can add to the complexity of end-of -life or health care decision-making by Hispanic/Latino elders.

### **a. Patient Autonomy and Advance Health Care Directives**

Knowledge about the Patient Self-Determination Act (PSDA) of 1991 and Advance Health Care Directives (AHCD) and possession of an AHCD has varied across studies with Hispanic/Latino elders. A Los Angeles study found that 46% of Mexican American elders knew about AHCD and only 10% possessed an AHCD (Murphy et al., 1996). In a San Antonio study, 36% of Mexican American elders were knowledgeable about the PSDA, and only 26% knew about various options regarding AHCD. However, similar to the Los Angeles study, 10% of the elders had an AHCD (Talamantes & Gomez, 1996).

In the Los Angeles multicultural study related to patient autonomy, more older Mexican American and Korean respondents than those in other ethnic groups believed that a patient with a metastatic cancer should not be told about the diagnoses. In this same study, investigators reported that younger elders, those with incomes above \$10,000, and those more acculturated were more likely to prefer the truth regarding terminal diagnoses (Blackhall, Murphy, Frank, Michel, & Azen, 1995).

Talamantes and Gomez (1996) found that 46% of Mexican American elderly would rely on their physicians to make health care decisions for them, 24% preferred to make their own decisions, and 18% would rely on their families to make their health care decisions for them. When asked who could make decisions about life support measures if they were unable to make these decisions, 28% selected their daughters, 14% selected spouse, and 12% selected their physicians. In the San Antonio study, there was no relationship between level of

acculturation and elders' knowledge and completion of an AHCD (Talamantes, Gomez, Braun, 2000) in contrast to the Mexican American elders in the Los Angeles study where acculturation was a significant predictor of knowledge and completion of an AHCD (Blackhall et al., 1995; Murphy et al., 1996). This example illustrates regional differences within the same ethnic group.

In a study in Miami, a sample of primarily Cuban American elders were found to be less knowledgeable about living wills than were the comparison groups, African Americans and NH white elders (Caralis, Davis, Wright, and Marcial, 1993). Findings were similar in a study of New Mexican elderly where Hispanic subjects were less likely to know about AHCD or have a completed directive (Romero, Lindeman, Koheler, & Allen, 1997).

In response to survey questions regarding life-prolonging treatments, Hispanic elders were more likely than NH whites to approve the use of cardiopulmonary resuscitation, hospitalization, the use of antibiotics, intubation, and intravenous nutrition (Romero, et al., 1997; Caralis et al., 1993).

Comfort levels in discussing end-of-life issues differ among studies. A tri-ethnic study of Hispanics/Latino (the majority of whom were Puerto Rican), African American and NH whites revealed that Hispanic/Latino elders were least comfortable discussing end-of-life issue compared to the two other elder groups (Morrison, Zaya, Mulvihill, Baskin, Meier, 1998). Hispanic/Latino subjects also reported that they felt that a health care proxy was not necessary if they had an involved family, and they were less likely to have an appointed health care proxy. Other significant barriers to completion of an AHCD by Hispanic/Latino elderly included more distrust of physicians and the health care system (Morrison et al., 1998). These two findings (trust in physician and comfort level) differed significantly from a study of Mexican American elders in San Antonio who reported they were very comfortable discussing AHCD with their physicians and relied on their physicians to make health care decisions for them when they were unable to (Talamantes & Gomez, 1996).

### **b. Hospice, Dying and Death**

The act of dying and death has been a more naturally accepted process culturally in the Hispanic/Latino communities than other communities (Talamantes, Gomez, Braun, 2000). Religion, faith and spirituality hold an important role in the acceptance of death (Villa, 1991). *El Dia de Los Muertos* (Day of the Dead) is a holiday celebrated throughout Mexico and in Hispanic communities in the southwestern part of the United States. During *El Dia de Los Muertos*, families go to the gravesites of deceased family members and take food and other symbols in order to honor the lives and to celebrate the unity of the family. Additionally, decorated altars depicting pictures of the deceased and symbols representing death and dying and important mementos for the family members can be displayed in numerous places during this holiday. In discussing dying and death, Hispanic/Latino elders often incorporate "dichos" or sayings about God and their faith (Talamantes, Gomez, & Braun, 2000).

In contrast, although death appears to be more readily accepted by Hispanic/Latino elders, the use of Hospice services tends to be significantly lower for this elder group as reported by several studies (Talamantes, Lawler, Espino, 1995; Pawling-Kaplan & O'Connor, 1989). Reasons for not utilizing Hospice services included lack of knowledge about Hospice programs, the use of Hospice services would denote "giving up hope and faith" in the life of the dying patient, lack of insurance, and distrust in the provider or health care system (Talamantes, Gomez, & Braun, 2000; Morrison, et. al., 1998).

It is evident in the literature that Hispanic/Latino elders do not make end-of-life decisions autonomously, rather, decisions are made in a familial context usually with reliance on the physician for guidance (Romero et al., 1997; Talamantes & Gomez, 1996; Blackhall, et al., 1995, Murphy, et al., 1996).

Recommendations to providers for patient and family discussions on end-of-life decision making include the following:

- Assess the patient and family (when applicable) for understanding of end-of life issues and values associated with making health care decisions;
- Become knowledgeable about the elder's cultural background; including social-historical, religion and spirituality and health belief system;
- Recognize language issues and screen for barriers of service use;
- Utilize values history (a document to process decisions and values related to medical care) as a guide for provider and a method for Hispanic/Latino elders and families to begin to think about end-of-life issues (McIver-Gibson, 1990);
- Conduct grass root outreach efforts to discuss end-of-life issues;
- Recruit bilingual/bicultural volunteers in Hospice and Palliative care programs.

### **Case of Mrs. D:**

*Mrs. D. was a 78-year-old Cuban American who was caring for her 80-year-old husband in the end stages of probable Alzheimer's Disease. They had two adult children who live in the same city, however, not in close proximity. Mrs. D. spoke limited English and was referred to the social service agency by an Adult Day Health Center located two blocks away. Members of the Center had tried many times to help Mrs. D., however, she repeatedly refused any outside help. She said, "No tengo confianza en personas que no conozco" (I don't trust people that I don't know).*

*Mr. D. required total care, and Mrs. D. had one friend who came to her house to bathe and transfer him to the wheelchair each morning. The friend returned in the evening to transfer Mr. D. back to bed. Mrs. D. said that she prayed daily for strength to help her keep going as she worried about her own health. She was very upset as she reminisced about the 30+ years with her husband. She described their relationship as being very close and they functioned as a team. "Compartimos el café de la misma taza" (We share coffee from the same cup).*

*Talking about his death was difficult and she said that she would prefer to suffer the burden of caring for him the way he was than not having him around at all. She said that living in the U.S, was so different from living in Cuba or any Latin American country. "Here the children live far away and work all day everyone is busy. In Cuba, there would always be someone around to help or just to check in-a niece, cousin, aunt." Although she could rely on her son, she did not want to impose on him because he had an important job. Mrs. D. was very tearful and said that she never expected her husband to get this disease. "Yo rezo mis oraciones a diario, mi fe es en Dios, porque Dios es poderoso" (I say my daily prayers, I have faith in God because he is powerful).*

### **Questions for Discussion:**

1. What types of interventions could be used in order to provide Mr. and Mrs. D with supportive services?
2. How does the case of Mrs. D illustrate the lack of knowledge, language barrier and distrust of "outsiders" as reasons for not utilizing formal home care or Hospice services?
3. How would knowledge of the historical experiences and characteristics of Mrs. D.'s cohort help providers to understand her reluctance to accept services?

## **VI. ACCESS AND UTILIZATION**

### **A. Primary and Acute Care**

**1. Health Insurance and Other Barriers.** Hispanic elders living in the United States are underinsured and more likely to be living in poverty. Although Hispanic/Latino elders are more likely to have health insurance than their younger family members because of the availability of Medicare and Medicaid, the percentage of non-institutionalized Hispanics aged 65-84 with no insurance (3%) is higher than among similar NH whites or NH blacks (Kramerow et al, 1999). Older Hispanics also have the highest percentage with Medicare/Medicaid insurance, almost half in the 85 and over population. Health care is hindered in this population by lower access to health services and less use of preventive services. Barriers to access are primarily socioeconomic, but acculturation exerts an effect through its association with language skills, education, and employment.

Differences in access to care and use of health services over the last two decades were compared in Hispanics and non-Hispanic whites of all ages (Weinick, et al., 2000). Using data from three nationally representative medical expenditure surveys and multivariate analyses to adjust for disparities in health insurance and income, there was observed an increasing disparity between the two ethnicities between 1977 and 1996. Even after adjustments for income and health insurance coverage in 1996, one half to three quarters of the ethnic disparity remained.

**2. Primary Care, Hospitalization, and Procedures.** One approach to comparing access to primary care is to quantify hospitalizations for preventable conditions as an indicator of limited access to primary care. Using discharge data from 10 states, a study out of Georgetown University found that, even after controlling for differences in patient's health care needs, socioeconomic status, insurance coverage, and availability of primary care, Hispanics were at greater risk of hospitalization for preventable diseases than were NHW (Gaskin, Hoffman, 2000).

Age-adjusted rates of percutaneous transluminal coronary angioplasty (PTCA) and coronary artery bypass graft (CABG) were compared in Mexican-Americans and NHWs hospitalized in Texas for coronary heart disease (Ramsey, et al., 1997). Men were more likely than women to receive either procedure (33 vs. 22%,  $p < .01$ ), and NHW were more likely to receive PTCA than MA (23 vs. 13%,  $p < .01$ ), but not CABG. After adjustments for extent of disease and other potential confounders, marginal differences in receipt of PTCA, but not CABG, remained between the two ethnicities, suggesting a bias in the delivery in this type of health care service.

When utilization of primary care is focused on only older Hispanics, the results are less clear. Some studies find higher number of physician visits for older Hispanics compared to other ethnic populations. It is possible, however, that these reports reflect poorer health status of older Hispanic/Latino elders (For a more complete discussion, see Villa, et al., 1993).

## **B. Long Term Care**

Preferences for family care and lower utilization of formal long-term care services has been a hallmark of the literature concerning chronic illness management among Hispanic/Latino populations (Villa et al., 1993). Use of in-home care services was found by Wallace and Lew-Ting (1992) to be twice as high among Puerto Ricans as other older Hispanic populations, which they suggested might be related to the well-developed network of services in New York City compared to rural areas where many Mexican American elders live. Fewer older Hispanics use nursing home care than other older Americans and those that do are more likely to be younger and more impaired (Villa et al., 1993).

The most common explanations for the differences in utilization have been cultural preference and availability of, and feelings of obligation by, family caregivers. An exploratory study describes caregiving experiences by 8 MA women and explores their attitudes about elder care (Clark, & Huttlinger, 1998). A rich cultural heritage includes the importance of the family's responsibility to care for its elder members and describes family commitments that reach beyond obligation.

One misinterpretation of the availability of family care is that "they take care of their own, so no support services are needed." Some have called this the Cultural Aversion Hypothesis, meaning that Hispanic/Latino families have an aversion to the use of long-term care services. In reality, Hispanic families experience the stressors that any family caregivers face, and the need for culturally acceptable services supporting the families are crucial.

## **C. Complementary and Alternative Medicine**

See the discussion of use of herbs and alternative healers in Section V.

## **The Case of Mr. J. R**

*Mr. J.R. is a 64-year-old Mexican American former car mechanic. An otherwise healthy appearing man at close to six feet and 155 lbs., he was functionally unemployable at his trade because of his peripheral vascular disease, which had already taken away his left leg below the knee. With the use of his prosthesis he was able to get around and do odd jobs as a handyman. He also suffered from diabetes, which had only been moderately controlled. He knew that his diabetes could improve if he began to use insulin, however he could not bring himself to even consider it. He felt "if I start this insulin, I know that I'll end up on dialysis like my mother". "She suffered so much!" he lamented. Despite his decision not to begin insulin, Mr. J.R. was compliant with his medications and office visits.*

*One morning he arrived at the clinic and informed his physician that he had developed an ulcer to his toe. Sure enough, he had developed a small but ominous blister to the right second toe. It was only about one quarter of an inch but, unfortunately, Mr. J.R.'s foot showed the classic signs of poor circulation: absent pulses to the feet, paper thin skin, and cold feet. Although it was not an emergency, this blister was an urgent issue that would need to be attended by a team of specialists including a vascular surgeon to improve the circulation to his foot, a podiatrist to prevent any further extension of the blister, and very possibly physical therapy and rehabilitation to recover from any surgery. His wife's immediate response was "Doctor. Can't we just cut the toe off now?" Mr. J.R. concurred. They were assured that such drastic steps were not necessary at this point if a team approach was implemented soon.*

*Unfortunately, the couple had no resources. At 64 years and two months of age, Medicare was at least ten months away. The next reasonable option was to utilize the local university medical center, one of the "Top 50" in the nation. They were just three miles away from the clinic. However, Mr. J.R. lived just across the county line. He could only be admitted at this medical center if he arrived through the emergency room with a serious medical or surgical condition. In his county of residence, funds were very limited, with no orthopedic surgeon providing care at the local county hospital. Seeking a private consultation would require a high fee, with payment to any admitting hospital being next to impossible because of costs.*

*Mr. J.R. was followed weekly at the clinic with aggressive medical therapy. The distal phalanx of his toe ulcerated through the blister by one quarter of an inch and healed by the tissue of his toe constricting over the bone. He remained stable with no evidence of spreading infection. During the three months it took to heal the ulcer, he had instructions to go to the hospital if he ever had swelling, pain, or fever; fortunately he never did.*

*Mr. J.R. eventually received his Medicare. Within the year of receiving his medical coverage, he developed an infection of the foot with resulting amputation, had a stroke affecting his speech, and was eventually admitted to a nursing home for skilled nursing care.*

### **Questions for Discussion:**

1. What issues of access to health care affected the health outcomes for Mr. J.R and his family?
2. How might insulin therapy have changed the outcome?
3. What might have been done to increase the acceptability of insulin for Mr. J. R.?

## INSTRUCTIONAL STRATEGIES

Assigned readings, lecture, and discussion can be augmented with the following assignments:

- A. Readings on the sociological, historical and political origins on the various ethnic elder groups
- B. Lectures/presentations by historians/sociologists/and community experts on the specific ethnic groups
- C. Interviewing an elder on their life history (See Appendix C of the Core Curriculum in Ethnogeriatrics: Instructional Strategies for Interviewing Elders from Diverse Backgrounds)
- D. Reviewing cases and examining how SES may have impacted the health status
- E. Reviewing relevant historical/documentary films/videos on the Mexican American, Puerto Rican, or Cuban populations in the U.S.
- F. Provide possible explanations for the discrepancies between mortality statistics and the results of surveys of morbidity in community-based populations, e.g. why does it appear that the Coronary Heart Disease mortality is lower in Hispanics compared to NHW (mortality statistics) when subsequent, more rigorous community surveys fail to substantiate that there is less CHD in Hispanics?
- G. Supplementing information provided in Section II “Patterns of health risk” by searching the literature for more complete comparisons of disease prevalence, incidence, and mortality rates in Hispanics compared to non-Hispanic whites of entities not previously covered, e.g. gallbladder disease, osteoporosis, and hip fractures.
- H. Interviewing Hispanic elders of different origins, e.g. Mexican Americans, Cubans, and Puerto Ricans, on the social support the elders give, receive, and expect.
- I. Presenting the results of the interviews in class to compare and discuss similarities and differences and how they compare with other races/ethnicities.
- J. Research health promotion/disease prevention strategies understood and utilized by Hispanics compared to other races/ethnicities. As an example, what percentage of diabetics have their hypertension and dyslipidemia identified, under treatment, and reaching goal treatment levels? (see Harris, 2001).
- K. Using the cases in the Module for class discussion or written assignments

## STUDENT EVALUATION

- A. Reflective papers on Life History assignment
- B. Individual reports and group projects such as those mentioned under Instructional Strategies also can be used in the evaluation of student performance.
- C. Objective Questions

1. Which Hispanic/Latino group has the highest median age?

- A. Mexican American
- B. Cuban American
- C. Puerto Rican
- D. South American

*Answer: B*

2. Among all Hispanic/Latino elder groups all cause mortality rates are:

- A. Lower for Hispanic/Latinos over 65 compared to non-Hispanic whites
- B. Higher for Hispanic/Latinos over 85 compared to non- Hispanic whites
- C. Equal for both Hispanic/Latinos and non Hispanic whites
- D. None of the above

*Answer: A*

3. Patient autonomy has been found to be an important value among most elders from Hispanic/Latino backgrounds

True     False    *Answer: False*

4. Hispanic/Latino elders tend to rely more on family for a support network. This statement is no longer true with the increased levels of acculturation among Hispanic/Latino families.

True     False    *Answer: False*

### D. Essay Questions

1. Discuss reasons why obtaining a historical cohort perspective would be important for a clinical encounter with a Hispanic/Latino elder?
2. List three reasons why health care providers should be cautious when using non-professional language translators:

3. What are the three types of translation methods? Describe each method briefly?
4. Name 3 reasons that providers should provide information to Hispanic/Latino elders regarding purchasing medications across the border?
5. What is the most appropriate method for eliciting information from Hispanic/Latino elders regarding their use of herbal/folk remedies?
6. Name three methods for discussing end of life issues with Hispanic/Latino elderly:

## REFERENCES AND RESOURCES

- Angel, J.L., Angel R.J., McClellan, J.L., & Markides, K.S., (1996). Nativity, declining health, and preferences in living arrangements among elderly Mexican Americans: Implications for long term care. *The Gerontologist* 36(4): 464-473.
- Angel, J.L., & Tienda, M., (1987). Determinants of extended household structure: Cultural pattern or economic need? *American Journal of Sociology*, 87, 1360-1383.
- Anson, R. (1988). Cable television, telecommunications, and the U.S. Hispanic elderly. In S. Applewhite (Ed.) *Hispanic Elderly in Transition, Theory, Research, Policy and Practice*, (p.p. 203-225). New York: Greenwood Press.
- Applewhite-Lozano, S. (1995). Curanderismo: Demystifying the health beliefs and practices of elderly Mexican Americans. *Health and Social Work* , Nov; 20(4): 247-53.
- Aranda, M.P., & Miranda, M.R., (1997). Hispanic aging, social support, and mental health, does acculturation makes a difference? In K.S. Markides (Ed.), *Research Issues in aging Hispanics*. New York: Sage.
- Astin, J.A., Pelletier, K.R., Marie, A., & Haskell, W., (2000). Complementary and alternative medicine use among elderly persons: One year analysis of blue shield medicare supplement. *Journal of Gerontology: Medical Sciences*, M-4-M9.
- Baker, F. M. (1996). Issues in assessing dementia in African American elders. In G.Yeo & D. Gallagher-Thompson (Eds.), *Ethnicity and the Dementias* (pp. 59-76). Washington, DC: Taylor and Francis Publishers
- Baker, F.M., & Espino, D.V., (1997). A spanish version of the geriatric depression scale in Mexican-American elders. *International Journal of Geriatric Psychiatry*, 12,21-25.
- Baker, F.M., Espino, D.V., Robinson, B.H., (1993). Assessing depressive symptoms in African-American and Mexican-American elders. *Clinical Gerontology*, 14, 15-21.
- Bassford, T.L. (1995). Health status of Hispanic elders. *Clinical Geriatric Medicine*, 11, 25-38.
- Becker, T.M., Wheeler, C.M., Key, C.R., & Samet, J.M., (1992). Cervical cancer incidence and mortality in New Mexico's Hispanics, American Indians, and non-Hispanic whites. *Western Journal of Medicine*, 156:376-379.

- Bernal, G. (1982). Cuban families. In M. McGoldrick, K.J., Pearce & J. Giordano. (Eds.) *Ethnicity and Family Therapy*. (p.p. 187-205).
- Black, S.A., & Markides, K.S., (1998). Depressive symptoms and mortality in older Mexican Americans. *Journal of Clinical Epidemiology*, 45-52. New York: Elsevier Science Inc.
- Black, S.A., Markides, K.S., & Miller, T.Q., (1998). Correlates of depressive symptomatology among older community-dwelling Mexican Americans: The Hispanic EPESE. *Journal of Gerontology: Social Sciences*, 53B:S198-208.
- Blackhall, L.J., Murphy, S.T., Frank, G., Michel, V., & Azen, S. (1995, September 13). Ethnicity and attitudes toward patient autonomy. *JAMA*, 274 (10), 820-825.
- Bohnstedt, M., Fox, P.J., & Kohatsu, N.D., (1994). Correlates of mini-mental status examination scores among elderly demented patients: the influence of race-ethnicity. *Journal of Clinical Epidemiology*, 47, 1381-1387.
- Brangman, S.A., (1995). African American elders: Implications for health care providers. *Clinics in Geriatric Medicine*, 11(1): 15-23.
- BRFSS (1997). *Behavioral risk factor surveillance system report*. Austin, TX: Texas Department of Health, Bureau of Chronic Disease Prevention and Control.
- Burke, J.P., Williams, K., Gaskell, S.P., Hazuda, H.P., Haffner, S.M., & Stern, M.P. (1999). Rapid rise in the incidence of type 2 diabetes from 1987 to 1996: Results from the San Antonio heart study. *Archives of Internal Medicine*, 159,1450-1456.
- Burt, V.L., Whelton, P., Roccella, E.J., Brown, C., Cuyllrt, J.A., Higgins, M., Horan, M.J., & Labarthe, D., (1995). Prevalence of hypertension in the US adult population. Results from the third national health and nutrition examination survey, 1988-1991. *Hypertension*, 25,305-313.
- Calvo, D., (1997). Frontier Medicine, *The New Republic*, 217,15-16.
- Cantero, P.J., Richardson, J.L., Baezconde-Garbanati, L., & Marks, G., (1999). The association between acculturation and health practices among middle-aged and middle-aged and elderly latinas. *Ethnicity and Disease*, 9(2),166-180.
- Carter, J.S., Pugh, J.A., & Monterrosa, A., (1996). Non-insulin-dependent diabetes mellitus in minorities in the United States. *Annals of Internal Medicine*, 125,221-232.
- Casner, P.R., & Guerra, L.G., (1992). Purchasing prescription medication in Mexico Without a prescription, the experience at the border. *Western Journal of Medicine*, 156,512-516.

- Chiapella, A.P., Feldman, H.I., (1995) Renal failure among male Hispanics in the United States. *American Journal of Public Health*. 85(7):1001-4.
- Chiodo, L.K., Kanten, D.N., Gerety, M.B., Mulrow, C.D., & Cornell, J.E., (1994). Functional status of Mexican American nursing home residents. *Journal of the Geriatric Society* 42:293-296.
- Clark, M., & Huttlinger, K., (1998). Elder care among Mexican American families. *Clinical Nursing Research*, 7,64-81.
- Commonwealth Fund Commission (1989). *Poverty and poor health among elderly Hispanic Americans*. Baltimore, MD: The Commonwealth Fund Commission on Elderly People Living Alone.
- Conian, M.F. (1997). Border pharmacy: Down Mexico way, rx prices are low and Americans are loading up. *Drug-Topics*, 141,42-54.
- Corkery, R., Palmer, C., Foley, M.E., Shechter, C.B., Frisker, L., & Roman, S., (1997). Effect on a bicultural community health worker on completion of diabetes education in a Hispanic population. *Diabetes Care*. 20(3), March, 254-257.
- Cox, C., & Monk, A., (1990). Minority caregivers of dementia victims: A comparison of Black and Hispanic families. *Journal of Applied Gerontology*, 9,340-354.
- Crum, R.M., Anthony, J.C., Bassett, S.S., & Folstein, M.F., (1993). Population-based norms for the mini-mental state examination by age and educational level. *Journal of American Medical Association*, 269, 2386-2391.
- Cubillos, H.L. (1987). *The Hispanic elderly: A demographic profile*. Washington DC: National Council of La Raza.
- Cuellar, I, Arnold, B, & Maldonado, R. (1995). Acculturation rating scale for Mexican Americans: A revision of the original ARSMA scale. *Hispanic Journal of Behavioral Science* 17, 275-304.
- Cuellar, I, Harris, L.C., & Jasso, R., (1980). An acculturation scale for Mexican American normal and clinical populations. *Hispanic Journal of Behavioral Science*, 2,199-217.
- Day, J.C., (1996). *Population Projections of the United States by Age, Sex, Race and Hispanic Origin: 1995 to 2050*. Washington, D.C.: U.S. Bureau of the Census, Current Population Reports, P25-1130, U.S. Government Printing Office.
- Delgado, M. (1982). Ethnic and cultural variations in the care of the aged: Hispanic elderly and natural support systems: A special focus on Puerto Ricans. *Journal of Geriatric Psychiatry*, 15, 239-251.

- Delgado, M. & Tennstedt, S. (1997). Making the case for culturally appropriate community services-Puerto Rican elders and their caregivers. *Health and Social Work, 22*(4): 246-55.
- Deyo, R.A., Diehl, A.K., Hazuda, H., & Stern M.P. (1985). A simple language-based acculturation scale for Mexican Americans: Validation and application to health care research. *American Journal of Public Health, 75*,51-55.
- Eidson, M., Becker, T.M., Wiggins, C.L., Key, C.R., & Samet, J.M., (1994). Breast cancer among New Mexico's Hispanics, American Indians, and non-Hispanic whites. *International Journal of Epidemiology, 23*,231-237.
- Eisenberg, D.M., Kessler, R.C., Foster, C., Norlock, F.E., Calkins, D.R., & Delbanco, T.L., (1993). Unconventional medicine in the United States: prevalence, costs, and patterns of use. *New England Journal of Medicine, 328*:246-52.
- Espino, D.V., Burge, S.K., & Moreno, C.A., (1991). The prevalence of selected chronic disease among the Mexican-American elderly: Data from the 1982-84 Hispanic health and nutrition examination survey. *Journal of the American Board Family Practice, 4*,217-222.
- Espino, D.V., Lichtenstein, M.J., Hazuda, H.P., Fabrizio, D., Goodwin, J., Stroup-Benham, C.A., & Markides, K.S., (1998). Correlates of prescription and over the counter medication usage among elder Mexican-Americans: The Hispanic EPESE study. *Journal of the American Geriatrics Society, 46*, 1228-1234.
- Espino, D.V., Palmer, R.F., Miles, T.P., Bayne, N.S., & Markides, K.S., (2000). Patterns of prescription drug utilization in elder Mexican Americans: Result from the Hispanic EPESE study, *Ethnicity and Disease*, Vol 10, Spring/Summer, 218-223.
- Espino, D.V., Palmer, R.F., Miles, T.P., Mouton, C.P., Wood, R.C., Bayne, NS, & Markides, K.P., (2000). Prevalence, incidence, and risk factors associated with hip fractures in community-dwelling older Mexican Americans results of the Hispanic EPESE study, *Journal of the American Geriatric Society, 48*,1252-1260.
- Espino, D.V., Parra, E.O., & Kriehbiel, R., (1994). Mortality differences between elderly Mexican Americans and non-Hispanic whites in San Antonio, Texas. *Journal of the American Geriatric Society, 42*,604-608.
- Falcon, L.M. (2000). Prevalence and correlates of depressive symptoms among Hispanic elders in Massachusetts. *Journal of Gerontological Social Science, 55*(2): D108-S116.
- Fitten, L.J., Ortiz, F., & Pontón, M. (2001). Frequency of alzheimer's disease and other dementias in a community outreach sample of Hispanics. *Journal of the American Geriatric Society, 49*,10.

- Flegal, K.M., Carroll, M.D., Kuczmarski, R.J., & Johnson, C.L., (1998). Overweight and obesity in the United States: Prevalence and trends, 1960-1994. *International Journal of Obesity and Metabolic Disorders*, 22,39-47.
- Flegal, K.M., Ezzati, T.M., Harris, M.I., Haynes, S.G., Juarez, R.Z., Knowler, W.C., Perez-Stable, E.J., & Stern, M.P., (1991). Prevalence of diabetes in Mexican-Americans, Cubans, and Puerto Ricans from the Hispanic health and nutrition examination survey, 1982-84. *Diabetes Care*, 14,628-638.
- N. Fligstein, & R.M. Fernandez, (1994). Hispanics and Education, In P.S.J. Cafferty & W.C. McCready (Eds.) *Hispanics in the United States-A New Social Agenda*, (p.p. 113-46), New Jersey: Transaction Publishers.
- Fox, S.A., Stein, J.A., Sockloskie, R.J., & Ory, M.G., Targeted mailed materials and medicare beneficiary: Increasing mammogram screening among the elderly, *American Journal of Public Health*, 91, (1), 55-61.
- Frank, E., Winkleby, M.A., Altman, D.G., Rockhill, B. & Fortmann, S.P., (1991) Predictors of physician's smoking cessation advice. *Journal of American Medical Association*, 266, 3139-3144.
- Frey, J.L., Jahnke, H.K., & Bullfinch, E.W., (1998). Differences in stroke between white, Hispanic, and Native American patients: The barrow neurological institute stroke database. *Stroke*, 29,29-33.
- Gallagher-Thompson, D., Talamantes, M., Ramirez, R., & Valverde, R., (1996). Services delivery issues and recommendations for working with Mexican American family caregivers. In G. Yeo & D. Gallagher-Thompson (Eds.), *Ethnicity and the Dementias* (pp.137-152). Washington, D.C.: Taylor & Frances.
- Gardner, C.D., Winkleby, M.A., & Fortmann, S.P., (2000). Population frequency distribution of non-high-density lipoprotein cholesterol (NHANES III), 1988-1994. *American Journal of Cardiology*, 86,299-304.
- Gaskin, D.J., & Hoffman, C., (2000). Racial and ethnic differences in preventable Hospitalizations across 10 states. *Medical Care Research Review*,57 Suppl(1), 85-107.
- Gilbson-McIver, J., (1990). National values history project. *Generations (Suppl)*, 51-63.
- Gilliland, F.D., Becker, T.M., Key, C.R., & Samet, J.M., (1994). Contrasting trends of prostate cancer incidence and mortality in New Mexico's Hispanics, non-Hispanic whites, American Indians, and Blacks. *Cancer*, 73,2192-2199.

- Gillum, R.F., (1995). Epidemiology of stroke in Hispanic Americans. *Stroke*, 26,1707-1712.
- Gillum, R.F., (1997). Sudden cardiac death in Hispanic Americans and African Americans. *American Journal of Public Health*, 87,1461-1467.
- Goff, D.C., Nichaman, M.Z., Chou, W., Ramsey, D.J., Labarthe, D.R., & Ortiz, C., (1997). Greater incidence of hospitalized myocardial infarction among Mexican-Americans than non-Hispanic whites. The Corpus Christi heart project, 1988-1992. *Circulation*, 95,1433-1440.
- Golding, J.M., & Aneshensel, C.S., (1989). Factor structure of the center for Epidemiologic studies depression scale among Mexican-Americans and non-Hispanic whites. *Psychological Assessment*, 1, 163-168.
- Golding, J.M., Aneshensel, C.S., & Hough, R.L., (1991). Responses to depression scale items among Mexican-Americans and non-Hispanic whites. *Journal of Clinical Psychology*, 47, 61-75.
- González, H.M., Haan, M.N., & Hinton, L. (2001). Acculturation and the prevalence of depression in older Mexican Americans: Baseline results of the Sacramento area latino study on aging. *Journal of American Geriatrics Society*, 49, 948-953.
- Goodwin, J.S., Hunt, W.C., Samet, J.M., (1991). A population-based study of functional status and social support networks of elderly patients newly diagnosed with cancer. *Archives of Internal Medicine*, 151,366-370.
- Grad, S., (1994). Social security administration, income of the population 55 or older, 1992 (SSA Publications No. 13-11871), tables 1.7,VC7. Washington: U.S. Government Printing Office.
- Gratton, B., (1987). Familism among Black and Mexican American elderly: Myth or reality? *Journal of Aging Studies*, 1, 193-202.
- Grebler, L., Moore, J.W., & Guzman, R.C., (1970). The Mexican American people: The nations second largest minority. New York: The Free Press.
- Grigsby, J., Kaye, K., Baxter, J., Shetterly, S.M., & Hamman, R.F., (1998). Executive cognitive abilities and functional status among community-dwelling older persons in the San Luis Valley health and aging study. *Journal of the American Geriatrics Society*, 46,590-596.
- Guralnik, J.M., Branch, L.G., Cummings, S.R., & Curb, J.D., (1989). Physical performance measures in aging research. *Journal of Gerontology*, 44, M141-146.

- Guralnik, J.M., Reuben, D.B., Buchner, D.M., & Ferrucci, L., (1995). Performance measures of physical function in comprehensive geriatric assessment. In L.Z. Rubenstein, D. Wieland, & R. Bernabel (Eds.) *Geriatric Assessment Technology: The State of the Art* (pp. 59-74) New York: Springer Publishing Co.
- Gurland, B., Wilder, D., Lantigua, R., Mayeaux, R., Stern, Y., Chen, J., Cross, P., & Killeffer, E., (1997). Differences in rates of dementia between ethno-racial groups. In L.G. Martin, B.J. Soldo, (Eds.) *Racial and Ethnic Differences in the Health of Older Americans*. Washington, DC: National Academy Press.
- Haffner, S.M., Mitchell, B.D., Stern, M.P., Hazuda, H.P., & Patterson, J.K., (1990). Decreased prevalence of hypertension in Mexican Americans. *Hypertension*, 16, 225-232.
- Hajat, A., Lucas, J.B., Kington, R., (2000). *Health outcomes among Hispanic subgroups: Data from the National Health Interview Survey, 1992-1995*. *Adv Data*; 25,1-14.
- Hamman, R.F., Mulgrew, C.L., & Baxter, J., (1999). Methods and prevalence of ADL Limitations in Hispanic and non-Hispanic white subjects in rural Colorado: The San Luis Valley health and aging study. *Annals of Epidemiology*, 9,225-235.
- Harris, M.I., (1991). Epidemiological correlates of non-insulin-dependent diabetes Mellitus in Hispanics, Whites and blacks in the United States population. *Diabetes care*, 14,639-648.
- Harris, M.I., (2001). Racial and ethnic differences in health care access and health outcomes for adults with type 2 diabetes. *Diabetes Care*, 24,454-459.
- Harwood, D.G., Barker, W.W., Ownby, R.L., Bravo, M., Agüero, H., & Duara, R., (2000). Predictors of positive and negative appraisal among Cuban American caregivers of alzheimer's disease patients. *International Journal of Geriatric Psychiatry* 15, 481-487.
- Hayes-Bautista, D.E., Chapa, J., (1987). Latino Terminology: *Conceptual bases for Standardized terminology*. *American Journal of Public Health* 77 (1),61-68.
- Hernandez, G.G., (1992). The family and its aged members: The Cuban experience. In TL Brink (Ed.) *Hispanic Aged Mental Health*. (p.p. 45-67) The Haworth Press.
- Higginbotham, J.C.V., Trevino, F.M., Ray, L.R., (1990). Utilization of curanderos by Mexican Americans: prevalence and predictors findings from HHANES 1982-84 *American Journal of Public Health*, Vol 80, December, 32-35.

- Howard, G., Anderson, R., Sorlie, P., Andrews, V., Backlund, E., & Burke, G.L., (1994). Ethnic differences in stroke mortality between non-Hispanic whites, Hispanic whites and Blacks. The national longitudinal mortality study. *Stroke*, 25, 2120-2125.
- Hunt, L.M., Arar, N.H., Akana, L.L., (2000). Herbs, prayer and insulin, use of medical and alternative treatments, by a group of Mexican American diabetes patients. *Journal of Family Practice*, March (Vol 49, No3), 216-223.
- John, R., & McMillian, B., (1998). Exploring caregiver burden among Mexican Americans: cultural prescriptions, family dilemmas. *Journal of Aging and Ethnicity*. 1(2), 93-111.
- Karter, A.J., Gazzaniga, J.M., Cohen, R.D., Casper, M.L., Davis, B.D., & Kaplan, G.A., (1998). Ischemic heart disease and stroke mortality in African American, Hispanic, and non-Hispanic white men and women, 1985-1991. *Western Journal of Medicine*, 169,139-145.
- Kleinman, A., (1980). *Patients and Healers in the Context of Cultural. An exploration of the borderland between anthropology, medicine and psychiatry*. Los Angeles, CA: University of California Press.
- Kleinman, A., (1985). *Culture and Depression: Studies in the anthropology and Cross-cultural psychiatry of affective disorder*, Los Angeles, CA: University of California Press.
- Kramarow, E., Lentzner, H., Rooks R., Weeks, J., & Saydah, S. (1999). *Health and Aging Chartbook, Health, United States, 1999*. Hyattsville, MD: National Center for Health Statistics.
- Krause, N., & Goldenhar, L.M. (1991). Acculturation and psychological distress in three groups of elderly Hispanics. *Journal of Gerontology*, 47(6): S279-S288.
- Laffrey, S.C. (2000). Physical activity among older Mexican American women. *Research in Nursing and Health*, 23,383-392.
- LaRue, A., Romero, L.J., Ortiz, I.E., Liang, H.C., & Lindeman, R.D. (1999). Neuropsychological performance of Hispanic and non-Hispanic older adults: an epidemiological survey. *Clinical Neuropsychology*, 13,474-486.
- Liao, Y., Cooper, R.S., Cao, G., Durazo-Ariviluzo R., Kaufman. J.S., Long, A.E., & McGee, D.L., (1997). Mortality from coronary heart disease and cardiovascular disease among U.S. Hispanics: Findings from the national health interview survey (1986-1994). *Journal American College Cardiology*, 30,1200-1205.

- Lindeman, R.D., Romero, L.J., Hundley, R., Allen, A.S., Liang H.C., Baumgartner, R.N., Koehler, K.M., Schade, D.S., & Garry, P.J. (1988). Prevalence of type 2 diabetes, the insulin resistance syndrome, and coronary heart disease in an elderly, biethnic population. *Diabetes Care*, 21,959-966.
- Madsen, W. (1964). *The Mexican Americans of South Texas*, New York: Holt, Rinehart and Winston.
- Marin, G., & Marin, B.V. (1991). *Research With Hispanic Populations*. Applied Social Research Methods Series Newbury Park, Calif: Sage Publications, (Vol 23).
- Marin, G., Sabogal, F., Marin, B.V., Otero-Sabogal, R., & Perez-Stable, E.J. (1987). Development of a short acculturation scale for Hispanics. *Hispanic Journal Behavioral Science*, 183-205.
- Markides, K.S., Boldt, J.S., & Ray, L. (1986). Sources of helping and intergenerational solidarity: A three generations study of Mexican-Americans. *Journal of Gerontology*, 41(4): 506-511.
- Markides, K.S, Miller, T.Q, & Ray, L.A. (1999). Changes in the smoking behavior of elderly Mexican Americans in the Southwest from 1982-84 to 1993-1994. *Preventative Medicine*, 28,251-254.
- Markides, K.S., Rudin, L., Angel, R.J., & Espino, D.V. (1977). Health status of Hispanic elderly. In L.G. Martin & B.J. Soldo, (Eds.), *Racial and Ethnic Differences in the Health of Older Americans* (pp. 285-300). Washington, DC: National Academy Press.
- Marshall, S.C., Mungas, D., Weldon, M., Reed, B., & Haan, M. (1997). Differential item functioning in the mini-mental state examination in English and Spanish-speaking older adults. *Psychology and Aging*, 12, 718-725.
- Mintzer, J.E., Rubert, M.P., Loewenstein, D., Gamez, E., Millor, A., Quinteros, R., Flores, L., Miller, M., Rainerman, A. & Eisdorfer, C. (1992). Daughters' caregiving for Hispanic and non-Hispanic alzheimer's patient: Does ethnicity make a difference? *Community Mental Health Journal*, 28, 293-303.
- Mitchell, B.D., Hazuda, H.P., Haffner, S.M., Patterson, J.K., & Stern, M.P., (1991). High prevalence of angina pectoris in Mexican-American men. A population with reduced risk of myocardial infarction. *Annals of Epidemiology*, 1,415-426.
- Mitchell, B.D., Hazuda, H.P., & Haffner, S.M., (1991a). Myocardial infarction in Mexican-Americans and non-Hispanic whites: the San Antonio heart study. *Circulation*, 93,45-51.

- Molina, C., & Aguirre-Molina, M. (1994). Eds. Latino health in the U.S.: A growing challenge. Washington D.C.: American Public Health Association.
- Molina, M. (1996). Archetypes and spirits: A jungian analysis of Puerto Rico espiritismo. *Journal of Analytical Psychology* Apr, 41(2): 227-44.
- Monge, J.T., (1997). Puerto Rico the trials of the oldest colony in the world. New Haven, CT: Yale University Press.
- Mosca, L., Jones, W.K., King, K.B., Ouyan, P., Redberg, R.F., & Hill, M.N. (2000). Awareness, perception and knowledge of heart disease risk and prevention among women in the United States. *Archives of Family Medicine*, 9, 506-515.
- Mouton, C. & Esparza, Y.B. (2001). Ethnicity and Geriatric Assessment. In J. Gallo, T. Fulmer, G. J. Paveza, & W. Reichel (Eds.) *Handbook of Geriatric Assessment* (pp. 13-28). Gaithersburg, MD: Aspen Publishers.
- Mouton, C.P., Johnson, M.S., & Cole, D.R. (1995). Ethical considerations with African-American elders. *Clinics in Geriatric Medicine*, 11, 113-129.
- Mulrow, C.D., Chiodo, L.K., Gerety, M.B., Lee, S., Basu, S., & Nelson, D. (1996). Function and medical comorbidity in South Texas nursing home residents: Variations by Ethnic Group. *Journal American Geriatric Society*, 44, 279-284.
- Mungas, D., Marshall, S.C., Weldon, M., Haan, M., & Reed, B.R. (1996). Age and education correction of the mini-mental state exam for English and Spanish-speaking elderly. *Neurology*, 46, 700-706.
- Mutchler, J.E., & Brallier, S. (1999). English language proficiency among older Hispanics in the United States. *The Gerontologist*, 39(3): 310-319.
- National Coalition of Hispanic Health and Human Services Organizations (1995). March/April, 9(4): 300-311.
- Neighbors, H.W. & Lumpkin, S. (1990). The epidemiology of mental disorder in the black population. In D.S. Ruiz & et al. (Eds.) *Handbook of Mental Health and Mental Disorder among Black Americans* (pp. 55-70). Westport, CT: Greenwood Press.
- O'Malley, A.S., Kerner, J., Johnson, A.E., & Mandelblatt, J. (1999). Acculturation and breast cancer screening among Hispanic women in New York City. *American Journal Public Health*, 89, 219-227.
- Ostchega, Y., Harris, T.B., & Hirsch, R., Parsons, V.L., & Kington, R. (2000). The prevalence of functional limitations and disability in older persons in the United States: Data from the national health and examination survey III. *Journal American Geriatric Society*, 48, 1132-1135.

- Padilla, R., Gomez, V., Biggerstgaff, S.L., & Mehler, P.S. (2001). Use of curanderismo in a public health care system. *Archives Internal Medicine*, 161, May, 1336-1340.
- Pandey, D.K., Labarthe, D.R., Goff, D.C., & Nichaman, M.Z. (2001). Community-wide coronary heart disease mortality in Mexican Americans equals or exceeds that in non-Hispanic whites: the Corpus Christi heart project. *American Journal Medicine*, 110:81-87.
- Phillips, L.R., Torres de Ardon, E., Komnenich, P., Killeen, M., & Rusinak, R. (2000). The Mexican American caregiving experiences. *Hispanic Journal of Behavioral Science*, 22(3), 296-313.
- Pfeiffer, E. (1975). A short portable mental status questionnaire for the assessment of organic brain deficit in elderly patients. *Journal of American Geriatric Society*, 23, 433-441.
- Pugh, J.A., Tuley, M.R., & Basu, S. (1994). Survival among Mexican-Americans, non-Hispanic whites, and African-American with end-stage renal disease: the emergence of a minority pattern of increased incidence and prolonged survival. *Journal of Kidney Diseases*, 23(6):803-7.
- Radloff, L.S. (1977). The CES-D scale: a self report depression scale for research in the general population. *Applied Psychological Measurement*, 1, 385-401.
- Ramsey, D.J., Goff, D.C., Wear, M.L., Labarthe, D.R., & Nichaman, M.Z. (2001). Sex and ethnic differences in use of myocardial revascularization procedures in Mexican-American and non-Hispanic whites: the Corpus Christi heart project. *Journal of Clinical Epidemiology*, 50, 603-609.
- Rewers, M., Shetterly, S.M., & Hamman, R.F. (1996). Hypertension among rural Hispanics and non-Hispanic whites; the San Luis Valley diabetes study. *Public Health Report*, 111 (Suppl 2), 27-29.
- Rewers, M., Shetterly, S.M., Hoag, S., Baxter, J., Marshall, J., & Hamman, R.F. (1993). Is the risk of coronary heart disease lower in Hispanics than in non-Hispanic whites: The San Luis Valley diabetes study. *Ethnicity and Disease*, (3), 44-54.
- Sabogal, F., Marin, G., Otereo-Sabogal, R., VanOss Marin, B., & Perez-Stable, E.J. (1987). Hispanic familism and acculturation: What changes and what don't? *Hispanic Journal of Behavioral Sciences*, 9(4): 397-412.
- Saltzstein, S.L. (1997). The association of ethnicity and the incidence of mammary cancer in situ in women: 11,436 cases from the California cancer registry. *Cancer Detection Prevention*, 21, 361-369.

- Sanchez-Ayendez, M. (1988) Elderly Puerto Ricans in the United States. In S.R. Applewhite (Ed.) *Hispanic Elderly in Transition, Theory, Research, Policy and Practice* (p.p. 17-32) Westport, CT: Greenwood Press.
- Sanchez-Salgado, C.D. (1994). The informal support system of the Hispanic elderly: A group approach. In M. Sotomayor, *Triple Jeopardy-Aged Hispanic Women: Insight and Experiences* (p.p. 31-45) Washington D.C.: National Hispanic Council on Aging:
- Shetterly, S.M., Baxter, J., Mason, L.D., & Hamman, R.F. (1996) Self-rated health among Hispanic vs. non-Hispanic white adults: The San Luis Valley health and aging study. *American Journal Public Health*, 86, 1798-1801.
- Shetterly, S.M., Baxter, J., Morgenstern, N.E., Grigsby, J. & Hamman, R.F. (1998). Higher instrumental activities of daily living disability in Hispanics compared with non-Hispanic whites in rural Colorado. The San Luis Valley health and aging study. *American Journal Epidemiology*; 147, 1019-1027.
- Sorel, J.E, Ragland, D.R., & Syme, S.L. (1991). Blood pressure in Mexican-Americans, Whites, and Blacks. The second national health and nutrition examination survey and the Hispanic health and nutrition examination survey. *American Journal Epidemiology*, 134, 370-378.
- Sorlie, P.D., Backlund, E., Johnson, N.J., & Rogot, E. (1993). Mortality by Hispanic status in the United States. *Journal of American Medical Associates*, 270, 2464-2468.
- Sotomayor, M. (1992). Social support networks. *Hispanic aging research reports: Part I and Part II*, (p.p. 94-105) Bethesda, MD: National Institutes of Health, National Institutes on Aging,
- Sotomayor, M. & Applewhite, S.R. (1988). The Hispanic elderly and the extended multigenerational family, In S.R. Applewhite (Ed.), *Hispanic elderly in transition: Theory Research policy and practice* (p.p. 121-134) Westport, CT: Greenwood press.
- Stoneham, L. (2000). The southern exodus: Is seeking health care south of the border a healthy practice? *Texas Medicine*, December 96 (12):48-52.
- Stroup-Benham, C.A., Markides, K.S., Espino, D.V. & Goodwin, J.S. (1999). Changes in blood pressure and risk factors for cardiovascular disease among older Mexican-American from 1982-1984 to 1993-1994. *Journal of American Geriatrics Society* 47(7): 804-810.

- Swenson, C.J, Baxter, J., Shetterly, S.M., Scarbro, S.L., & Hamman, R.F. (2000). Depressive symptoms in Hispanic and non-Hispanic white rural elderly: The San Luis Valley health and aging study. *American Journal of Epidemiology*, 152, 1048-1055.
- Talamantes, M.A., Fabrizio, D.K., Lichtenstein, M.L., & Hazuda HP (1996). Perceived caregiver burden among Mexican American Elderly and European American Elderly: The San Antonio Longitudinal Study of Aging (SALSA), paper presentation at the Gerontological Society of American Annual Meeting, Cleveland, OH.
- Talamantes, M.A., Gomez, G., & Braun, K.L. (2000). Advance directives and end-of-life care: The Hispanic perspective: In K.L Braun, J.H. Pietsch, & P.L. Blanchette, (Eds.) *Cultural Issues in End of Life Decision Making*: (p.p. 83-100) Sage Publication.
- Talamantes, H.D. (1992). *Unpublished tape recorded oral history*, El Paso, Texas.
- Talamantes, M.A., Lawler, W.R., & Espino, D.V. (1995). Hispanic American elders: caregiving norms surrounding dying and the use of hospice services. *Hospice Journal*, 10(4): 35-49.
- Trapido, E.J., Chen, F., Davis, K., Lewis, N., & MacKinnon, J.A., & Strait, P.M. (1994). Cancer in South Florida women: A 9-year assessment. *Archives Internal Medicine*, 154, 1083-1088.
- Trevino, F.M., Moyer, M.E., Valdez, R.B., & Stroup-Benham, C.A (1991). Health insurance coverage and utilization of health services by Mexican Americans, mainland Puerto Ricans, and Cuban American. *Journal of American Medical Association*, 265, 233-237.
- U.S. Bureau of the Census, Fred Hollmann (1993). *U.S. Population Estimates, by Age, Sex, Race and Hispanic Origin*, 1980-1991, Current Population Reports, P25-1095.
- U.S. Bureau of the Census (2000). Current Population Survey, March.
- U.S. Bureau of the Census (1993). *Money Income of Households, Families, and Persons in the United States: 1992*, Current Population Reports, P60-184, Washington DC: U.S. Government Printing Office, Table 26.
- U.S. Bureau of the Census (1993). *U.S. Population Estimates, by Age, Sex, Race, and Hispanic Origin: 1980 1991*, Current Population Reports, P23-1095, November , middle series projections.
- U.S. Census Bureau (1998). Current Population Survey, Chappell, P.J.

- Valle, R. (1989). Cultural and ethnic issues in alzheimer's disease family research. In E. Light & BD Lebowitz (Eds.), *alzheimer's disease treatment and family stress: Directions for research*. Washington, D.C.: National Institute of Mental Health.
- Villa, M.L., Cuellar, J., Gamel, N., & Yeo, G. (1993). *Aging and Health: Hispanic American Elders* (2<sup>nd</sup> edition), SGEC Working Paper Series, Number 5, Ethnogeriatric Reviews, Stanford Geriatric Education Center.
- Villa, R.F. (1991). La Fe de la mujer. In M. Sotomayor (Ed.) *Empowering Hispanic families: A critical issue for the 90's* (pp.43-58). Milwaukee, WI: Family Services America.
- Wallace, S.P., & Lew-Ting, C.Y. (1992). Getting by at home: Community based long term care of Latino elders. *Western Journal of Medicine* 157, 337-344.
- Warda, M.R. (2000). Mexican American perceptions of cultural competent care. *Western Journal of Nursing Research*, 22(2):203, 224
- Weinick, R.M, Zuvekas, S.H., & Cohen, J.W. (2000). Racial and ethnic differences in access to and use of health care services, 1977 to 1996. *Medical Care Research Reviews*, 57, Suppl 1, 36-54..
- Welsh, K.A., Fillenbaum, G., Wilkinson, W., Heyman, A., Mohs, R.C., Stern, Y., Harrell, L., Edland, S.D., & Beekly, D. (1995). Neuropsychological test performance in African-American and White patients with alzheimer's disease *Neurology*, 45, 2207-2211.
- Wiggins, C.L., Becker, T.M., Key, C.R., & Samet, J.M. (1993). Cancer mortality among New Mexico's Hispanics, American Indians, and non-Hispanic whites, 1958-1987. *Journal of National Cancer Institute*, 85, 1670-1678.
- Winkleby, M.A., Schooler, C., Kraemer, H.C., Lin, J., & Fortman, S.P. (1995). Hispanic versus White smoking patterns by sex and level of education. *American Journal Epidemiology* 1995 142(4), 410-418.
- Woloshin, S., Bickell, N.A., Schwartz, L.M., Gary, F., & Welch, G. (1995). Language barriers in Medicine in the United States. *Journal of American Medical Association*, March 1,(273) 9.
- Yeo, G. (Ed.), Chee, Y.K., Choi, E.E., Enslein, J., Hagan, J., Hendrix, L., Kelley Skemp, L., Ishler, K., Leinhaas, M., Levkoff, S., Mackenzie, E., McBride, M., Mendez, J., Reynoso-Vallejo, H., Scott, V., Sherman, A., Reimer Tripp, T., Tumosa, N., Wallace, S., Welleford, A., Yee, B.W.K., & Yeo, G. (2000). *Core Curriculum in Ethnogeriatrics* (2<sup>nd</sup> edition) October, Bureau of Health Professions, Health Resources Administration U.S. Department of Health and Human Services.

Yeo, G., Gallagher-Thompson, D., & Lieberman, M. (1996). Variations in dementia characteristics by ethnic category. In G. Yeo & D. Gallagher-Thompson, *Ethnicity and the Dementias*. Washington D.C.: Taylor and Francis.

Yeo, G., Hikoyeda, N., McBride, M., Chin, S.Y., Edmonds, M., & Hendrix, L., (1998). *Cohort Analysis as a tool in Ethnogeriatrics: Historical Profiles of Elders from eight ethnic populations in the United States*, 2<sup>nd</sup> edition, Working Paper Series Number 12, Stanford Geriatric Education Center.