



Health and Health Care of Hispanic/Latino American Older Adults

<http://geriatrics.stanford.edu/ethnomed/latino>



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DESCRIPTION

This module in the Ethnogeriatric Curriculum for Hispanic/Latino older adults 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
 2. Cultural traditions, health beliefs and values, including complementary and alternative medicine, palliative and end-of-life care
- Background and skills needed to provide a culturally competent geriatric assessment
- Treatment issues with Hispanic/Latino older adults
- Review of access and utilization of health care

Information in the content section is based on evidence from research, and citations to the published studies are included.

MODULE CHARACTERISTICS



Time to Complete: 2 hrs, 0 Mins



Intended Audience: Doctors, Nurses, Social Workers, Psychologists, Chaplains, Pharmacists, OT, PT, MT, MFT and all other clinicians caring for older adults.



Peer-Reviewed: Yes

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Special thanks to Mary Garza for assistance with the tables.

LEARNING OBJECTIVES

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



- 1.** Define the terms Hispanic/Latino as used in its broad form to describe Mexican American, Puerto Rican, and Cuban older adults; 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 older adult groups
- 3.** Identify the major risks of diseases that face Hispanic/Latino older adults and their implications
- 4.** Recognize the important role that history plays in the lives of Hispanic/Latino older adults
- 5.** Describe culturally based traditions, health beliefs, values, attitudes and behaviors
- 6.** Identify and describe culturally appropriate palliative care and end-of-life health care decision-making
- 7.** Conduct a culturally appropriate ethnogeriatric health assessment for Hispanic/Latino older adults and their families using methods and strategies recommended in the Culture Med Ethnogeriatrics Overview 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 older adults
- 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

INTRODUCTION AND OVERVIEW

Terminology

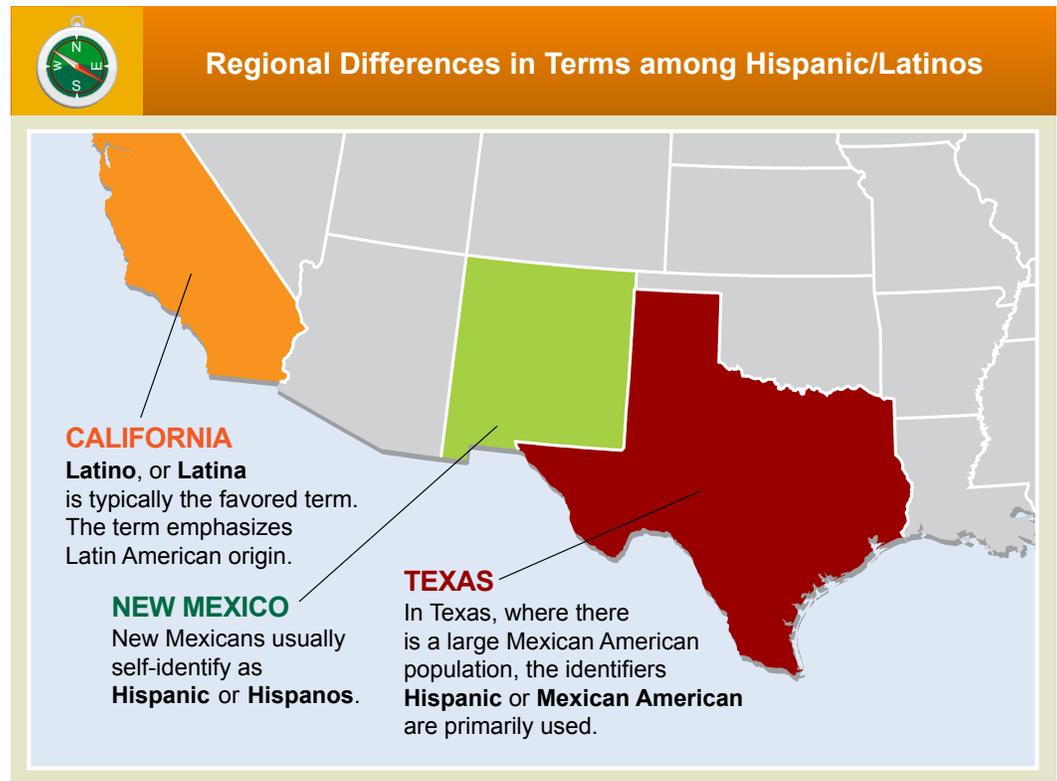
The diverse use of the terms “Hispanic and Latino” in the literature can be attributed to the diversity of the subgroups of Mexican American, Cuban American and Puerto Rican populations within a broader context. State and or regional differences in the use of terms are frequently noted in the Southwest.

See the map to the right.

U.S. Census Definitions

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 purposes of this curriculum, when a specific ethnic subgroup is not identified, Hispanic and Latino will be used interchangeably.



MORE INFORMATION

Statistical Policy Office, Office of Information & Regulatory Affairs, Office of Management & Budget, NEOB, Room 10201, 725 17th Street, N.W., Washington, D.C. 20503.

www.whitehouse.gov/omb/fedreg-1997standards

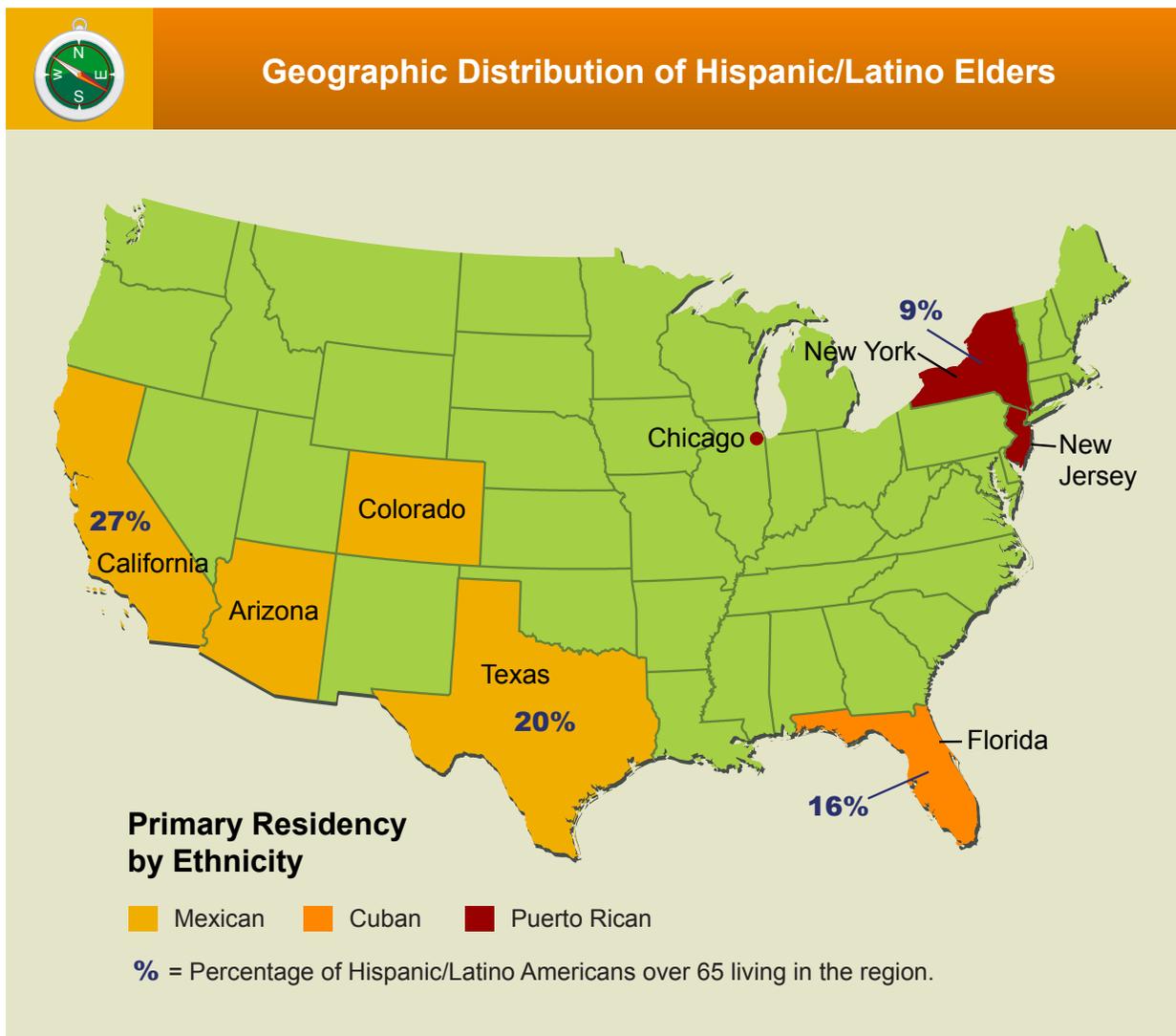
(INTRODUCTION & OVERVIEW CONT'D)

Geographic Distribution

There is substantial heterogeneity among the various Hispanic/Latino older adult 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 primarily 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
- **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.

In 2006, 75% of Hispanic persons aged 65 and over resided in four states: California (27%), Texas (20%), Florida, (16%), and New York (9%) (USDHHS, AoA, 2008). **See the map below:**



(INTRODUCTION & OVERVIEW CONT'D)

Population Size and Trends**Age 65 and Older**

In 2006, Americans age 65 and over who identify themselves as Hispanic or Latino comprise 6.4% of all older Americans. There were an estimated 2.4 million older adults in this category in 2006 (U.S. Census Bureau, Population Estimates and Projections).

By 2050 the Hispanic population is projected to comprise 18% of the older population. By 2028, the Hispanic population aged 65 and older is expected to be the largest racial/ethnic minority in this age group (www.aoa.gov/prof/Statistics/statistics.aspx). The older Hispanic/Latino population is expected to grow more quickly than other ethnic minority groups from over 2 million in 2005 to 15 million in 2050, so by 2028, it is projected that the 65 and older population will surpass the non-Hispanic Black population in that age category.

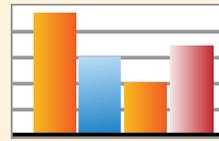
Table 1 and **Figure 1** compare the percentage of each of the total ethnic populations that are 65 and over. Cuban older adults represent the oldest cohort when compared to the other subgroups and make up a higher percentage of older adults over 65 compared to the overall older adult population.

Age 85 and Older

The U.S. Census Bureau reports that the population age 85 and older is expected to increase from 5.3 million in 2006 to almost 21 million in 2050. 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).

Centenarians

The overall numbers of US Centenarians are expected to rise significantly between now and 2050. A 2003 census projection it is expected that the centenarians



For tables and bar graphs, see pages 8–10.

will comprise of 1.1 million in 2050. This projection is an increase of an earlier projection made of 834,000. (Gerontological Research Group, 2008) Almost two decades ago the population of Hispanic/Latino older adults 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 (Angel & Whitfield 2007).

Age Compared to other Ethnic Groups

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 (Angel & Whitfield, 2007; Ramirez, 2004; Villa, Cuellar, Gamel, Yeo, 1993). This demographic trend has future implications for caregiving dependency ratios.

(INTRODUCTION & OVERVIEW CONT'D)

Table 1

Hispanic Origin Population by Gender, Age and Ethnicity

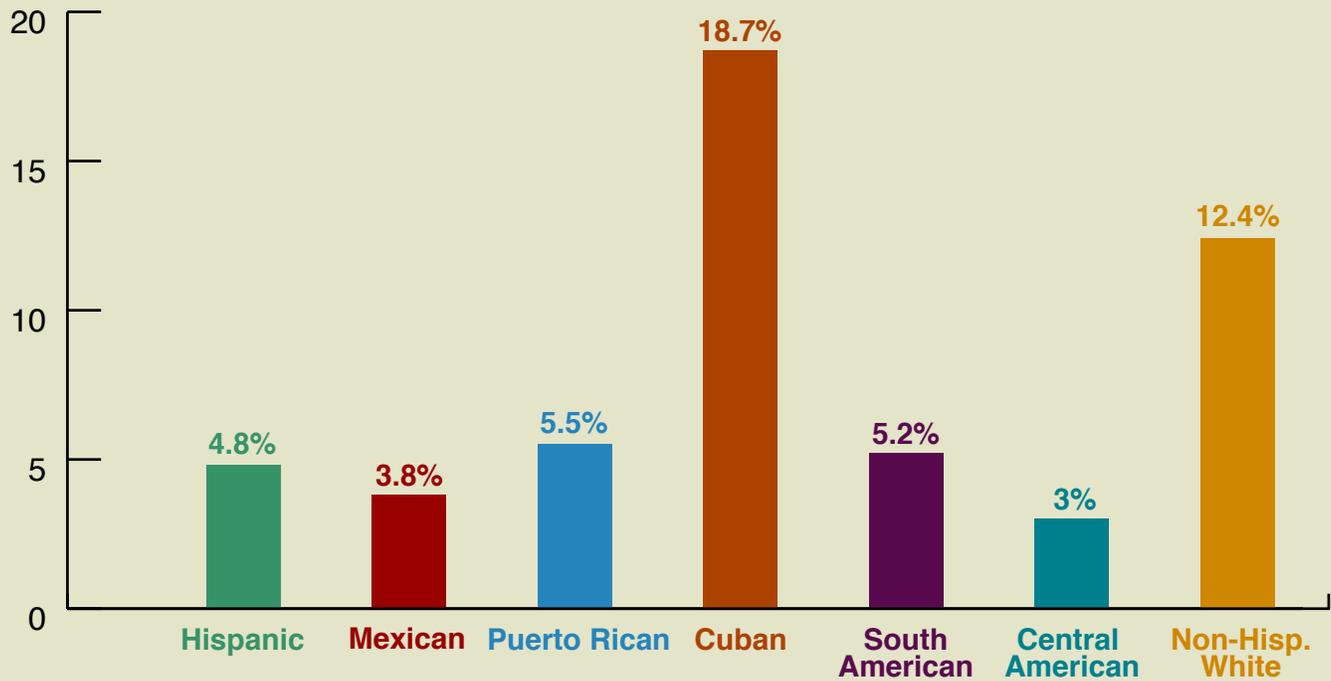
Age	Total Hispanic		Hispanic Origin Type				
	Number	%	Mexican American %	Puerto Rican %	Cuban %	Central/So. American %	
Female	55-64	12,250	8.7	4.5	7.2	9.7	7.5
	65-74	9,747	7.0	3.3	4.9	12.3	4.0
	75-84	6,889	4.9	1.4	2.3	9.6	1.4
	85 +	2,099	1.5	0.3	--	1.7	--
Male	55-64	11,137	8.3	4.1	7.1	11.5	.5
	65-74	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

(INTRODUCTION & OVERVIEW CONT'D)



Percent of Population Aged 65 & Over by Ethnic Group



Source: U.S. Census Bureau, Census 2000 Summary File 4

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(INTRODUCTION & OVERVIEW CONT'D)

Table 2

Projected Number of Centenarians in the United States by Race, and Hispanic Origin: 2000 to 2050¹

Year	Total Lowest Series ²	Total Middle Series	Total Highest Series ³	% ⁴	% Non-Hispanic			
					White	Black	American Indian, Eskimo, Aleut	Asian & 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	56.2	13.2	2.7
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

¹Projections 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*.

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

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

⁴Percentage values are based on middle series projections.

⁵Persons 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.

(INTRODUCTION & OVERVIEW CONT'D)**Gender, Marital Status,
& Living Arrangements****Gender and Age**

Similar to the non-Hispanic white older adult groups and the other minority ethnic groups, Hispanic/Latino older adults 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 each ethnic group. There is an increased older population of men and women within the Cuban population compared to the other older adult 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.

Marital Status

In *Older Americans 2008: 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 on page 12.

Data from the Hispanic Epidemiological Studies of the older adults (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 older adults live with a spouse alone than do married foreign-born older adults.

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.

Living Arrangements

The Census population survey shows Hispanic/Latino older adults to be second only to Asian/Pacific Islanders in living with relatives (U.S. Census Bureau, 2000). Historically preferences for living with others have 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 older adults 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).

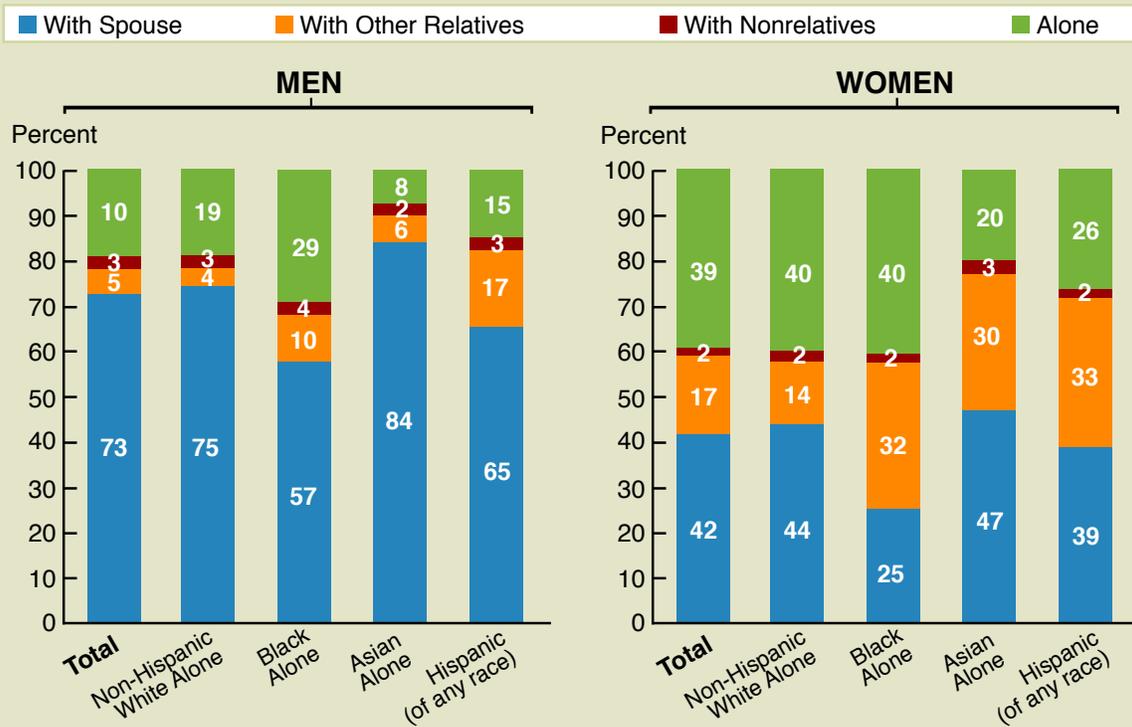
In the Hispanic-(H-HEPESE) study, a sample of 3,046 Mexican American older adults over 65 were assessed on their preferences for living arrangements and comparisons were made between foreign-born older adults and native-born (Angel & Angel, McClellan & Markides, 1996). There were many differences between the native and foreign-born groups in terms of reasons for living with family. More foreign-born older adults lived with their adult children because these older adults were providing their adult children with financial or child care assistance.

However, the primary reason given by the Mexican American older adults 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 older adults had less education, less personal income, and had increased mobility and instrumental activity of daily living problems compared to native-born Mexican American older adults (Angel, Angel, McClellan, & Markides, 1996).

(INTRODUCTION & OVERVIEW CONT'D)

Table 3

Living Arrangements of the population age 65 & Over, by Sex, Race & Hispanic origin, 2007



Living Arrangements:

Living with other relatives indicates no spouse present.
 Living with nonrelatives indicates no spouse or other relatives present.



Explanation of Terms:

- **Non-Hispanic White Alone** is used to refer to people who reported being white and no other race and who are not Hispanic.
- **Black Alone** is used to refer to people who reported being black or African American and no other race
- **Asian Alone** is used to refer to people who reported only Asian as their race.

The use of single-race populations in this report does not imply that this is the preferred method of presenting or analyzing data. The U.S. Census Bureau uses a variety of approaches.

Reference Population: These data refer to the civilian non-institutionalized population.

Source: U.S. Census Bureau, Current Population Survey, Annual Social and Economic Supplement.

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Language, Literacy and Education**Spanish Language Retention and English Proficiency**

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

Linguistic Isolation

Limited English proficiency has been reported as a barrier to accessing medical and social services (Mutchler & Brallier, 1999). Use of Spanish by Hispanic/Latino older adults 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 older adult Hispanic/Latinos who speak Spanish only are linguistically isolated (U.S. Bureau of the Census, 1990 Summary Tape File 3C). **Table 4 on page 14** illustrates English language proficiency and linguistic isolation by Hispanic/Latino older adult groups.

Cuban older adults are the least likely to be proficient in English and are therefore the most isolated linguistically at 54%, compared to the Puerto Rican older adults at 36% and Mexican American older adults at 28%. Puerto Rican older adults rely on their adult children to assist them with communication requirements (Montoro-Rodriguez, Small & McCallum, 2006). Interestingly, Cuban older adults have higher levels of education than any other group.

Hispanic/Latino older adults who speak English poorly or not at all tend to live in more Hispanic/Latino geographically concentrated areas. For example, many

“ Cuban older adults are the least likely to be proficient in English and are therefore the most isolated linguistically at 54%...Interestingly, Cuban older adults have higher levels of education than any other group. ”

older Cubans have lived in the same ethnically cohesive geographic area (Miami-Dade, FL) since the time they immigrated to this country. This cohort may be bilingual; however it is more usual for them to prefer speaking Spanish as their primary language (Arguelles & Aguelles, 2006). For all Hispanic/Latino older adult groups, linguistic isolation can pose barriers to access.

Literacy Levels

The education levels among the Hispanic/Latino older adult groups vary significantly. **Table 5 on page 15** 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 older adults have achieved the highest level of education (Arguelles & Arguelles, 2006; Hernandez, 1992) compared to the Mexican American and Puerto Rican older adults.

Historically, many of the older Cubans were established, well-educated professionals when they arrived in the U.S. (Arguelles & Arguelles, 2006; Fligstein & Fernandez, 1994). Having little or no education can become a barrier for accessing health education information and accessing needed care.

(INTRODUCTION & OVERVIEW CONT'D)

Table 4

English Language Proficiency & Linguistic Isolation by National Origin Group: Hispanic Populations Aged 60 & Older in the United States

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



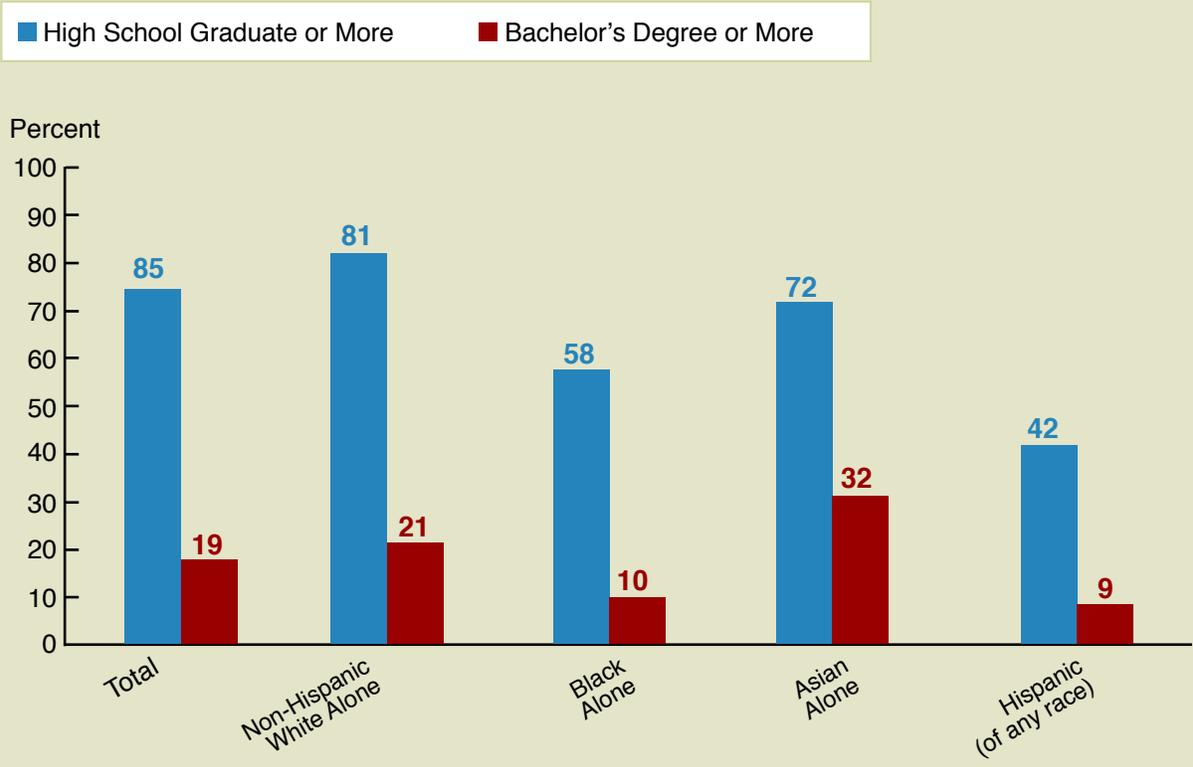
a. Ling. Isol. = Linguistically Isolated.

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

Source: Mutchler & Brallier, 1999.

(INTRODUCTION & OVERVIEW CONT'D)

Table 5 Educational Attainment of the Population Age 65 and Over, by Race and Hispanic Origin, 2007



Explanation of Terms:

- **Non-Hispanic White Alone** is used to refer to people who reported being white and no other race and who are not Hispanic.
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Source: U.S. Census Bureau, Current Population Survey, Annual Social and Economic Supplement.

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Employment, Income, and Retirement**Employment**

Employment and labor force participation rates tend to mirror those of the non-Hispanic white older adult and African American older adult 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 to 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% of non-Hispanic white women. Most Mexican American and Puerto Rican older adults have held occupations in the skilled blue collar and unskilled and laborer positions compared to Cuban older adults who have held professional and technical positions (Villa et al., 1993).

Sources of Income

Income sources for older adult Hispanic/Latinos are primarily from Social Security. In 2000 the census data revealed that:

- 77% Hispanic/Latinos primary source of income came from social security followed by
- 28% in asset income,
- 19% earnings,
- 22% pensions
- 16% from supplemental security income (www.socialsecurity.gov/policy/docs/chartbooks/income_aged/2000/text_cb.html).

In 2006, households with families headed by a Hispanic/Latino 65 years or over had a median income of 29,868 compared to 41,220 for non-Hispanic whites (USDHHS, AoA, 2008). About 19% of this cohort of older adult Latinos had incomes of less than 15,000 and 17% have incomes of 50,000.

“ Most Mexican American and Puerto Rican older adults have held occupations in the skilled blue collar and unskilled and laborer positions compared to Cuban older adults who have held professional and technical positions (Villa et al., 1993). ”

Often because of the low retirement incomes, older adult Hispanic/Latinos continue to work after 65 to supplement their income. According to the U.S. Census Bureau (2007), the overall poverty rate for Hispanics over 65 is 20%.

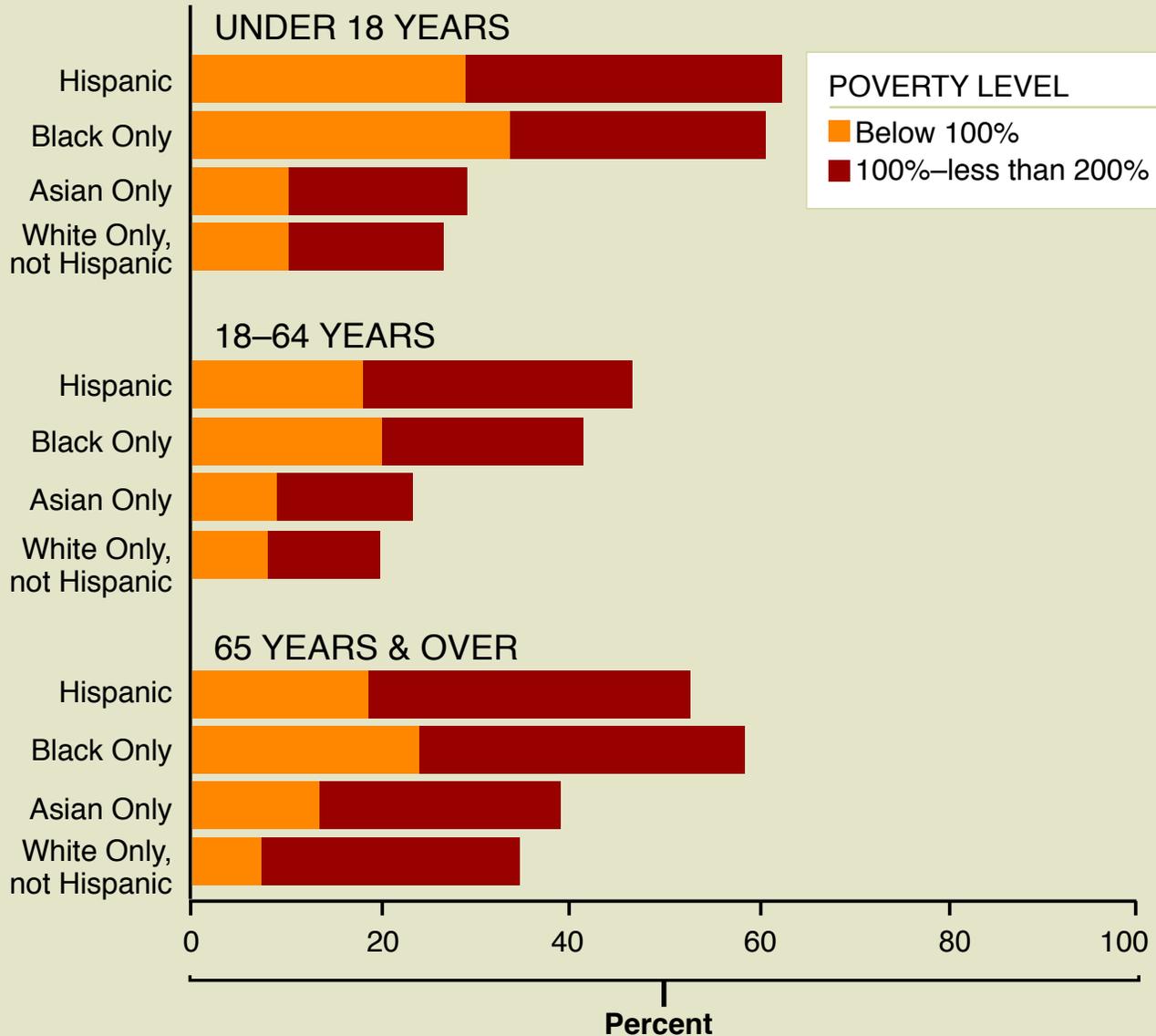
It is evident that many Hispanic older adults live well below the poverty level as illustrated in **Figure 2 on page 17**. Older Hispanic/Latino non-married women tend to experience poverty more than Hispanic men at 26.6% compared to 19.6%. Poverty poses a serious threat to the quality of life older Hispanic/Latina women face and suggests they struggle economically in their old age. For many Hispanic/Latino older adults, retirement may not an option. The types of occupations they have experienced have not allowed these older adults 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).

In the H-EPESE study of older adult Hispanics from the Southwest, Angel, Frisco, Angel and Chiroboga identified a relationship between financial strain and poorer self-rated health, increased probability of reported problems with physical functioning, and the ability for the older adult to provide self-care (2003). The authors conclude that the subjective aspects of health are more strongly related to financial strain and the sample of older Mexican American older adult may have access to social support which has a protective factor from financial strain (Angel, et al, 2003).

(INTRODUCTION & OVERVIEW CONT'D)



Low Income Population, 2002



Source: Centers for Disease Control and Prevention, National Center for Health Statistics, Health, United States, 2006, Figure 5. Data from the U.S. Census Bureau

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PATTERNS OF HEALTH RISK



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 and health disparities (Stevens & Cousineau, 2007). 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 subgroups (Hajat, Lucas, & Kingston, 2000).

Health indicators for persons of Puerto Rican descent were significantly worse than those of other Hispanic origin subgroups. For example, 21% of Puerto Rican persons reported having an activity limitation compared to 15% and 14% for Cuban and Mexican persons. Data in 2005–2006 showed that older Hispanics engaged less in physical activity compared to non-Hispanic White and black older adults (Federal Interagency Forum on Aging-Related Statistics, 2008).

“ Health indicators for persons of Puerto Rican descent were significantly worse than those of other Hispanic origin subgroups. ”

Ethnic differences in self-assessed health may not accurately reflect patterns resulting from objective health measurements. Older non-Hispanic white men and women report their health to be good compared to older adult Hispanics and African Americans (Federal Interagency Forum on Aging-Related Statistics, 2008). In this same report male Latinos over the age of 85 had the lowest health ratings.

The San Luis Valley Health and Aging Study compared self-rated health in Hispanics and non-Hispanic Whites 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 non-Hispanic Whites (OR 3.6; 95% CI 2.4–5.3). Adjustments for socioeconomic factors accounted for a portion of Hispanics’ lower health rating, but the strongest explanatory factor was acculturation.

(PATTERNS OF HEALTH RISK CONT'D)

Mortality from All Causes and Life Expectancy

The Hispanic mortality paradox has received growing attention since the epidemiological paradox for Mexican Americans in the Southwest was proposed over twenty years ago by Markides and Coreil (1986). The Hispanic paradox can be defined as the health and mortality advantage that the Hispanic population enjoys relative to the non-Hispanic White population, which seems to be more salient in old age (Turra & Goldman, 2007; Markides & Eschbach, 2005; Franzini, Ribble, and Keddie, 2001).

The evidence is based on various National and regional data sets including the National Death Index, Mortality, Medicare and Social Security files (Markides et al., 2005). Despite the evidence in the literature, research shows that self-reports indicate that this population reports poorer health and greater disability—results which are inconsistent with the health advantage findings. New findings regarding the Hispanic paradox show a mortality advantage with foreign-born Hispanics compared to U.S. born with middle and older ages, occurs more with other Hispanics rather than Puerto Ricans, and relevant to those who are of lower socioeconomic status (Turra & Goldman, 2007).

Based on the H-EPESE study examining widowhood among older Mexican Americans and risk for mortality, findings revealed that the risk of dying after the death of the spouse is extended to 33 months for Mexican Americans compared to previous findings of 24 months (Stimpson, Kuo, Ray, Raji, Peek, 2007).

IMPORTANT TERM

Hispanic Mortality Paradox—refers to the fact that the health and mortality advantage that the Hispanic population has relative to the non-Hispanic White population and seems to be more salient in old age (Turra & Goldman, 2007; Markides & Eschbach, 2005; Franzini, Ribble, and Keddie, 2001).



Table 6 on page 20 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 non-Hispanic Whites (standardized rate ratio or SSR = 0.74 for men, and 0.82 for women) (Sorlie, Backlund, Johnson, & Rogot, 1993).

(PATTERNS OF HEALTH RISK CONT'D)

Table 6

All Cause Mortality and Five Leading Causes of Death for Hispanics and non-Hispanic Whites Aged 65 and Over

Mortality Rates per 100,000 Population

Cause of Death	Age Group	♂ _H	♂ _{NHW}	Odds Ratio	♀ _H	♀ _{NHW}	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
Heart Diseases (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	135	0.95	98	111	0.88
	75–84	304	304	0.63	287	438	0.66
	85+	788	788	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



♂_H = Hispanic Male
 ♀_H = Hispanic Female
 ** Females Only

♂_{NHW} = Non-Hispanic White Male
 ♀_{NHW} = Non-Hispanic White Female

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

(PATTERNS OF HEALTH RISK CONT'D)

These findings are consistent with observations reported from the National Health Interview Study (1986-1990) with 27,000 Hispanics and nearly 300,000 non-Hispanic Whites 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 non-Hispanic White men, 1,581 for Hispanic women, and 1,897 for non-Hispanic White 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 non-Hispanic Whites, especially in those over age 65.

Table 6 presents 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). Each of the disease-specific mortality rates is lower in Hispanics than non-Hispanic Whites.

Table 7 below shows that the top five causes of death for older Hispanics explain 70% of all causes of death, suggesting that these diseases are critical for health prevention efforts. The other five diseases that are important causes of death among Hispanics include influenza, pneumonia, Alzheimer's Disease, nephritis, accidents (or unintentional injuries), and chronic liver disease (Heron & Smith, 2007).

 Table 7 Leading Causes of Death for Hispanics, 65+		
	Number	Percentage of Total Deaths
All Causes of Death	66,944	100%
Diseases of the Heart	21,301	31.8%
Malignant Neoplasms	14,013	20.9%
Cerebrovascular Diseases	4,930	7.4%
Diabetes Mellitus	4,180	6.2%
Chronic Lower Respiratory Diseases	2,634	3.9%
Total (for top 5 causes)	47,058	70.3%

Source: *National Vital Statistics Report*, Heron & Smith, 2007

(PATTERNS OF HEALTH RISK CONT'D)**Disease-Specific Mortality Rates****Coronary Heart Disease**

In the Current Population Surveys conducted by the Census Bureau, Hispanics also had a lower mortality from cardiovascular diseases (Standardized Rate Ratio [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/non-Hispanic White mortality rate ratio (or odds ratio) for men at 0.77 (95% CI 0.64-0.93), and for women at 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 non-Hispanic White men; 24.1% in Hispanic women vs. 24.9% in non-Hispanic White 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 non-Hispanic White men and 35 for Hispanic women vs 74 for non-Hispanic White 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, 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 related 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 Mexican American women (RR=1.43, 95% CI 1.12 – 1.82); in men, the risk ratio (RR) was not significant.

Cerebrovascular Disease

In 2004, cerebrovascular disease was the 3rd leading cause of death in Hispanics over the age of 65 in the U.S (Centers for Disease Control and Prevention). Hispanics had mortality rates from stroke substantially lower than non-Hispanic Whites 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 non-Hispanic Whites. 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 stroke mortality at earlier ages, while non-Hispanic Whites' rates were higher after 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).

Malignancies

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

Morbidity**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 non-Hispanic White counterparts (Goff, Nichaman, Chan, Ramsey, Labarthe, & Ortiz, 1997). The San Antonio Study, a population-based survey

(PATTERNS OF HEALTH RISK CONT'D)

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 non-Hispanic Whites (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 angina prevalence remained higher ($p < .05$) in Mexican American men, but not in women.

CHD incidence and prevalence was compared in the Hispanic and non-Hispanic White populations of San Luis Valley in rural, southern Colorado (Rewers, Shetterly, Hoag, Baxter, Marshall, & Hamman, 1993). This is a unique subgroup of Hispanics, calling themselves Spanish-Americans, who 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 non-Hispanic Whites, especially men. While the prevalence of CHD in Mexican Americans with diabetes was not different compared to those without diabetes (RR=1.0, 95% CI 0.6–1.7), non-Hispanic Whites with diabetes had significantly higher rates of CHD when compared to non-Hispanic Whites 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).

Cardiovascular (Atherosclerotic) Risk Factors

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, a more sedentary life style, and more 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. They had 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 non-Hispanic Whites, 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 prevalence 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 non-Hispanic White men drink alcohol more frequently than Hispanic men, and very few Hispanic women drink daily, which could increase the risk for CHD in Hispanics.

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

(PATTERNS OF HEALTH RISK CONT'D)

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 non-Hispanic Whites.

Smoking

An analysis of population-based, cross-sectional surveys conducted in California between 1979 and 1990 paired Hispanic men and women with non-Hispanic White counterparts (Winkleby, Schooler, Kraemer, Lin, Fortmann, 1995). There were large differences in smoking prevalence rates between Hispanic and non-Hispanic White pairs with low educational attainment (less than high school education), with non-Hispanic Whites 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 Mexican Americans over age 65 from the Southwestern United States (Markides, et al., 1999).

Cerebrovascular Disease and Stroke

A study from a neurological institute in Arizona comparing 242 Hispanic stroke and TIA patients with 1290 non-Hispanic White patients found that hemorrhagic stroke was more common in Hispanics than in non-Hispanic Whites (48% vs. 37%), and cardioembolic stroke was less prevalent (9% vs. 16%) (Frey, et al., 1998). Hypertension and diabetes were more often risk factors in Hispanics, who also had a lower mean age of stroke onset.

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 non-Hispanic White 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 older adult 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 Mexican Americans and non-Hispanic Whites (22.6 vs. 23.3%) (Burt, Whelton, Roccella, Brown, Cutler, Higgins, Horan, & Labarthe, 1995). However, only 35% of Mexican Americans were being treated and 14% had achieved control, percentages much lower than for non-Hispanic Whites.

Type 2 Diabetes Mellitus

The prevalence of Type 2 diabetes is 1.5 times greater in Hispanics than non-Hispanic whites. Hispanics are more likely to experience complications as a result of the disease (CDC, 2003; American Diabetes Association, 2003). Data on 3935 Hispanics in the Hispanic Health and Nutrition Examination Survey (HHANES, 1982–1984) 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

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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 significantly increasing trend in the incidence of Type 2 diabetes in Mexican Americans and a marginally significant trend in non-Hispanic Whites 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 to non-Hispanic Whites.

Findings from a study comparing rural Hispanic and non-Hispanic white older adults reported that highly-accultured Hispanics were more likely to have diabetes (Coronado, Thompson, Tejada, Godina & Chen, 2007). Other findings of note in this study were a lower proportion of Hispanics who reported exercising regularly and were less likely to use diet to manage their diabetes. An important qualitative study yielded findings that are critical for diabetes self-management. Two key factors that emerged in diabetes self-management included family support and religious faith (Carbone, Rosal, Torres, Goins & Bermudez, 2007).

Malignancies

Cancer incidence rates have been monitored in Hispanic populations using cancer registries and compared to those in non-Hispanic 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.

According to the American Cancer Society the lowest median age at any cancer diagnoses was among Latinos at age 62 years (2006). Latino cancer incidence was the lowest within all age categories from 20 years to over 75, although prostate cancer in Latino men age 75 was higher than in non-Hispanic Whites of this same age group (American Cancer Society, 2006).

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 non-Hispanic White women (Trapido, Chen, Davis, Lewis, MacKinnon, & Strait, 1994).

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 non-Hispanic Whites 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

(PATTERNS OF HEALTH RISK CONT'D)

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.

End-of-Life Care

Hispanic/Latinos die at home more frequently than other ethnic groups (Enguidanos, 2005). Generally they often underutilize hospice; however, the reasons remain unclear (Colon, 2005). Some causes have been attributed to lack of insurance, lack of information, and living in a minority community (Haas, 2007). However, no studies have been conducted specifically in the older adult population. Those Hispanic/Latino patients who do receive hospice services are likely to prefer to speak Spanish with their providers. As expected, families were more involved in the care of Hispanic family members under the care of hospice compared with non-Hispanic white populations; but non-Hispanic older adults do seem to make greater use of volunteer services from hospice program (Adams, 2006).

Cognitive and Emotional Status**Mental Status and Dementia**

NEW MEXICO: A battery of neuropsychological tests was used to compare performances in the Hispanics and non-Hispanic whites in the New Mexico Older adult Health Survey (LaRue, Romero, Ortiz, Liang, & Lindeman, 1999). Considering the educational, language fluency, socioeconomic, and cultural differences between the older adults 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.

NEW YORK: The largest prevalence research on dementia which included 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 in 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).

CALIFORNIA: 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 (ADDTTC), 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 older adults in that study did not seem to predispose them to higher rates of vascular dementia, as might be expected.

SOUTHWEST: 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

(PATTERNS OF HEALTH RISK CONT'D)

(Black & Markides, 1998).

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).

RURAL AREAS: 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 non-Hispanic White 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, for example, low acculturation was associated with more depression.

A study that examined Hispanic subgroup differences among Mexican American, Puerto Ricans and Cuban older adults relative to psychological distress also found that language acculturation had a beneficial effect on the positive well being of the older adults. The more acculturated older adults experienced less social isolation and had fewer financial problems (Krause & Goldenhar, 1992).

MASSACHUSETTS: The Massachusetts Elder Study (MAHES), a representative sample of community-based Hispanic older adults (predominately Puerto Rican and Dominican older adults) and a non-Hispanic white (non-Hispanic Whites) comparison group, reported a higher prevalence of depression among Puerto Rican older adults compared to the Dominican and non-Hispanic White older adults (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 non-Hispanic Whites.

CALIFORNIA: 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%;

“ Disability was greatest for Mexican American women suggesting they represent a particularly vulnerable population. ”

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).

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
- Use of assistive devices for walking

Mexican American men and women reported significantly more disability ($p < .01$) than non-Hispanic White 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 non-Hispanic Whites, however, there was no excess of observed functional difficulties (Hamman, Mulgrew, & Baxter, 1999). This study also examined Hispanic vs. non-Hispanic White 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).

CULTURALLY-APPROPRIATE GERIATRIC CARE: FUND OF KNOWLEDGE

To work effectively with Hispanic/Latino older adults, clinicians need to have some background knowledge about the significant factors affecting the population. Two issues of importance are:

- Historical Background
- The range of culturally-related health beliefs they may bring to the clinical encounter

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. The following information of the various subgroups is only a cursory description of the Hispanic/Latino origins. For a detailed historical discourse that reflects the magnitude of diversity that this population represents see Velez, Chalela, & Ramirez, 2007 chapter on Hispanic/Latino Health and Disease.

Mexican American

Early History

When Mexican Americans older adults 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 17th and 18th centuries, and when it was part of Mexico in the 19th 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.

Older adults 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 older adults 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

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.

Civil Rights Movement

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

(FUND OF KNOWLEDGE CONT'D)

founded by Cesar Chavez, an advocate for the migrant farmworkers, who fought for political, health, and working reforms for this population.

Struggles

Many Mexican American older adults have experienced lifelong 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 older adults who had immigrated to the U.S. at early ages and had never applied for citizenship. These older adults 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).

Cohort Analysis: For an abbreviated historical version of Mexican American older adults in the form of a cohort analysis see the Fund of Knowledge Module of the Culture Med Ethnogeriatrics Overview. 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).

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 which 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 island to the mainland 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.

Cuban

As a result of Fidel Castro's regime in the 1960s, about 37,000 Cubans immigrated to the United States seeking political asylum from 1959–1961. Unlike the Mexican American and Puerto Rican older adults, older adult 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 older adults were arrivals in this first wave of Cuban immigrants. Among all the Hispanic/Latino older adult 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).

Cultural Traditions, Beliefs and Values

The importance for health and human service providers of working toward cultural competence and cultural proficiency with the population they are caring for cannot be overemphasized.

(FUND OF KNOWLEDGE CONT'D)

Definition

Culture can be identified as one’s world view which includes “experiences, expressions, symbols, materials, customs, behaviors, morals, values, attitudes, and beliefs created and communicated among individuals,” and past down from generation to 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 elicit the older adult’s world view and use the explanatory models of illness as outlined in http://geriatrics.stanford.edu/culturemed/overview/assessment/ethnogeriatric_assessment.html#problem.

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

 Description of Hispanic/Latino Cultural Themes	
Cultural Theme	Description
Familismo	Importance of family at all levels: nuclear, extended, fictive kin (compadres). 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

(FUND OF KNOWLEDGE CONT'D)

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 which include use of language, country of origin, length of residence, contact with country of origin, parental expectations and food preferences. Familiarity with the acculturation continuum and dimensions within the continuum may help to facilitate and enhance communication with older adult Hispanic/Latino patients.

Previous studies have shown that higher levels of acculturation 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 older adult 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.

Acculturation Continuum

Retention of values and beliefs from one's own culture

Adoption of mainstream society's values and beliefs



CULTURALLY-APPROPRIATE GERIATRIC CARE: ASSESSMENT

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 toward facilitating 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. These older adults express a strong need to be treated with dignity (Villa et al., 1993).

Suggestions for respectful communications with older adults 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 to be a form of discrimination (Woloshin et. al., 1995).

A special issue in use of family members as interpreters among Spanish speaking older adults 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.

For a discussion of advantages and disadvantages of different types of interpreters, see the Assessment Module in the Culture Med, Ethnogeriatrics Overview: <http://geriatrics.stanford.edu/culturemed/overview/assessment> 

More info on family members as interpreters: **the Case of Mr. M in Instructional Strategies.**

(ASSESSMENT CONT'D)

End-of-Life Care Communication

For Hispanic/Latino Older adults and their Families

Hispanic/Latino older adults are more than other ethnic groups likely to prefer family-centered decision making. Variations within groups existed and were related to cultural values, demographic characteristics, level of acculturation, and knowledge of end-of-life treatment options (Kwak, 2005).

S.P.I.K.E.S. Communication Model

Different communication models have been suggested to approach the delivery of bad news and end of life decision making in family meetings. Models such as “S.P.I.K.E.S.” may be helpful (Baile and Buckman, 2006), particularly when dealing with large numbers of family members.

The model incorporates the following framework:

SETTING

PERCEPTION



With Latino families, discussing the “Patient” or “bringing the patient into the room,” in the form of asking family members about the patient preferences and/or specific questions such as—Who is the patient? What are the patient’s values? These questions may be helpful, as they redirects the discussion to what the patient would have wanted, rather than the families’ desires (Ragan, Wittenberg-Lyles, Goldsmith and Sanchez-Reilly, 2008).

INVITATION

KNOWLEDGE

EMPATHY

STRATEGY

Suggestions for respectful end of life communication with older adults from Hispanic/Latino backgrounds and their families include:

- As a sign of respect, older persons should be addressed by their last name.
- Family meetings are recommended, including as many relatives as requested by the family and as appropriate to each patient.
- If the health provider is not bilingual, supply outside (non-family) translation services if available and needed.
- It is possible that there will be larger family meetings, thus it is important to include all family members in the discussions; however identify the power of attorney for health care and the primary family spokesperson.
- Consider consulting palliative care services, as they have more experience in managing large family meetings.
- Assure that the patient and the family understand the discussions. It is possible that some persons will nod “yes” but not really comprehend. They may be embarrassed to ask for clarification. Try to avoid medical jargon and explain terminology as much as possible.
- Outright questioning of authority figures, such as a physician, is taboo in some cultures, so it is important for the provider to encourage the patient and family to ask questions.
- Propose a plan of care for the patient and leave your contact information with the family.

(ASSESSMENT CONT'D)**Background Information**

General information that could be helpful in assessing older persons from Hispanic/Latino backgrounds 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).

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 he/she thinks 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 him/her most about their illness.
- Ask why the patient thinks he/she is ill now.

Assumptive World

Getting into the “assumptive world” 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.

EXAMPLE: Older persons within traveling distance of Mexico obtain pharmacologically active compounds that are not always equivalent to medications bought in the United States.

Diet

Assessing cultural beliefs about illness includes asking about diet, especially if dietary prescriptions are components of traditional healing practices in their culture.

EXAMPLE: Maintaining balance by eating or not eating foods defined as “hot” or “cold” is common in many Hispanic/Latino cultures.

Ideas on Illness

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.

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.

(ASSESSMENT CONT'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.



Pre-testing instrument or assessment tool is necessary to ensure cultural equivalency.

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 on the following page.

(ASSESSMENT CONT'D)

OTHER TRANSLATION METHODS**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 world view 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).

Clinical Assessment**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 older adult'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:

- The Mini-Mental State Examination (MMSE)
- The Short Portable Mental Status Questionnaire (SPMSQ)

The MMSE has been criticized for its lack of sensitivity to lower education level individuals and studies have shown that certain items in the instrument are difficult to administer (Rosselli, Tappen, Williams & Salvatierra, 2006). 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).

Clock drawings have been used more often because they have been shown to be more sensitive to sociocultural influences (La Rue, Romero, Ortiz, et al, 1999). Similarly, clock-drawing also has shown the sensitivity of the MMSE to mild cognitive impairment syndromes in non-Alzheimer's type dementias (De Jager, Hogervorst, Combrinck, et al., 2003).

Findings from a study of Mexican American older adults in the Southwest show that the degree of affiliation with their Mexican American ethnicity correlates with poor performance on cognitive impairment (Heller, Briones, Schiffer, Guerrero, et al., 2006), even after controlling for education, age and gender.

(ASSESSMENT CONT'D)

That the authors were unable to make conclusions based on their findings, however, suggests that there are some unknown determinants of late-life cognitive impairment in these populations (Heller, et al., 2006).

Among older African-Americans, Hispanic-Americans, and persons with an 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 (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 a lack of schooling (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.

The Spanish and English Neuropsychological Assessment Scale (SENAS) was initially developed specifically to address bias in measurement of cognitive abilities for different ethnic groups. (Mungas, Reed, Crane, Haan, Gonzalez, 2004). For a more detailed description of the SENAS instrument see Mungas, Reed, Marshall, & Gonzales, (2000). 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).

Using the H-EPESE data researchers examined the association with cognitive decline and Mexican Americans with diabetes (Rotkiewicz-Piorun, Snih, Raji, Kuo, & Markides, 2006). Findings revealed that male Hispanics with high depressive symptoms and diabetic complications were likely to have greater declines in their MMSE scores over time.

Depression

In most cases, there is little information on how



For case study on depression, see the **Case of Mrs. R in Instructional Strategies.**

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 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 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)

(ASSESSMENT CONT'D)

See Baker and Espino (1997) for information on the Spanish language GDS.

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.

CULTURALLY-APPROPRIATE GERIATRIC CARE: DELIVERY OF CARE

Health Promotion and Disease Prevention

Special issues for Hispanic/Latino older adults 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 older adults 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 older adults, so special attention is recommended (Espino, Palmer, Miles, et al., 2000b).

2. Health Education

- a. Grassroots outreach educational programs for health promotion can benefit older Hispanic/Latinos. One study showed benefits from 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).
- b. 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 (*See*

See also recommendations for preventive care for all older Americans in **Culture Med Ethnogeriatric Overview, Delivery of Care of:**

http://geriatrics.stanford.edu/culturemed/overview/delivery_of_care/



Assessment on page 32). Caution should be taken about solely relying on written materials/brochures for health promotion purposes even when translated into Spanish.

- c. When relying on telephone methods, health providers or outreach workers miss the population of Hispanic/Latino older adults 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 older adult 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.

(DELIVERY OF CARE CONT'D)

Treatment Issues

Prescription and Over-the-Counter Medicine

A longitudinal study of older adult Mexican Americans in the Southwest revealed that 58.1% of the subjects 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 older adults between the ages of 65-74 used more hypoglycemic and endocrine medications. Older adults 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 by older adult 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)

Border Medication

The increased cost of medication in the United States is increasing the numbers of older adults 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).

Complementary and Alternative Medicine (CAM) and Healers

The subject of CAM is important for this older adult cohort because the use of CAM and traditional healers is often anecdotally mentioned in presentations but frequently not supported by empirical data. The data that are available include samples of the older adult population.

Prevalence of CAM

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). Herbal therapy is known to be one of the most frequently used a form of complementary medicine used in the U.S. (Bruno & Ellis, 2005). Two national studies revealed that 12.1% and 9.6% of the US population used a form of herbal therapy in the previous year (Eisenberg, Davis, Ettner, Appel, Wilkey, Van Rompay et al., 1998).

(DELIVERY OF CARE CONT'D)**Herbal Remedies**

A more recent national study revealed that the use of herbal remedies was highest among women, Hispanics, and non-Hispanic ethnic minorities (Bruno & Ellis, 2005). In this same study findings revealed that older adults used specific herbal remedies for conditions such as liver dysfunction, urinary and prostate problems, irritable bowel, depression and thyroid conditions, to name a few.

The older adults in this study believed that taking the herbal remedies along with their prescribed medicine would be helpful while others tried herbal remedies out of curiosity (Bruno & Ellis, 2005). Despite the reasons for taking the herbal supplements about half of the study participants did not discuss this use with their medical provider; thus it is important for medical providers to ask their older adult patients whether they use herbal supplements or other alternative medicines.

Older Californians

In a study of CAM use among older Californians, 50% of the 40 Hispanic older adults 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 health-related religious beliefs, are studied, it is usually only the frequencies of the beliefs and practices that are reported rather than the importance of these treatments or methods to individual health care and how the use affects the utilization of biomedical treatments.

“ Despite the reasons for taking the herbal supplements about half of the study participants did not discuss this use with their medical provider... ”

Healing Systems and Techniques

As defined in Villa et al., (1993) within the various Hispanic/Latino groups, healing systems/techniques include:

- Curanderismo
- Espiritismo
- 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)
- Sobadores (massage therapists)

Studies which have discussed the use of these healers and/or systems has not solely studied the aged population of Hispanic/Latinos, however the older adult 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).

Use of Folk Medicine Healers

HHANES Study: 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 older adults within their samples.

TEXAS: 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

(DELIVERY OF CARE CONT'D)

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 have been reported to be important values, beliefs and coping mechanisms used by this cohort of Hispanic/Latino older adults (Talamantes, Lawler, Espino, 1995; Villa, 1991)

ARIZONA: In an ethnographic study of Mexican American older adults 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 older adults 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 (pink eye), and caída de la mollera (fallen fontanel). About 12% indicated their involvement with spiritual cleansing (barridas or limpiezas). 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 older adults’ faith in God, which has been described in other studies (Applewhite, 1995; Talamantes, Lawler, Espino, 1995; Villa, 1991).

Espiritismo

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 (Molina, 1996). In an analysis of Puerto Rican espiritismo, 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.



For case study on Espiritismo, see the **Case of Mr. M in Instructional Strategies.**

(DELIVERY OF CARE CONT'D)

Working with Families, Caregiving, and Social Support

Social Support

Social support and family caregiving within the context of the Hispanic/Latino older adult 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 older adults. Based on previous studies social support networks appear to be more available for Hispanic/Latino older adults (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 older adults, however, has been debated in the literature (Aranda & Miranda, 1997). In contrast, older adult 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. Some studies have reported that older adult Hispanic/Latinos expect their children to provide support. (Cox & Monk, 1990; Markides, Boldt, and Ray, 1986). Mutual reciprocity

continues to be exhibited by the older adults and their families for care provision by well older adults and for disabled older adults (Sotomayor, 1992; Gallagher-Thompson, Talamantes, Ramirez, Valverde, 1996).

Family Caregiving

With the older adult 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 (Angel, et. al, 2004; Talamantes et al., 2006; 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 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 older adults were unaware of available formal services, or whether a distrust of the service network existed.

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

(DELIVERY OF CARE CONT'D)

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 Center for Epidemiologic Studies Depression Scale (CES-D) (Cox & Monk, 1990). In another study Puerto Rican caregivers were found to be providing instrumental and affectional support to their older adult 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 older adults, 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 “overridealization” of the family support system. Feelings expressed by Mexican American caregivers in focus groups included a sense of isolation and frustration (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).

For a detailed description of caregiving and caregiving interventions from the Mexican American, Puerto Rican and Cuban perspectives see *Ethnicity and the Dementias*, (2006) edited by Gwen Yeo and Dolores Gallagher-Thompson.

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 very inclusive 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 which 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.

(DELIVERY OF CARE CONT'D)**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 which may include lack of access as a result of language, education, and economic limitations 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 older adults.

Hospice, Dying and Death

The act of dying and death has been a more naturally accepted process culturally in the Hispanic/Latino communities than in 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

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 older adults often incorporate “dichos” or sayings about God and their faith (Talamantes, Gomez, & Braun, 2000).

THE FOUR UMPIRES: A PARADIGM FOR ETHICAL LEADERSHIP (CALDWELL AND BISCHOFF 2002)

The following is a universal model to follow when addressing medical ethical issues:

- 1. Medical Indications**
- 2. Quality of Life**
- 3. Patient Preferences**
- 4. Contextual Features**

For a case study on these issues, see the Case of Mr. B in Instructional Strategies



Dia de los muertos decorations in a cemetery in Los Angeles, CA © iStockphoto.com/Dana Baldwin

(DELIVERY OF CARE CONT'D)**Use of Hospice**

In contrast, although death appears to be more readily accepted by Hispanic/Latino older adults, the use of hospice services tends to be significantly less for this older adult 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 fact that 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 older adults 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; Blackhall, et al., 1995, Murphy, et.al., 1996).



For case study on Hospice, see the **Case of Mrs. D in Instructional Strategies.**

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 older adult's cultural background, including social-historical, religion and spirituality and health belief system
- Recognize language issues and screen for barriers to 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 older adults and families to begin to think about end-of-life issues (Gibson, 1990)
- Conduct grass root outreach efforts to discuss end-of-life issues
- Recruit bilingual/bicultural volunteers in hospice and palliative care programs.

ACCESS AND UTILIZATION

Primary and Acute Care

Health Insurance and Other Barriers

Hispanic older adults living in the United States are underinsured and more likely to be living in poverty. Although Hispanic/Latino older adults 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 (Kramarow 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 reduced 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, the authors 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.

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 patients' health care needs, socioeconomic status, insurance coverage, and availability of primary care, Hispanics were at greater

risk of hospitalization for preventable diseases than were non-Hispanic Whites (Gaskin, Hoffman, 2000).

Age-adjusted rates of percutaneous transluminal coronary angioplasty (PTCA) and coronary artery bypass graft (CABG) were compared in Mexican Americans and non-Hispanic Whites 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 non-Hispanic Whites were more likely to receive PTCA than Mexican Americans (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 older adults (For a more complete discussion, see Villa, et al., 1993).

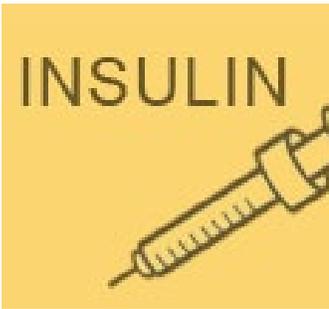
Long Term Care

Institutionalization

Based on the H-EPESE study, age, functional status, male gender, and cognitive impairment were the primary predictors of institutionalization of Latino older adults (Angel, Angel, Aranda, Miles, 2004). In a National Mortality Followback Survey there were similar proportions of non-Hispanic whites and Latinos died in nursing homes and were less likely to die in a private home (Iwashyna & Chang, 2002).

Yet another study found that Latinos experiencing more benefits or "uplifts" delayed institutionalization over an 11-month period compared to their Caucasian sample of older adults (Mausbach, Coon, Depp, Rabinowitz, Wilson-Aria, Kraemer et al., 2004).

(ACCESS AND UTILIZATION CONT'D)



For case study on long-term care, see the **Case of Mr J.R. in Instructional Strategies.**

More recent data on predictors of institutionalization among Latinos demonstrated the importance of the well-being of the caregiver. Caregivers reporting greater depression and increased care provision were more likely make decisions toward institutionalization (Gaugler, Kane, Kane, Newcomer, 2006). Gaugler, et al., 2006 reported that obtaining Medicaid also facilitated the institutionalization process for Latinos. Historically, preferences for family care and lower utilization of formal long-term care services has been examined in the literature on chronic illness management among Hispanic/Latino populations (Gaugler, et al., 2006; Villa et al., 1993).

In-Home Services

Use of in-home care services was found by Wallace and Lew-Ting (1992) to be twice as high among Puerto Ricans as among 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 older adults 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 services, and feelings of obligation by family caregivers. An exploratory study describes caregiving experiences by 8 Mexican American women and explores their attitudes about older adult care (Clark, & Huttlinger, 1998). A rich cultural heritage includes the importance of the family's responsibility to care for its older adult members and describes family commitments that reach beyond obligation.

Cultural Aversion Hypothesis

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 is crucial.

LEARNING RESOURCES: INSTRUCTIONAL STRATEGIES

Assignments

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

A. Readings

Readings on the sociological, historical and political origins on the various ethnic older adult groups.

B. Lectures and Presentations

Lectures/presentations by historians/sociologists/and community experts on the specific ethnic groups.

C. Interview

Interviewing an older adult on his or her life history. *See Interview Strategies: http://geriatrics.stanford.edu/culturemed/interview_strategies.html.*

D. Case Review

Reviewing cases and examining how SES may have impacted the health status.

E. Film and Video Review

Reviewing relevant historical/documentary films/videos on the Mexican American, Puerto Rican, or Cuban populations in the U.S.

F. Statistical and Survey Explanations

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 non-Hispanic Whites (mortality statistics) when subsequent, more rigorous community surveys fail to substantiate that there is less CHD in Hispanics?

G. Comparative Research

Supplementing information provided in 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. Social Support Research

Interviewing Hispanic older adults of different origins, e.g. Mexican Americans, Cubans, and Puerto Ricans, on the social support the older adults give, receive, and expect.

I. Presentation of Interview Results

Presenting the results of the interviews in class to compare and discuss similarities and differences and how they compare with other races/ethnicities.

J. Health Promotion/Disease Prevention Research

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. Case Study Discussions

Using the cases in this Module for class discussion or written assignments.

(LEARNING RESOURCES CONT'D)

Case Studies**The Case of Mr. M**

Mr. M is an 84 year-old patient who lives alone. Mr. M was born in Colombia but immigrated to the United States 50 years ago. He has worked as a custodian of a large

building in the city for a long time. He does not speak fluent English. He has a past medical history of diabetes, alcohol abuse and hypertension.

Mr. M is separated from his Colombian wife, but she lives in the same apartment building with their two daughters and several grandchildren. Mr. M fell while going to the bathroom one morning and could not get up. He was brought to the hospital via ambulance after someone heard him moaning. On exam, Mr. M was confused, and oriented only to his name. Further testing reveals a left hip fracture. He is “cleared for surgery” the same day. Multiple unsuccessful attempts are made to reach the family.

After surgery, Mr. M is in respiratory distress. You perform his intubation and respiratory therapy helps you with the mechanical ventilation parameters. Further testing indicates massive pulmonary embolism.

Several days later, Mr. M remains unresponsive and dependent on life support. The ICU physicians believe his prognosis is very poor. Mr. M’s family arrives after multiple attempted phone calls and phone messages by the ICU team. Mrs. Miguel states that she was away visiting her family in Colombia and she returned today.

You set up a meeting in an hour, and when you arrive, there are numerous people waiting for you. Mrs. M just saw her husband and is crying loudly “*Esto es terrible, no puedo creer que me pase a mi!*” (This is terrible; I cannot believe this is happening to me!).

At introduction time, you realize that there are 4 children, 1 of them from a different mother, several grandchildren, and patient’s relatives. All of them have questions for you.

This situation is very surprising for all of them. No one seems to know if Mr. M had advance directives, and by the looks on their faces, it is clear they might not understand the definition of an advance directive.

**Questions for Discussion**

1. What percent of Latinos in the U.S. have an advance care directive?
2. When dealing with large family meetings, what are some helpful tips for effective communication?
3. Who should be included in making decisions for Mr. M?
4. Legally, who is responsible for making decisions?

(LEARNING RESOURCES CONT'D)

**The Case of Mrs. R**

Mrs. 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 which left him paralyzed on the left side of his body. Recently he has started to become more combative, but Mrs. 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. Mrs. R. indicates “OK” and you make arrangements.

A follow-up visit is scheduled two weeks later, and Mrs. 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. Mrs. R apparently agrees and the colonoscopy is rescheduled.

Mrs. 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 Mrs. 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, Mrs. R scores 8 abnormal responses out 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 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. R’s own perception of her condition?
4. Legally, who is responsible for making decisions?

(LEARNING RESOURCES CONT'D)

**The Case of Mrs. J**

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 (Molina, 1996). In an analysis of Puerto Rican espiritismo, 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 Ricans 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).

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. has this disease for about 15 years; however, only in the past four years has his health begun to deteriorate. Throughout the course of his illness, Mr. J. has 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 has four children, two who live in Puerto Rico. These adult children provide 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 his life.

"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 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 have 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?

(LEARNING RESOURCES CONT'D)

**The Case of Mr. B**

Mr. B is a 70 year-old male patient from Venezuela with a past medical history of diabetes, high cholesterol, hypertension and severe hemodialysis-

supported renal disease. He presented to the hospital after he fell. Mr. B denied any other symptoms. Of note, patient also has dementia which has been progressive over the past several months.

Mr. B does recognize his family and is able to interact and communicate with others; however, he has become verbally and physically aggressive with his wife. Mr. B lives with his wife of many years, and has 2 sons who are very close to him. Mr. B has no insurance and is undocumented.

Mr. B was admitted to the hospital for observation, and also because during initial evaluation, his chest x-ray revealed a lung mass.

Mr. B has been admitted to the hospital and is being treated for pneumonia (lung infection), and is receiving hemo-dialysis. Also, he requires a nurse assistant to sit with him at all times due to agitation. Mr. B undergoes many tests to diagnose the etiology of the lung mass. The results of Mr. B's report from a CT scan of the chest, an MRI of chest and abdomen indicate that he has lung cancer with metastasis to bone. Multiple attempts have been made to try to biopsy the mass, all unsuccessful. Some nodes are noted around his aorta and on the liver.

There is no positive metastatic cancer diagnosis, but it is very likely. His wife and children wish to have this cancer diagnosed; because "yo quiero saber para rezar que ocurra un milagro" (I want to know so I can pray that a miracle happens). Also, the family thinks that Mr. B should continue dialysis. An ethics consultation is called to evaluate the situation.

**Questions for Discussion**

1. Should Mr. B continue hemodialysis? If so, who will pay for it?
2. Should Mr. B be offered more invasive procedures to diagnose this cancer, knowing that his prognosis is very poor?
3. Who is the decision maker?
4. The ethics consultation team must make a decision...

(LEARNING RESOURCES CONT'D)

**The Case of Mrs. D**

Mrs. D is 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 have two

adult children who live in the same city, but, not in close proximity. Mrs. D speaks 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 requires total care, and Mrs. D has one friend who comes to her house to bathe and transfer him to the wheelchair each morning. The friend returns 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.

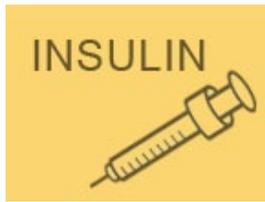
She described their relationship as being very close and they functioned as a team. "Compartimos el café de la misma taza" (We share coffee from the same cup).

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?

(LEARNING RESOURCES CONT'D)

**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 on his toe. Sure enough, he had developed a small but ominous blister on 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 which 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.

concluded. 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 a 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. Who is the decision maker?
4. What might have been done to increase the acceptability of insulin for Mr. J. R.?

(LEARNING RESOURCES CONT'D)

Student Evaluation**Papers, Projects and Reports**

1. Reflective papers on Life History assignment
2. Individual reports and group projects such as those mentioned under Instructional Strategies also can be used in the evaluation of student performance.

Objective Questions

1. Which Hispanic/Latino group has the highest median age? (click on ONE correct answer)

- A. Mexican American
- B. Cuban American
- C. Puerto Rican
- D. None of the Above

2. Among all Hispanic/Latino older adult groups all-cause mortality rates are (click on ONE correct answer):

- 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

3. (True or False) Patient autonomy has been found to be an important value among most older adults from Hispanic/Latino backgrounds.

- True
- False

4. (True or False) Hispanic/Latino older adults 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 Key**

1. B Cuban
2. A. Lower for Hispanic/Latinos over 65 compared to non-Hispanic Whites
- 3, False
4. False

(LEARNING RESOURCES CONT'D)**Essay Questions**

1. Discuss reasons why obtaining a historical cohort perspective would be important for a clinical encounter with a Hispanic/Latino older adult?
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 older adults regarding purchasing medications across the border?
5. What is the most appropriate method for eliciting information from Hispanic/Latino older adults regarding their use of herbal/folk remedies?
6. Name three methods for discussing end of life issues with Hispanic/Latino older adults.

REFERENCES

A

- Adams, C.E., Horn K. Hispanic access to hospice services in a predominantly Hispanic community. *Am J Hosp Palliative Care. Jan-Feb, 23* (1): 9–16
- American Diabetes Association. Diabetes Facts & Figures Among Latinos. Alexandria, VA: American Diabetes Association, 2003.
- Angel, J.L., Angel, R.J., Aranda, M.P., Miles, T.P. ((2004). Can the family still cope? Social support and health as determinants of nursing home use in the older Mexican-Origin population. *Journal of Aging and Health, 16*, 338–354.
- 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, R.J., Frisco, M., Angel, J.L., Chiroboga, D.A. (2003). Financial strain and health among elderly Mexican-origin individuals. *Journal of Health and Social Behavior 44*(4):536–51.
- Angel, J.L., & Tienda, M., (1987). Determinants of extended household structure: Cultural pattern or economic need? *American Journal of Sociology, 87*, 1360–1383
- Angel, J.L., & Whitfield, K.E. (2007). Setting the stage: Hispanic health and aging in the Americans. In J.L. Angel & K.E. Whitfield (Eds.), *The health of aging Hispanics*, pp.1-14. New York: Springer.
- 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, 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., & Knight, B. G. (1997). The influence of ethnicity and culture on the caregiver stress and coping process: a sociocultural review and analysis. *Gerontologist, 37*(3), 342-354.
- 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.
- Arguelles, T. & Arguelles, S. (2006). Working with Cuban American families. In G. Yeo & D. Gallagher-Thompson (Eds.) *Ethnicity and the Dementias*, pp 311–326. New York: Taylor and Francis Group.
- Astin, J.A., Pelletier, K.R., Marie, A., & Haskell, W., (2000). Complementary and alternative medicine use among elderly persons: One year analysis of a Blue Shield Medicare Supplement. *Journals of Gerontology, Series A, Biological Sciences and Medical Sciences, 55*(1):M4-9.

B

- Baile, W., Buckman, R., Schipira, L., & Parker, P. (2006). Breaking bad news: More than just guidelines. *Journal of Clinical Oncology, 24*(19), 3217.
- 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.

(REFERENCES CONT'D)

- Baker, F. M., Espino, D. V., Robinson, B. H., & Stewart, B. (1993). Depression among elderly African Americans and Mexican Americans. *Am J Psychiatry*, 150(6), 987-988.
- 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.
- Bernal, G. (1982). Cuban families. In M. McGoldrick, K.J., Pearce & J. Giordano. (Eds.) *Ethnicity and Family Therapy*. (pp. 187-205).
- Black, S.A., & Markides, K.S., (1998). Depressive symptoms and mortality in older Mexican Americans. *Journal of Clinical Epidemiology*, 45-52.
- 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.
- Bruno, J.J., Ellis, J.J., (2005). Herbal use among US elderly: 2002 National Health Interview Survey. *The Annals of Pharmacotherapy*, 39, 643-648.
- 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., Cuyllr, 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.

C

- Caldwell, C.; Bischoff, S. (2002). The Four Umpires: A Paradigm for Ethical Leadership. *Journal of Business Ethics*, 36, (1-2), 153-163.
- 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.
- Carbone, E.T., Rosal, M.C., Torres, M.I., Goins, K.V. & Bermudez, O.I., (2007). Diabetes self-management: Perspectives of Latino patients and their health care providers. *Patient Education and Counseling*, 66, 202-210.
- 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.

(REFERENCES CONT'D)

- 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.
- Centers for Disease Control and Prevention, National Center for Health Statistics, Health, United States, 2006, Figure 5.
- Centers for Disease Control and Prevention. National Diabetes Fact Sheet: General information and National Estimates on Diabetes in the United States, 2003, Atlanta, GA: US Department of Health and Human Services, Center for Disease Control and Prevention, 2003.
- Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System: Washington D.C.: Public Health Service. 2004 Annual Mortality File.
- 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., Kantan, 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.
- Colon, M. (2005). Hospice and Latinos: A review of the literature. *J Soc Work End Life Palliative Care*, 1(2):27-43.
- 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 of a bicultural community health worker on completion of diabetes education in a Hispanic population. *Diabetes Care*. 20(3), March, 254–257.
- Coronado, G.D., Thompson, B., Tejada, S., Gomina, R., Chen, L. (2007). Sociodemographic factors and self-management practices related to type 2 diabetes among Hispanics and non-Hispanic whites in a rural setting. National Rural Health Association: Winter.
- 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 minimal state examination by age and educational level. *Journal of the 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.

(REFERENCES CONT'D)

D

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.

De Jager, C.A., Hogervorst, E., Combrinck, M., et al (2003). Sensitivity and specificity of neuropsychological tests for mild cognitive impairment, vascular cognitive impairment, and Alzheimer's disease. *Psychological Medicine*, 33, 1039-1050.

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.

E

Eisenberg, D.M., Davis, R.B., Ettner, S.L., Appel, S., Wilkey, S., Van Rompay, M., et al (1998). Trends in alternative medicine use in the United States, 1990-19997. *JAMA*, 280, 1569-75.

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. *N Engl J Med*, 328(4), 246-252.

Enguidanos S, Yip J, Wilber K. (2005) Ethnic variation in site of death of older adults dually eligible for Medicaid and Medicare. *Journal of the American Geriatric Society*, 53, (8):1411-6.

Erkut, S., Alarcon, O., Coll, C. G., Tropp, L. R., & Garcia, H. A. (1999). The dual-focus approach to creating bilingual measures. *Journal of Cross-Cultural Psychology*, 30(2), 206-218.

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., (2000a). Patterns of prescription drug utilization in elder Mexican Americans: Result from the Hispanic EPESE study, *Ethnicity and Disease*, 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., (2000b). 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.

(REFERENCES CONT'D)

F

- Falcón, L.M. (2000). Prevalence and correlates of depressive symptoms among Hispanic elders in Massachusetts. *J Gerontol B Psychol Sci Soc Sci*, 55(2): S108–116.
- Falcon, L. M., & Tucker, K. L. (2000). Prevalence and correlates of depressive symptoms among Hispanic elders in Massachusetts. *J Gerontol B Psychol Sci Soc Sci*, 55(2), S108–116.
- Federal Interagency forum on Aging-Related Statistics. Older Americans 2008: Key Indicators of Well-Being. Federal Interagency Forum on Aging-Related Statistics. Washington, DC: U.S. Government Printing Office. March 2008.
- 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.
- Fillenbaum, G., Heyman, A., Williams, K., Prosnitz, B., & Burchett, B. (1990). Sensitivity and specificity of standardized screens of cognitive impairment and dementia among elderly black and white community residents. *J Clin Epidemiol*, 43(7), 651–660.
- Fitten, L. J., Ortiz, F., & Ponton, M. (2001). Frequency of Alzheimer's disease and other dementias in a community outreach sample of Hispanics. *J Am Geriatr Soc*, 49(10), 1301–1308.
- Fligstein, N. & Fernandez, R.M. (1994). Hispanics and Education, In P.S.J. Cafferty & W.C. McCready (Eds.) *Hispanics in the United States—A New Social Agenda*, (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.
- Franzini, L., Ribble, J. C., & Keddie, A.M. (2001). Understanding the Hispanic paradox. *Ethnicity and Disease*, 11, 496–518.
- 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.
- Friss, L., Whitlatch, C., & Yale, R. (1990). *Who's taking care? A profile of California's family caregivers of brain-impaired adults*. San Francisco: The Family Survival Project.

G

- Gallagher-Thompson, D., Talamantes, M., Ramírez, 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 and Review*, 57 Suppl (1), 85–107.

(REFERENCES CONT'D)

- Gaugler, J.E., Kane, R.L., Kane, R.A., Newcomer, R. (2006). Predictors of institutionalization in Latinos with dementia. *Journal of Cross Cultural Gerontology*, 21, 139–155.
- Gerontological Research Group (2008). Retrieved from <http://www.grg.org/> on December 1, 2008.
- Gilbson, J.M., (1990). National values history project. *Generations*, 14(Suppl. 1990), 51–63.
- 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., Aneshenel, 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.
- Gratton, B., (1987). Familism among Black and Mexican American elderly: Myth or reality? *Journal of Aging Studies*, 1, 1932.
- 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 ethnic-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.

(REFERENCES CONT'D)

H

- Haas JS, Earle CC. (2007). Lower use of hospice by cancer patients who live in minority versus white areas. *J Gen Intern Med.*, 22(3):396–9.
- 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., Aguero, 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.
- Héller, P.L., Briones, D.F., Schiffer, R.B., Guerrero, M., Royall, D.R., Wilcox, J.A., Ledger, E.M. (2006). Mexican-American ethnicity and cognitive function: Findings from an elderly southwestern sample. *Journal of Neuropsychiatry and Clinical Neuroscience*, 18 (3), 350–355.
- Heron, M.P., & Smith, B.L. (2007). Deaths: Leading Causes for 2003. *National Vital Statistics Reports*. Mar 15; 55(10), 1–92.
- 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, Suppl. 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.
- Howe, L.H., Wu, X, Ries, L.A., Cokkinides, V., Ahemd, F., Jemal, A., Miller, B., Williams, M. et al., (2006). Annual report to the nation on the status of cancer, 1975–2003, featuring cancer among U.S. Hispanic/Latino populations. American Cancer Society. Retrieved on October 27, 2008 from <http://www.InterScience.wiley.com>.
- 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 49(3), 216–223.

(REFERENCES CONT'D)

I

Iwashyna, T.J. & Chang, V.W. (2002). Racial and ethnic differences in place of death: United States, 1993. *Journal of the American Geriatrics Society*, 50, 1113–1117.

J

John, R., & McMillian, B., (1998). Exploring caregiver burden among Mexican Americans: cultural prescriptions, family dilemmas. *Journal of Aging and Ethnicity*. 1(2), 93–111.

K

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 Culture. An exploration of the borderland between anthropology, medicine and psychiatry*. Los Angeles, CA: University of California Press.

Kleinman, A., & Good, B. (Eds.) (1985). *Culture and Depression: Studies in the anthropology and cross-cultural psychiatry of affect and 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. (1992). Acculturation and psychological distress in three groups of elderly Hispanics. *Journal of Gerontology*, 47(6): S279–S288.

Kwak J, Haley WE (2005). Current research findings on end-of-life decision making among racially or ethnically diverse groups. *Gerontologist*, 45(5): 634–41.

L

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 Neuropsychologist*, 13,474–486.

Leveille, S. G., Guralnik, J. M., Ferrucci, L., Corti, M. C., Kasper, J., & Fried, L. P. (1998). Black/white differences in the relationship between MMSE scores and disability: the Women's Health and Aging Study. *J Gerontol B Psychol Sci Soc Sci*, 53(3), P201-208.

Liao, Y., Cooper, R.S., Cao, G., Durazo-Arividu 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., Allen, A. S., Liang, H. C., Baumgartner, R. N., Koehler, K. M., et al. (1999). Alcohol consumption is negatively associated with the prevalence of coronary heart disease in the New Mexico Elder Health Survey. *J Am Geriatr Soc*, 47(4), 396-401.

(REFERENCES CONT'D)

- 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. (1998). 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.
- M**
- 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 of Behavioral Science*, 9(2) 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. & Coreil, J. (1986). The health of Southwestern Hispanics: An epidemiologic paradox. *Public Health Reports*, 101, 253–265.
- Markides, K.S. & Eschbach, K. (2005). Aging, migration, and mortality: Current status of Research on the Hispanic paradox. *Journals of Gerontology: SERIES B*, 60B (Special Issue), 68–75.
- 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. *Preventive Medicine*, 28, 251–254.
- Markides, K.S., Rudin, L., Angel, R.J., & Espino, D.V. (1997). 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.
- Mausbach, B.T., Coon, D.W., Depp, C., Rabinowitz, Y.G., Wilson-Aria, E., Kraemer, H.C., et al., (2004). Ethnicity and time to institutionalization of dementia patients: A comparison of Latina and Caucasian female caregivers. *Journal of the American Geriatrics Society*, 52, 1077–1084.
- 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 patients: 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(5): 415–426.
- 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). Archtypes 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.

(REFERENCES CONT'D)

- Montoro-Rodriguez, J., Small, J.A., McCallum, T.J. (2006). Working with Hispanic/Latino American families with focus on Puerto Rican. In G.Yeo & D. Gallagher-Thompson, (Eds.), *Ethnicity and the Dementias* (2nd edition), pp28–310. New York: Taylor & Francis Group.
- Morrison, R. S., Zayas, L. H., Mulvihill, M., Baskin, S. A., & Meier, D. E. (1998). Barriers to completion of health care proxies: an examination of ethnic differences. *Arch Intern Med*, *158*(22), 2493-2497.
- 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. 1–28). 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.
- Mungas, D., Reed, B.R., Crane, P.K., Haan, M.N., Gonzalez, H. (2004). Spanish and English neuropsychological assessment scales (SENAS): Further development and psychometric characteristics. *Psychological Assessment*, *16*(4), 347–359.
- Mungas, D., Reed, B.R., Crane, P.K., Haan, M.N., Gonzalez, H. (2000). Development of psychometrically matched English and Spanish neuropsychological tests for older persons. *Neuropsychology*, *14*, 209–223.
- Mungas, D., Reed, B. R., Marshall, S. C., & Gonzalez, H. M. (2000). Development of psychometrically matched English and Spanish language neuropsychological tests for older persons. *Neuropsychology*, *14*(2), 209-223.
- Murphy, S. T., Palmer, J. M., Azen, S., Frank, G., Michel, V., & Blackhall, L. J. (1996). Ethnicity and advance care directives. *J Law Med Ethics*, *24*(2), 108-117.
- Mutchler, J.E., & Brallier, S. (1999). English language proficiency among older Hispanics in the United States. *The Gerontologist*, *39*(3): 310–319.

N

National Coalition of Hispanic Health and Human Services Organizations (1995). March/April, *9*(4): 300–311.

National Vital Statistics Report, (2007), Heron & Smith.

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.

(REFERENCES CONT'D)

O

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 of the American Geriatrics Society, 48*, 1132–1135.

P

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 of Medicine, 110*:81–87.

Pawling-Kaplan, M., & O'Connor, P. (1989). Hospice care for minorities: an analysis of a hospital-based inner city palliative care service. *Am J Hosp Care, 6*(4), 13–21.

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 the American Geriatrics Society, 23*, 433–441.

Ponton, M. O., Satz, P., Herrera, L., Ortiz, F., & et al. (1996). Normative data stratified by age and education for the Neuropsychological Screening Battery for Hispanics (NeSBHIS): Initial report. *Journal of the International Neuropsychological Society, 2*(2), 96–104.

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. *American Journal of Kidney Diseases, 23*(6):803–7.

R

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.

Ragan, S., L., Wittenberg-Lyles, E. M., Goldsmith, J., & Sanchez-Reilly, S. (2008). *Communication as comfort: Multiple voices in palliative care*. New York: Routledge.

Ramirez, R.R. (2004). We the people: Hispanics in the United States. U.S. Department of Commerce, Economics and Statistical Administration. U.S. Census Bureau. Retrieved on July 10, 2008 from <http://www.census.gov/prod/2004pubs/censr-18.pdf>

Ramirez, A. G., Cousins, J. H., Santos, Y., & Supik, J. D. (1986). A media-based acculturation scale for Mexican-Americans: Application to public health education programs. *Family & Community Health: The Journal of Health Promotion & Maintenance, 9*(3), 63–71.

(REFERENCES CONT'D)

- Ramsey, D.J., Goff, D.C., Wear, M.L., Labarthe, D.R., & Nichaman, M.Z. (1997). 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 Reports*, III (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.
- Romero, L. J., Lindeman, R. D., Koehler, K. M., & Allen, A. (1997). Influence of ethnicity on advance directives and end-of-life decisions. *JAMA*, 277(4), 298-299.
- Rosselli, M., Tappen, R., Williams, C., Salvatierra, J. (2006). The relation of education and gender on the attention items of the mini-mental state examination in Spanish speaking Hispanic elders. *Archives of Clinical Neuropsychology*, 21, 677–686.
- Rotkiewicz-Piorun, A.M., Snih, S.A., Raji, M.A., Yong-Fang, K., Markides, K.S. (2006). Cognitive decline in older Mexican Americans with Diabetes. *Journal of the National Medical Association*, 98(11), 1840–1847.
- S**
- Sabogal, F., Marin, G., Oterero-Sabogal, R., VanOss Marin, B., & Perez-Stable, E.J. (1987). Hispanic familism and acculturation: What changes and what doesn't? *Hispanic Journal of Behavioral Sciences*, 9(4): 397–412.
- Saldana, D. H., Dassori, A. M., & Miller, A. L. (1999). When is caregiving a burden? Listening to Mexican American women. *Hispanic Journal of Behavioral Sciences*, 21(3), 283–301.
- 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 of 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.

(REFERENCES CONT'D)

- Sorlie, P.D., Backlund, E., Johnson, N.J., & Rogot, E. (1993). Mortality by Hispanic status in the United States. *Journal of the American Medical Association*, 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.
- Stevens, G.D. & Cousineau, M.R. (2007). Health Disparities in Multicultural Populations. In M.V.Kline & R.M.Huff (Eds.) *Health Promotion in Multicultural Populations- A Handbook for Practitioners and Students*, (pp. 102-124). Thousand Oaks, CA: Sage
- Stimpson, J.P., Young-Fang, K., Ray, L.A., Mukaila, A.R., Peek, K. ((2007). Risk of mortality related to widowhood in older Mexican Americans. *Annals of Epidemiology*, 17, 313-319.
- 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 the American Geriatrics Society* 47(7): 804-810.
- Sundquist, J., Winkleby, M. A., & Pudarcic, S. (2001). Cardiovascular disease risk factors among older black, Mexican-American, and white women and men: an analysis of NHANES III, 1988-1994. Third National Health and Nutrition Examination Survey. *J Am Geriatr Soc*, 49(2), 109-116.
- 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.
- T**
- Talamantes, M.A., Aranda, M.P. (2004). *Cultural competency in working with family caregivers*. San Francisco, CA: Family Caregiver Alliance.
- 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, H.D. (1992). *Unpublished tape recorded oral history*, El Paso, Texas.
- Talamantes, M. A., Gomez, C., & 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*. Thousand Oaks, CA: Sage.
- 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.
- Talamantes, MA, Trejo, L., Jiménez, D. & Gallagher-Thompson, D. (2006). Working with Mexican American Families. In G. Yeo & D. Gallagher-Thompson (Eds.) *Ethnicity and the Dementias*, 2nd ed. pp 327-340. New York: Taylor and Francis Group.

(REFERENCES CONT'D)

- 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.
- Turra, C.M. & Goldman, N. (2007). Socioeconomic differences in mortality among U. S. adults: Insights into the Hispanic paradox. *Journals of Gerontology, Series B-Psychological Sciences and Social Sciences*. 62(3):S184–S192.
- U**
- U.S. Census Bureau, (2006). Current Population Survey
- U.S. Census Bureau, (2007). Current Population Survey, Annual Social and Economic Supplement
- U.S. Census Bureau, (2000). Current Population Survey, www.census.gov/population.
- 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. Bureau of the Census (1990). Summary Tape File 3C.
- U.S. Census Bureau (1998). Current Population Survey, Chappell, P.J.
- U.S. Department of Health and Human Services, Administration on Aging, (2010). A Statistical Profile of Hispanic Older Americans Aged 65+. www.aoa.gov/AoARoot/Aging_Statistics/minority_aging/Facts-on-Hispanic-Elderly.aspx. Retrieved 8/19/2010.
- U.S. Social Security Administration, Office of Policy. Income of the Aged Chartbook, (2004). Retrieved on October 23, 2008 from http://www.ssa.gov/policy/docs/chartbooks/income_aged/2004
- V**
- 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.
- Velez, L.F., Chalela, P, Ramirez, A.G. (2007). Hispanic/Latino health and disease. In M.V.Kline & R.M.Huff (Eds.), *Health Promotion in Multicultural Populations-A Handbook for Practitioners and Students* (2nd edition), (pp187–221) Los Angeles: Sage.
- Villa, M.L., Cuellar, J., Gamel, N., & Yeo, G. (1993). *Aging and Health: Hispanic American Elders* (2nd 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.
- W**
- 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.

(REFERENCES CONT'D)

- 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 and Review*, 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 of 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 the American Medical Association*, March 1, 273(9):724–8.
- Y**
- Yeo, G. & Gallagher-Thompson, D. (2006). *Ethnicity and the Dementias*, (2nd edition). New York: Taylor and Francis Group.
- 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* (2nd 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*, 2nd edition, Working Paper Series Number 12, Stanford Geriatric Education Center.