



Patterns of Health Risk

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



Course Director and Editor in Chief: **VJ Periyakoil, MD** Stanford University School of Medicine

✉ periyakoil@stanford.edu ☎ 650-493-5000 x66209 <http://geriatrics.stanford.edu>

Author: **Gwen Yeo, PhD (Emeritus)** Stanford University School of Medicine



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DESCRIPTION

This module presents an overview of the available information on the risk of health conditions and death among older adults from diverse ethnic backgrounds.

Most of the data are based on comparisons with the majority white older American or with averages for all older Americans. The range of ethnic differences in social support networks is also included.

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

Course Director and Editor in Chief of the Ethnogeriatrics Curriculum and Training

VJ Periyakoil, MD

Stanford University School of Medicine

Author

Gwen Yeo, PhD (Emeritus)

Stanford University School of Medicine

This edition of the module is based on a version developed by Eunice E. Choi, RN, DNSc, Janet Enslein, RN, MA, Lisa Skemp Kelley, RN, and Toni Tripp-Reimer, RN, PhD and edited by Gwen Yeo, PhD, in 2002. It has been updated, edited, and revised by Gwen Yeo, PhD.

LEARNING OBJECTIVES

After completion of this module, learners will be able to:



1. Identify the major sources of data on ethnogeriatric epidemiology and the gaps in available information
2. Describe the major differences in mortality rates between older adults from different ethnic populations in the U.S.
3. List five health conditions for which there are significant differences in risk between specific groups of ethnic older adults and the average for older Americans
4. Describe the ethnic-specific patterns of social support for frail and disabled older adults

MODULE CHARACTERISTICS



Time to Complete: 40 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

SOURCES OF DATA ON OLDER AMERICANS FROM SPECIFIC ETHNIC POPULATIONS AND THEIR LIMITATIONS

Mortality

Analyses of vital statistics data from death certificates.

LIMITATION: Mortality rates and life expectancy from national data are usually available only for the largest federally designated ethnic/racial categories, primarily black and white.

LIMITATION: Death certificates have been found to be marginally accurate as to cause of death, and in some cases for ethnic and racial identification as well.

Local or regional longitudinal data

LIMITATION: Only for specific ethnic populations included in the studies.

LIMITATION: Different results from different studies.

National data sets such as Health Interview Surveys, HANES, Medicare

LIMITATION: Smaller populations have too few subjects in the samples to be reported.

LIMITATION: Ethnic groups (e.g., Mexican American) within federally designated categories (e.g., Hispanic) are frequently not identified.

Regional, state and local data from surveys, longitudinal studies, epidemiological catchment area studies, hospital discharge data, and Medicare records; dissemination through scientific publications and academic centers.

LIMITATION: Different study designs, different definitions of ethnic populations, different indicators of health status, different exclusion criteria, and different results.

LIMITATION: Statistical differences are not always meaningful differences. In very large national data sets, such as Medicare or Health Interview Survey, a difference of one or two percentage points can be statistically significant, but they may not be clinically relevant.

LIMITATION: Variations within ethnic categories. Within each ethnic category and group, health status and mortality rates vary by education and income level, access to care, lifestyle, and sometimes by level of acculturation to the American culture.

NATIONAL DATA ON LIFE EXPECTANCY AND MORTALITY

Mortality Crossover


There is a “mortality crossover” effect between African Americans and non-Hispanic whites in which the higher mortality of African Americans in younger ages decreases in old age. As evidenced by Table 2-1 to the right, whites have a 5.1 year advantage in life expectancy at birth, which by age 75 has decreased to 0.5 years.

By 85 and after African American elders have slightly lower mortality rates than whites, and therefore slightly longer life expectancy. (Hummer, Benjamins, and Rogers, 2004). In the 1970s and 1980s the crossover occurred at earlier ages.

Although comparable federal data on life expectancy are not available for the other minority populations, there is evidence that, compared to non-Hispanic whites, by age 85 mortality in the other three populations is lower, so that elders would be expected to live longer on average than whites. (Hummer et al., 2004). Compared to Non-Hispanic whites: Mortality is 13% lower for Hispanic Americans, (16% lower for Mexican American) in ages 65 to 85.

Among Native Americans at age 65, mortality is 19% higher, but the differences decline with age so that by age 85, their mortality rates are actually 3% lower than whites, another example of a mortality crossover.

Among Asian/Pacific Islanders mortality is considerably lower than white elders at age 65, (only 36% of whites rates), but the differences decrease so that by age 85, it is almost the same (97% of whites).


 Life Expectancy at Birth & Ages 65 & 75 Whites & African Americans in the U.S., 2005			
Life Expectancy	At Birth	At Age 65	At Age 75
All Races			
Both Sexes	77.8	18.7	12.0
Males	75.2	17.2	10.8
Females	80.4	20.0	12.8
Black/African American			
Both Sexes	73.2	17.2	11.4
Males	69.5	15.2	10.0
Females	76.5	18.7	12.3
Whites			
Both Sexes	78.3	18.8	11.9
Males	75.7	17.2	10.7
Females	80.8	20.0	12.8

Source: Adapted from National Center for Health Statistics. *Health United States, 2007, With Chartbook on Trends on the Health of Americans, 2007.* Table 27. <http://www.cdc.gov/nchs/hus.htm>. Accessed 2.7.09

SUBGROUP DATA ON LIFE EXPECTANCIES FROM STATE SOURCES

California

Analysis of California data:

 Life Expectancy at Birth: Ethnic Subgroups in California, 2000					
Populations	Total	Males	Females	U.S. Born	Foreign Born
All Californians	78.4	76.0	80.0	77.4	81.5
American Indian	78.2	76.6	79.6	78.0	
Asian American	83.0	80.5	85.2	85.4	83.0
Asian Indian	84.3	81.5	88.1		83.1
Cambodian	77.3	75.5a	81.6*		78.2
Chinese	83.7	81.8	85.5	86.6	83.7
Filipino	82.5	79.7	85.3		82.9
Hmong	79.3	78.3*	82.0*		80.2
Japanese	82.9	80.9	84.6	83.2	83.9
Korean	83.2	80.8	85.2		83.0
Laotian	75.3	73.0*	80.4*		76.5
Vietnamese	83.8	82.0	85.7		83.7
Black/African American	72.1	69.0	75.3	71.9	77.2
Latino	80.5	77.7	83.2	79.2	82.1
Mexican	79.3	76.6	82.0	78.0	81.1
Puerto Rican	79.9	77.1	82.7	79.5	
Cuban	80.7	77.5	83.9		80.2
Central/South American	78.4	75.5	80.6		
Pacific Islander	74.0	70.5	77.8		
White	77.8	75.5	80.1	77.7	79.7

**Foreign-born only*
Source: Adapted from Johnson & Hayes, 2004

(SUBGROUP DATA CONT'D)**Hawaii**

Data from Hawaii from 1990 on life expectancy at birth for some of the Asian subpopulations are similar to the California data above in Table 2.2 with the following minor differences:

- Slightly lower life expectancies are found among white (Caucasian), Filipino, Chinese males, and Japanese males
- Slightly higher life expectancies are found among the Native Hawaiian as compared to the Pacific Islander California data (Braun, Yang, Onaka, & Horiuchi, 1996).

DISPARITIES IN MORTALITY RATES

Excess Mortality

The difference between the number of deaths actually observed in the minority population and number of deaths that would have occurred in that group if both minority and non-minority populations had the same age- and sex-specific death rates.

African Americans

Higher mortality for coronary heart disease and stroke account for 24% of the excess mortality in black males, 41% in black females.

Black males have a greater likelihood of dying from cancer than any other population.

Hispanic Women

Some data indicate 45% higher heart disease mortality among older Puerto Rican women in the U.S. than older Anglo women, but not for Puerto Rican men;

Cuban- and Mexican-born older adults had lower rates of heart disease mortality than Anglo older adults (Villa et al, 1993).

Mortality rates for cancer of the cervix among Mexican-born females in the U.S. was found to be twice as high as that of Anglo females; stomach and liver cancer were higher for both Mexican born males and females, but all other cancers showed lower cancer mortality (Villa, et al., 1993.)

AIPA

Japanese Americans, Chinese Americans, and Filipino Americans have lower age-adjusted death rates from all causes than Whites, Blacks, or American Indians (McBride, Morioka-Douglas, & Yeo, 1996).

American Indians

Excess deaths have been reported among older American Indians for tuberculosis, diabetes, pneumonia, and cirrhosis (John, 1997; McCabe & Cuellar, 1994).

Suicide

Suicide is much more common among older white non-Hispanic males than any minority category, and is higher among men than women in all categories. Among women it is slightly higher among Asian/Pacific Islanders than other populations (NCHS, 2007).

MORBIDITY

Disease States

Among older adults from the populations studied other than non-Hispanic white, data indicate that in many cases disease states tend to be more advanced by the time they are discovered clinically.

MORE INFORMATION:

SEE TABLE 2-4: Disparities in Health Status of U.S. Older Adults on page 9

Cancer and Cardiovascular Disease Rates

In some immigrant populations, rates of certain cancers and cardiovascular disease increased with time in the U.S.

Disparities in Chronic Conditions

Examples of disparities in chronic conditions by ethnic population other than those reported in Table 2-1 on mortality:

- Among persons aged 70 and over, non-Hispanic black and Mexican Americans had significantly higher levels of diabetes than non-Hispanic white older adults. Older adults from some American Indian tribes have the highest rates of diabetes among any populations. Some studies have also found higher rates of diabetes among Japanese American, Chinese American, and Filipino American older adults than among U.S. older adults as a whole (Hazuda & Espino, 1997; Kramer, 1997; Kramerow et al., 1999; McCabe & Cuellar, (1994); McBride et al., 1996).
- Non-Hispanic black older adults were 1.5 times more likely to report hypertension than non-Hispanic whites (Kramerow et al., 1999).
- Osteoporosis and hip fracture are more common in non-Hispanic white women than in non-Hispanic black or Hispanic women. Studies of post-menopausal Asian women in the U.S. have found lower rates of hip fracture but similar bone density as non-Hispanic white women (Kagawa-Singer, Hikoyeda, & Tanjasiri, 1997; Richardson, 1996; Villa et al., 1993).

(MORBIDITY CONT'D)




Disparities in Health Status of U.S. Older Adults:
Prevalence of, or Mortality from, Conditions Compared with Non-Hispanic Whites

Populations	More Prevalent	Less Prevalent
African American	Heart Disease Hypertension Cerebrovascular Disease Diabetes Most Cancers (especially prostate) Glaucoma Vascular Dementia Fair or Poor SRH Activity Limitation Untreated Dental Caries	Osteoporosis Respiratory Disease
American Indian/ Alaska Native*	Diabetes Fair or Poor SRH Activity Limitation Accidents (m) Alcoholism Cervical Cancer (f) Kidney Disease Liver Disease Tuberculosis Rheumatoid Arthritis Hearing Problems Vision Problems	Cancer (most kinds) Cerebrovascular Disease
Southwestern & Oklahoma Tribes	Gallbladder Cancer	
Alaska Natives	Esophageal Cancer Liver Cancer	

SRH=Self Rated Health; Diabetes=Type II Diabetes • (f)=females; (m)=males

*Rates vary greatly between tribes and geographic areas, especially in the rates of diabetes


(MORBIDITY CONT'D)

 Disparities in Health Status of U.S. Older Adults: Prevalence of, or Mortality from, Conditions Compared with Non-Hispanic Whites		
Populations	More Prevalent	Less Prevalent
Asian American	Tuberculosis	Hypertension Cerebrovascular Disease Cancer (most kinds) Respiratory Disease Hip Fracture
Asian Indian	Depression Insulin Resistance	
Cambodian	Severe Headache & Dizziness Post Traumatic Stress Disorder	
Chinese	Diabetes (f) Depression Suicide (f) Vascular Dementia Esophageal Cancer Nasopharyngeal Cancer (M) Liver Cancer Pancreatic Cancer (f) Colorectal Cancer Hepatitis B	Breast Cancer (f) Ovarian Cancer (f) Prostate Cancer (m) Colon Cancer (f)

SRH=Self Rated Health; Diabetes=Type II Diabetes • (f)=females; (m)=males

*Rates vary greatly between tribes and geographic areas, especially in the rates of diabetes


(MORBIDITY CONT'D)

 Disparities in Health Status of U.S. Older Adults: Prevalence of, or Mortality from, Conditions Compared with Non-Hispanic Whites		
Populations	More Prevalent	Less Prevalent
Filipino	Diabetes Hypertension Gout Liver Cancer Lung Cancer (m) Thyroid Cancer (f)	Breast Cancer (f)
Hmong	Diabetes Hepatitis B Post Traumatic Stress Disorder	
Japanese	Depression Suicide Diabetes Hemorrhagic Stroke Vascular Dementia Esophageal Cancer Stomach Cancer Colorectal Cancer Liver Cancer Osteoporosis (f)	
Korean	Fair or Poor SRH Liver Cancer (m) Diabetes	

SRH=Self Rated Health; Diabetes=Type II Diabetes • (f)=females; (m)=males

*Rates vary greatly between tribes and geographic areas, especially in the rates of diabetes

(MORBIDITY CONT'D)

 Disparities in Health Status of U.S. Older Adults: Prevalence of, or Mortality from, Conditions Compared with Non-Hispanic Whites		
Populations	More Prevalent	Less Prevalent
Vietnamese	Depression Cervical Cancer (f) Hepatitis B Liver Cancer Thyroid Cancer (f)	
Native Hawaiian and Pacific Islanders Americans	Heart Disease Hypertension Diabetes	
Guamanian	Parkinson's Disease	

SRH=Self Rated Health; Diabetes=Type II Diabetes • (f)=females; (m)=males

*Rates vary greatly between tribes and geographic areas, especially in the rates of diabetes

(MORBIDITY CONT'D)

Table 2-4 **Disparities in Health Status of U.S. Older Adults:**
Prevalence of, or Mortality from, Conditions Compared with Non-Hispanic Whites

Populations	More Prevalent	Less Prevalent
Hispanic/ Latino Americans	Fair or Poor SRH Activity/functional Limitations	Heart Disease Cancer (most types) Cerebrovascular Disease Respiratory Disease Accidents
Dominican	Dementia Diabetes Arthritis Hypertension	
Mexican	Diabetes Depression (f) Cervical Cancer (f) Liver Cancer Lung Cancer (m) Untreated Dental Caries	Hip Fracture or Osteoporosis Hypertension Arthritis
Puerto Rican	Diabetes Liver Cancer Heart Disease (f) Dementia Arthritis Cataracts Depression Hypertension	

SRH=Self Rated Health; Diabetes=Type II Diabetes • (f)=females; (m)=males

*Rates vary greatly between tribes and geographic areas, especially in the rates of diabetes

Sources: USDHHS (2006) Hummer et al.(2003); Richardson (1996); McCabe et al. (1994); McBride et al.(1996); Villa et al.(1993); Mui et al. (2003); Kagawa-Singer et al. (1997); Kramer (1997); Howe et al.(2001); Gomez et al.(2005); Markides et al. (1999); Tucker et al.(2000); Gurland et al.(1999); Yeo, 2004); Yeo & Gallagher-Thompson (2006)

FUNCTIONAL STATUS

Hispanic Older Adults

Data on various measures of functional status have consistently found that Hispanic older adults in the U.S. report greater activity limitations than their Anglo counterparts. Among older Hispanics, Puerto Ricans report more limitations than Mexican and Cuban Americans (Hazuda & Espino, 1997; Villa et al., 1993).

African Americans

Studies of functional status and disability among older African Americans have generally found higher rates of activity limitation than among their white counterparts. There is considerable variation by socio-economic status, however, and some older cohorts report less limitation than younger ones (Clark & Gibson, 1997; Richardson, 1996).

American Indians

More than half (59%) of American Indians over 65 reported one or more activity limitations in 1985, the highest of any ethnic population (McCabe & Cuellar, 1994).

Asian/Pacific Islanders

Almost no data are available on the functional status of older adults from ethnic groups in the Asian/Pacific Islander category.

SOCIAL SUPPORT

Support from Immediate Family

While most indicators of family support indicate that, in general, older adults from ethnic populations other than white receive higher levels of support from members of their immediate families, within each ethnic group there are isolated older adults with weak or no family ties (Yeo & Gallagher-Thompson, 2006).

Role of Older Adults within their Families

Older adults play important roles within their families in many ethnic communities, providing support through child care and financial assistance.

Extended Family

Assistance of extended family members in caring for frail older adults is common among many ethnic communities. Examples are families from African American, Mexican American, Filipino, and Vietnamese backgrounds.

Non-Family Support

Non-family support has been found to be common among African Americans in cases where fictive kin relationships are strong and, in many cases, where older adults are members of cohesive church communities. In ethnic groups where clan relationships are strong, such as Hmong and some American Indian communities, clan members can also be a strong source of support.

INSTRUCTIONAL STRATEGIES

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


A. Internet Research

Downloading the latest data on life expectancy and mortality rates for older adults from different ethnic populations from websites.

 See especially www.cdc.gov/nchs/hus.htm for charts that are updated annually.

B. Interview

Interviewing older adults from ethnic backgrounds different than the students' own on the assistance the older adults give, receive, and expect from their family members.

 See geriatrics.stanford.edu/culturemed/interview_strategies.html for guidelines on interviewing ethnic older adults.

C. Presentations

Presenting the results of the interviews in class to compare and discuss similarities and differences.

D. Group Projects

Group projects that address individual disease risks, such as diabetes, by researching the ethnic-specific incidence and prevalence, risks of complication by ethnic group, and interviews with ethnic older adults who have experienced the disease.

EVALUATION STRATEGIES

Evaluation Strategies for Specific Learning Objectives	
Learning Objectives	Suggested Evaluation Strategies
Identify the major sources of data on ethnogeriatric epidemiology and the gaps in available information.	Objective Test; Project A
Describe the major differences in mortality rates between older adults from different ethnic populations in the U.S.	Objective Test; Essay Question; Project A; Project D
List the health conditions for which there are significant differences in risk between specific groups of ethnic older adults and the average for older Americans	Objective Test; Essay Question; Project A
Describe the ethnic specific patterns of social support for frail and disabled older adults.	Essay Question; Project B; Project C

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LINKS



Administration on Aging Statistics

http://www.aoa.gov/AoARoot/Aging_Statistics/index.aspx

National Center for Health Statistics

www.cdc.gov/nchswww/fastat

Health United States, 2007, With Chartbook on Trends on the Health of Americans

Charts are updated yearly:

www.cdc.gov/nchs/hus.htm

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