U.S. Latino Population: 1970 to 2010

(Population in Millions)

Average growth rate from 1970 to 2010 ~52%

- 1970: 9.6 million
- 1980: 14.6 million
- 1990: 22.4 million
- 2000: 35.3 million
- 2010: 50.4 million
Percent Latino in the U.S. Population

- Latinos
- Mexican

<table>
<thead>
<tr>
<th>Year</th>
<th>Latinos</th>
<th>Mexican</th>
<th>All Latinos</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970</td>
<td>4.7%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1980</td>
<td>6.4%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1990</td>
<td>6.1%</td>
<td></td>
<td>9.0%</td>
</tr>
<tr>
<td>2000</td>
<td>7.3%</td>
<td></td>
<td>12.5%</td>
</tr>
<tr>
<td>2010</td>
<td>10.3%</td>
<td></td>
<td>16.3%</td>
</tr>
</tbody>
</table>

All Latinos = 16.3%
Percent Distribution of the Latino Population by Type of Origin: 2010

- Mexican: 63.0%
- Non-Mexican Central American: 10.9%
- South American: 9.2%
- Cuban: 8.0%
- Puerto Rican: 5.5%
- Other Latinos: 3.5%

Data Source: U.S. Census Bureau, 2010 SF1
POPULATION PROJECTIONS TO 2050

- Non-Hispanic Whites 210 million
- Hispanics 120 million (30%)
- African Americans (Blacks) 61 million
- Asian Origin 33 million

Early Literature – 1950’s and 1960’s

Writings on the Mexican American family emphasized the strengths and supportive qualities of the extended family (Carp, 1968; Reich et al, 1968).

Writings in the 1970’s criticized earlier literature for over-romanticizing the place of Mexican American elders in the extended family and for helping to foster stereotypes that might serve to deprive them of services they need (Moore, 1971; Maldonado, 1975).
Older Mexican Americans: A Study in an Urban Barrio (Markides & Martin, 1983)

Data collected in 1976 in the Southside of San Antonio led us to conclude that the Mexican American family had been changed by industrialization and urbanization.

Both older Mexican Americans and Anglos reported having good relationships with their children but Mexican Americans appeared to expect more from their children than their children were able or willing to deliver.

Such a conflict between expectations and reality was not present among older Anglos.
The previous findings led us to propose a study of three generations (older, middle-aged, and young adult) of Mexican Americans living in the San Antonio area.

Selected Findings

1. Traditional sex-role orientation was associated with more depressive symptoms in older Mexican American women (Markides and Vernon, 1984).

2. Marital status (divorce, widowhood) was associated with depressive symptoms in the younger generations. We found little evidence that widowhood was associated with depressive symptoms in the older generation among women.

3. Analysis of helping patterns revealed a high degree of reciprocity between older Mexican Americans and their children.
An Epidemiologic Paradox

- Hispanics (except Cuban Americans) are socioeconomically disadvantaged, but have favorable overall mortality

Risk factor profiles
- High rates of DIABETES
- High rates of OBESITY
- Similar rates of hypertension, cholesterol
- High SMOKING rates among men, lower among women (fewer cigarettes). Cuban American males smoke the most
- High ALCOHOL (binge) drinking rates among men, low among women. Alcohol consumption in women increases with acculturation
- Low rates of physical ACTIVITY
- Strong families
- Migration selection

Markides and Coreil (1986)
Recent Evidence of a Salmon Bias

- Turra & Elo (2008) used the Medicare-NUDIMENT data to examine the existence of a salmon bias.
- Data supported a salmon bias: foreign-born social security beneficiaries living abroad had higher mortality rates than foreign-born beneficiaries living in the U.S. Too small to explain mortality advantage.
- Effect of salmon bias on death rates is partially offset by the high mortality of Hispanic emigrants returning to the U.S.
EVIDENCE FROM MHAS
(Wong and Colleagues)

• While there is considerable return migration back to Mexico, MHAS data show that the vast majority of return migrants are younger.

• Very few older people return to Mexico because their children live in the U.S.
A Test of the “Healthy Migrant Effect” Using Data from the Mexican Family Life Survey (Rubalcava, Teruel, Thomas et al, 2008)

- 6446 respondents aged 15-29 in 2002. Some moved to the U.S. during the next three years.
- Health significantly predicted migration among females and rural males. However, associations were weak with considerable variation in the estimated between males and females and between urban and rural dwellers.
- Note: Small numbers of migrants might be a problem: 113 rural men; 87 urban men; 90 rural women; and 52 urban women.
Immigrant Enclaves

Osypuk, Diez Roux, Hadley & Kandula (2009) used data from the Multi-Ethnic Study of Atherosclerosis in four U.S. cities (New York, Los Angeles, St Paul and Chicago). They found that high neighborhood immigrant concentration was associated with lower consumption of high fat foods among Hispanics and Chinese but also less walk ability, fewer recreational exercise resources, worse safety, and other negative characteristics.
Overall Immigrant Advantage  
(Singh & Hyatt, 2006)

- **Immigrant mortality advantage not confined to Hispanics.** There appears to be an overall immigrant advantage which may have increased in recent years. Immigrant advantage was evident for cardiovascular diseases, major cancers, diabetes, respiratory diseases, suicide, and unintentional injuries. These trends due to growing heterogeneity of immigrant population, continuing advantages in behavioral characteristics, and migration selectivity.

- **Asian/Pacific Islanders had the highest life expectancy followed by Hispanics and non-Hispanic Whites.** For each ethnic origin, there was an immigrant advantage except for Asian/Pacific Islanders which likely reflects compositional differences between the native-born and immigrants (Markides & Colleagues, 2007).
Conclusions/Next Steps

- Migration selection still most viable explanation.
- A healthy migrant effect is found in most immigrant groups to the U.S. but also to Canada and Australia.
- Salmon bias exists but has minor effects.
- Immigrant communities. Need search for mechanisms.
- Low class has different meaning for Mexican Immigrants than for non-Hispanic Whites and African Americans.
- Increasing rates of obesity and diabetes including in old age. Hispanic EPESE data suggest increases in the prevalence of diabetes, disability, and cognitive impairment in very old Mexican Americans.
- Need closer examination of changes with time in the U.S. in health behaviors, diet, and obesity.
<table>
<thead>
<tr>
<th>Life Expectancy at Birth</th>
<th>Total</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hispanic:</td>
<td>80.6</td>
<td>77.9</td>
<td>83.1</td>
</tr>
<tr>
<td>Non-Hispanic White</td>
<td>78.1</td>
<td>75.6</td>
<td>80.4</td>
</tr>
<tr>
<td>Non-Hispanic Black</td>
<td>72.9</td>
<td>69.2</td>
<td>76.2</td>
</tr>
</tbody>
</table>

Adjusted for misclassification of race and Hispanic origin on death certificates.
80+ rates for Hispanics based on Non-Hispanic White rates.
A LONGITUDINAL STUDY OF THE HEALTH OF MEXICAN AMERICAN ELDERLY 1992-2014
FUNDED BY NIA (HISPANIC EPESE)

UTMB, GALVESTON, TX
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• Yong-Fang Kuo, Ph.D. – Biostatistician.
• Laura A. Ray, M.P.A.—Project Director (1992-2011)

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• **PI**, Ronald J. Angel, Ph.D.

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  - Jacqueline Angel, Ph.D.
Area probability multi-stage sample of Mexican Americans aged 65 and over residing in the five Southwestern states (Texas, New Mexico, Colorado, Arizona, and California) (Non-institutionalized population).


N = 3,050
### Hispanic EPESE Summary: Baseline, Wave 2, Wave 3, Wave 4, Wave 5, Wave 6, Wave 7 & Wave 8

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>Proxy+</th>
<th>Deceased</th>
<th>Refused</th>
<th>Not Located</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>1993-4</td>
<td>3050</td>
<td>177</td>
<td></td>
<td></td>
<td></td>
<td>65+</td>
</tr>
<tr>
<td>1995-6</td>
<td>2439</td>
<td>143</td>
<td>241</td>
<td>109</td>
<td>261</td>
<td>67+</td>
</tr>
<tr>
<td>1998-9</td>
<td>1981</td>
<td>145</td>
<td>432</td>
<td>122</td>
<td>274</td>
<td>70+</td>
</tr>
<tr>
<td>2000-1</td>
<td>1682</td>
<td>101</td>
<td>290</td>
<td>133</td>
<td>272</td>
<td>72+</td>
</tr>
<tr>
<td>2004-5</td>
<td>1167</td>
<td>93</td>
<td>504</td>
<td>139</td>
<td>277</td>
<td>75+</td>
</tr>
<tr>
<td>Added Sample</td>
<td>2004-5</td>
<td>902</td>
<td>49</td>
<td>--</td>
<td>--</td>
<td>75+</td>
</tr>
<tr>
<td>2004-5 Combined</td>
<td>2069</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>75+</td>
</tr>
<tr>
<td>2007-</td>
<td>1542</td>
<td>159</td>
<td>418</td>
<td>157</td>
<td>368</td>
<td>78</td>
</tr>
<tr>
<td>2010-11</td>
<td>1078</td>
<td>182</td>
<td>374</td>
<td>90</td>
<td></td>
<td>82+</td>
</tr>
<tr>
<td>2013</td>
<td>748</td>
<td>260</td>
<td></td>
<td></td>
<td></td>
<td>84+</td>
</tr>
</tbody>
</table>

(925 Informants at Wave 7) Cumulative deceased=2519 at end Wave 8

Updated 12/6/2013
# SELECTED SAMPLE CHARACTERISTICS

**N=3,050 (1993-94)**

<table>
<thead>
<tr>
<th>AGE</th>
<th>RANGE 65-99</th>
<th>MEAN 73.0 yrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>GENDER</td>
<td>MALE 43.3%</td>
<td>FEMALE 56.7%</td>
</tr>
<tr>
<td>YEARS of SCHOOL</td>
<td>MEAN 5.1 yrs.</td>
<td></td>
</tr>
<tr>
<td>PLACE OF BIRTH</td>
<td>MEXICO 46.8%</td>
<td>U.S.A. 53.2%</td>
</tr>
<tr>
<td>MARITAL STATUS</td>
<td>MARRIED 55.3%</td>
<td>DIV/SEP 7.9%</td>
</tr>
<tr>
<td></td>
<td>WIDOWED 31.6%</td>
<td>NEVER MARRIED 5.3%</td>
</tr>
<tr>
<td>LIVING ARRANGEMENTS</td>
<td>ALONE 20.9%</td>
<td>2 PERSONS 41.0%</td>
</tr>
<tr>
<td></td>
<td>3 PERSONS 15.3%</td>
<td>4+ PERSONS 22.8%</td>
</tr>
</tbody>
</table>

Continued on next slide
**SELECTED SAMPLE CHARACTERISTICS**

### SPEAKS ENGLISH
- NOT AT ALL 30.1%
- NOT TOO WELL 27.0%
- PRETTY WELL 17.0%
- VERY WELL 24.6%

### SOURCES OF INCOME
- SOCIAL SECURITY 96.1%
- PRIVATE PENSION 17.1%
- SSI 25.4%
- CHILDREN 7.0%
- RENT/STOCKS/BONDS, ETC. 4.4%

### HOUSEHOLD INCOME
- $0-4,999 13.2%
- $5,000-9,999 37.7%
- $10,000-14,999 25.8%
- $15,000-19,999 11.7%
- $20,000-29,999 6.2%
- $30,000+ 5.4%

### HEALTH INSURANCE
- MEDICARE 87.4% (92%)
- MEDICAID 34.1%
- PRIVATE 23.5%
Baseline Prevalence of 6 Medical Conditions, Disability, and 7-Year Mortality by Mexican Americans Population Share in Local Environments (Hispanic EPESE)

Eschbach, K., Markides, K.S., Patel, K., Goodwin, J.S.

- Neighborhood Percentage Mexican American is associated with lower prevalence of stroke, cancer, hip fracture, and seven-year mortality.
- Also true for depressive symptoms, self-rated health, and disability

American Journal of Public Health, 2004
Neighborhood Composition and the Incidence of Cancer among Hispanics in the United States

Eschbach et al.

• Using SEER and Census data Eschbach et al (2005) found that the incidence of breast, colorectal, and lung carcinoma among Hispanics increased as the percentage of Hispanics in the census tract decreased.

• The lower cancer rates among Hispanics relative to non-Hispanic Whites may dissipate as Hispanics become more assimilated into the mainstream society.

Cancer, 2005
Older Mexican Americans are more likely than other groups to live with children because of cultural preference and economic necessity. (Angel et al, 2002)

The foreign-born especially those immigrating later in life are more likely to live with children especially in the case of declining health. (Angel et al, 2002)

Older Mexican Americans are less likely to use assisted-living facilities or nursing homes despite suffering from higher rates of functional dependence. Families are more likely to keep families in the home but also because they are unable to afford nursing homes or assisted-living.
Mothers’ Health and Daughters’ Distress
(Rote et al, in review)

In 2010-11 (Wave 7), we obtained data from 925 “informants” of our subjects (aged 82 and over). About two-thirds were adult children. We identified 298 mother-daughter dyads where the daughter provided caregiving. Physical health conditions and disability of the mother were not associated with depressive symptoms in the daughter. The same for cognitive impairment.

However, high scores on the Neuropsychiatric Interview (NPI) in the mothers were strongly associated with higher depressive symptoms in the daughters. The NPI is a measure of psychopathology of dementia.
Caregiving by Nativity
Angel et al (in review)

Analysis of 629 caregiver/care recipient dyads from Wave 7 (2010-2011) revealed high levels of ADL and I-ADL dependence and poor performance on physical mobility tests by the older subjects (aged 84 and older).

Adult child caregivers report high levels of material hardship, financial strain, and low rates of insurance coverage for themselves and private insurance coverage for their parents. Especially the foreign-born.
Conclusions/Next Steps

The Mexican-American population is “paradoxically” long living with a life expectancy considerably higher than the general population. Immigrant selection and possibly strong families account for the advantage.

The advantage is reduced with time in the United States and by the older years there is high morbidity and disability that represent a significant burden on the family.

Current and future analyses of data from the current wave (2012-13) will focus on how exceptional longevity is depleting the resources of Mexican American families as well as correlates of exceptional longevity.
Figure 1. Conceptual Model
COLLABORATIONS

• Mexican Health and Aging Study (MHAS)
• Puerto Rican Health Conditions Study (PREHCO)
• SABE Studies (Chile, Mexico, Uruguay, Brazil, Cuba, Argentina, Barbados)
• Colombia, Frailty and Cognitive Function (Carlos Cano)
• Mexico, Frailty and Cognitive Function (L.M. Guiterrez)
September 24 & 25, 2014
University of Colorado Boulder
Dynamics of Hispanic Aging and Migration”

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Seventh Installment of the Conference Series on Aging in the Americas

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Aging, Health, and Longevity in the Mexican-Origin Population

As the nation’s largest Latino group, the Mexican-origin population will play a major role as America grows older; their situation is vital to understanding our aging, diverse society as national health care policy comes into a new era of analysis and revision.

*Aging, Health, and Longevity in the Mexican Origin Population* identifies current and emerging health issues affecting this demographic, from health care disparities to changing family dynamics to the health implications of the United States’ relationship with Mexico. Contributors test the Hispanic Paradox—that Latinos live longer than other Americans despite socioeconomic stresses—as it relates to various aspects of aging. Disability is discussed in social context, in terms of acculturation, family coping measures, access to care, and other key factors. And concluding chapters offer strategies for bringing the Mexican-American elder experience into the ongoing debate over health care. Throughout, coverage balances the heterogeneity of the community with its status as emblematic of minority aging and as a microcosm of aging in general.

Included among the topics:
- Immigration, economics, and family-contextualizing disability.
- Diabetes and employment productivity.
- The “healthy immigrant effect” and cognitive aging.
- Nursing home care: separate and unequal.
- Challenges of aging in place.
- Estimating the demand for long-term care.

*Aging, Health, and Longevity in the Mexican Origin Population* brings issues, answers, and a clear direction to those studying and working with this dynamic group, including policymakers, social workers, gerontologists, the academic and research communities, and health care professionals.