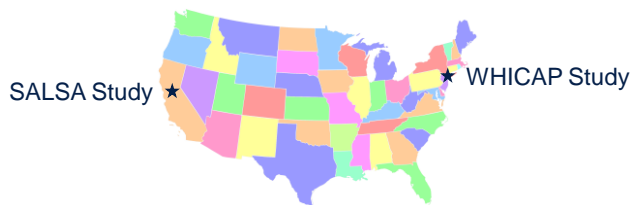


Racial and Ethnic Inequalities in Dementia: What Can We Learn from a Healthcare System Cohort?

Elizabeth Rose Mayeda, PhD, MPH
Postdoctoral Fellow
Department of Epidemiology and Biostatistics
University of California, San Francisco

Racial/ethnic disparities in dementia

- Reducing racial/ethnic disparities in dementia identified as a national priority by the National Alzheimer’s Plan
- No studies of dementia incidence in samples representing diversity of the U.S.
 - Most studies include 1-2 racial/ethnic groups
 - Dementia rates sensitive to diagnostic criteria
 - Geographic patterns may contribute to differences across studies



Haan *et al.*, *Am J Clin Nutr* 2007; Tang *et al.*, *Neurology* 2001

Objectives

- To what extent are there racial/ethnic inequalities in dementia incidence?
 - Mayeda *et al.*, *Alzheimer's & Dementia* 2016
- How long do people live with dementia?
 - Mayeda *et al.*, *Alzheimer's & Dementia* 2017

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Kaiser Permanente Northern California



- Integrated healthcare delivery system
- 3.8 million members
- Members representative of the overall population of the region
- Long-term membership
- Electronic medical records starting in 1996

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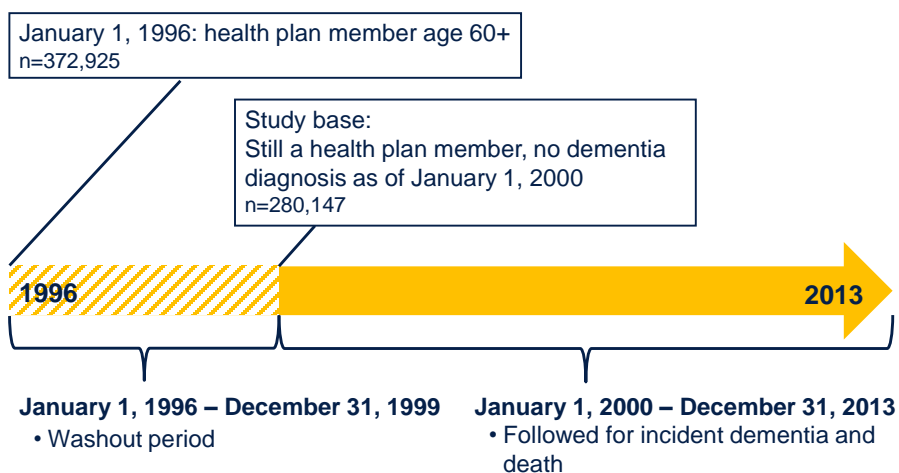
Measures

- **Self-reported race/ethnicity** from health plan member surveys
- **Dementia diagnosis** identified from visits in primary care, neurology, and psychiatry (ICD-9 codes for Alzheimer's disease, vascular dementia, nonspecific dementia)
- **Healthcare utilization:** ≥ 1 healthcare visit per year
- **Death** identified from medical records, California State Mortality File, and Social Security Death Records

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Study sample



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To what extent are there racial/ethnic inequalities in dementia incidence?

Mayeda *et al.*, *Alzheimer's & Dementia* 2016

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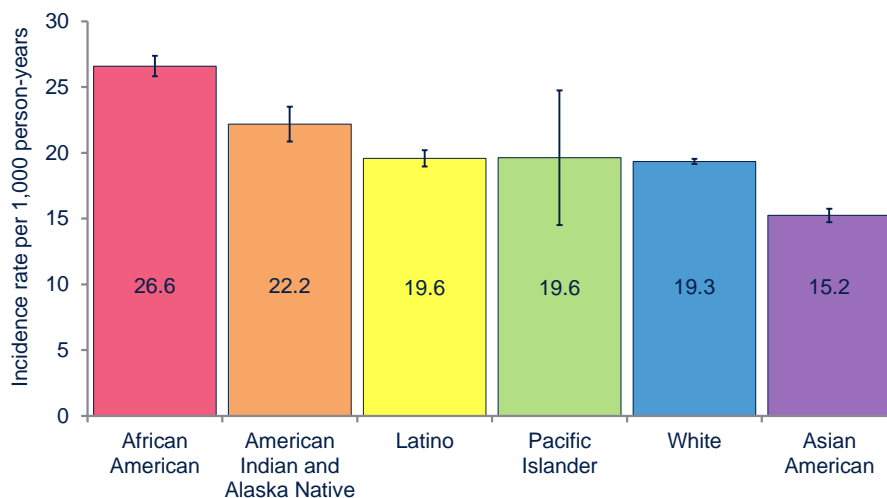
Characteristics of the sample

	African American	American Indian/ Alaska Native	Latino	Pacific Islander	White	Asian American
N	18,778	4,543	21,000	440	206,490	23,032
Mean age, years	72.7	73.5	71.9	71.5	73.9	71.7
Female, %	54.9	54.3	52.4	49.8	54.9	53.1
≥1 healthcare visit/year, %	80.5	87.5	81.6	58.0	82.3	78.9
Total person-years	157,118	41,182	195,686	3,246	1,750,252	224,120

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Age-standardized dementia incidence rates by race/ethnicity, 2000-2013



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Cumulative 25-year dementia risk by race/ethnicity, conditional on dementia-free survival to age 65

Race/ethnicity	Cumulative risk (95% CI)
African American	37.6 (36.4, 38.6)
American Indian/Alaska Native	34.7 (32.4, 36.4)
Latino	32.4 (31.2, 33.3)
Pacific Islander	25.1 (14.8, 31.4)
White	29.8 (29.5, 30.1)
Asian American	28.2 (27.0, 29.1)

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Summary: Dementia incidence

- Dementia incidence: Marked racial/ethnic inequalities
 - Dementia incidence 70% higher among African Americans than Asian Americans
- Lifetime risk is high in all racial/ethnic groups

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Conclusions and implications: Dementia incidence

- First study to directly compare dementia incidence in a sample representing the diversity of the U.S.
- Findings substantiate and extend findings from previous studies
- If social and behavior factors are the primary pathways, findings suggest substantial reductions in dementia incidence are possible
- Given high lifetime risk in all groups, dementia research is high priority for the health of all racial/ethnic groups
- Caveat: Is this just a difference in dementia diagnosis?



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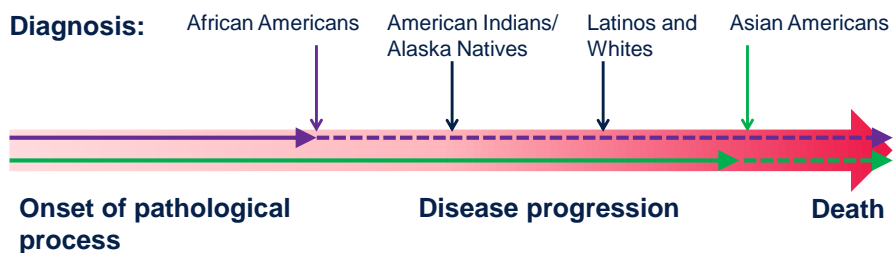
How long do people live with dementia?

Mayeda *et al.*, *Alzheimer's & Dementia* 2017

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Timing of dementia diagnosis could contribute to estimated differences in dementia incidence



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Survival after diagnosis by race/ethnicity

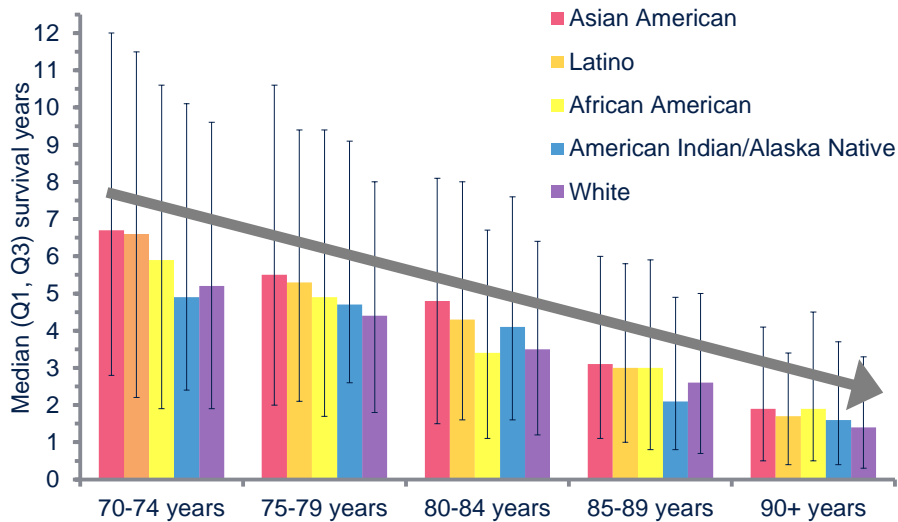
Race/ethnicity	N	Person-years	Median (Q1, Q3) survival years
Asian American	3,847	5,704	4.4 (1.4, 8.6)
Latino	4,942	6,898	4.1 (1.3, 8.2)
African American	4,371	7,780	3.7 (1.1, 7.6)
American Indian/Alaska Native	1,224	2,113	3.4 (1.2, 6.7)
White	45,110	75,138	3.1 (0.9, 6.3)

Longer
Shorter

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Survival after diagnosis by race/ethnicity



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What is the most likely explanation for racial/ethnic differences in survival after dementia diagnosis?

- Approach: Compare racial/ethnic mortality patterns among people with dementia to patterns among dementia-free older adults
- Finding: Racial/ethnic mortality patterns among people with dementia tended to parallel patterns among dementia-free older adults
- Implication: Same factors driving racial/ethnic mortality differences in people without dementia account for mortality differences in people with dementia

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Summary and conclusions: Dementia survival

- Most people live for years after dementia diagnosis
- Substantial differences in post-diagnosis survival by race/ethnicity
 - Survival shortest in Whites, longest in Asian Americans
- Racial/ethnic mortality patterns among people with dementia paralleled patterns among dementia-free older adults
- Suggest timing of diagnosis not major driver of estimated racial/ethnic inequalities in dementia incidence



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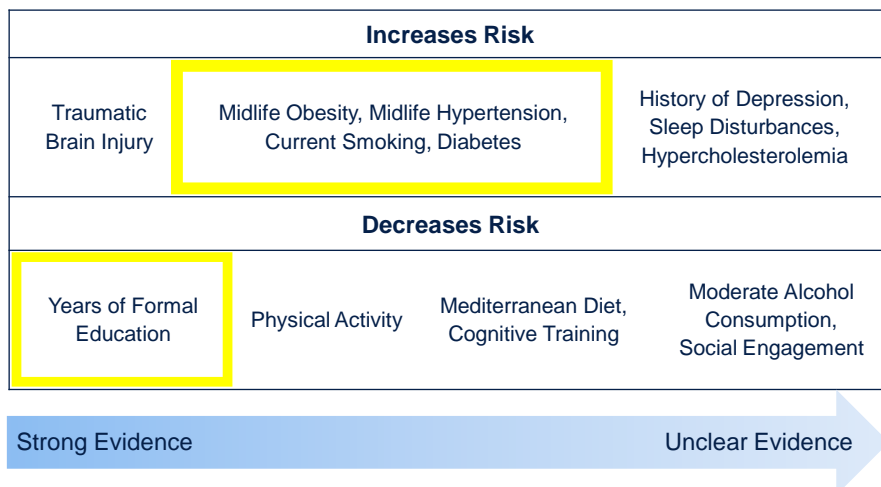
Main findings

- Marked racial/ethnic inequalities in dementia incidence
 - Unlikely to be attributable to differences in diagnosis
 - Mechanisms driving these inequalities?
 - Inequalities in quantity and quality of schooling
 - Vascular risk factors
- How long do people live with dementia?
 - Most people live for years after dementia diagnosis
 - Racial/ethnic mortality patterns among people with dementia paralleled patterns among dementia-free older adults

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Alzheimer's Association: Current evidence on modifiable risk factors for dementia



Baumgart *et al.*, *Alzheimers Dement* 2015

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