

Leading Causes of Death for Japanese Americans Compared to Native Japanese (2005-2017)

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Background

Japanese Americans (JAs)...

- 6th largest Asian subgroups in the U.S.
- Long immigration history (started 1860s) and distinct migration patterns:



- Different environment – varied lifestyles – difference in mortality burdens across region

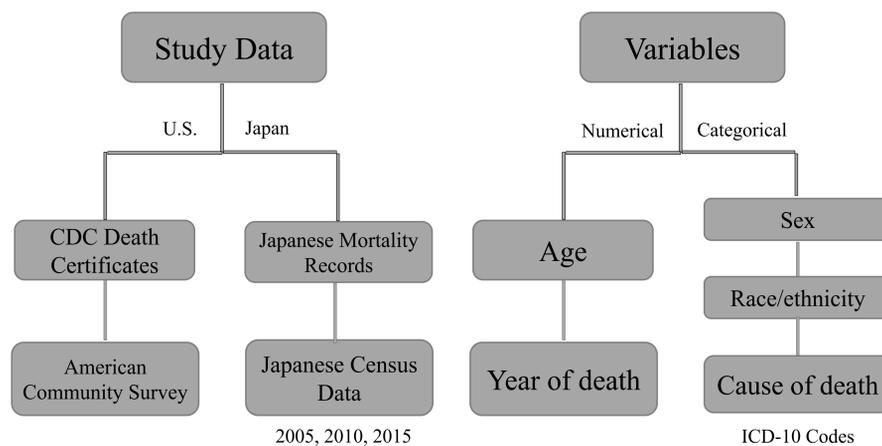
However...

- Previously studies on Asian mortality failed to disaggregate JAs by geography.
- NI-HON-SAN study (1950s) indicated a significant difference in mortality rates of cardiovascular diseases between JAs living in Hawaii and California.

Research Question

Based on geographically stratified mortality data from 2005-2017, are the leading causes of death for Japanese Americans significantly different from native Japanese?

Method



Statistical Analysis

- Ranking of death cause by raw death counts
- Calculating overall and yearly Age-standardized mortality rates (AMRs) by cause, sex, and geography
- Using linear regression to estimate mortality trends

Results

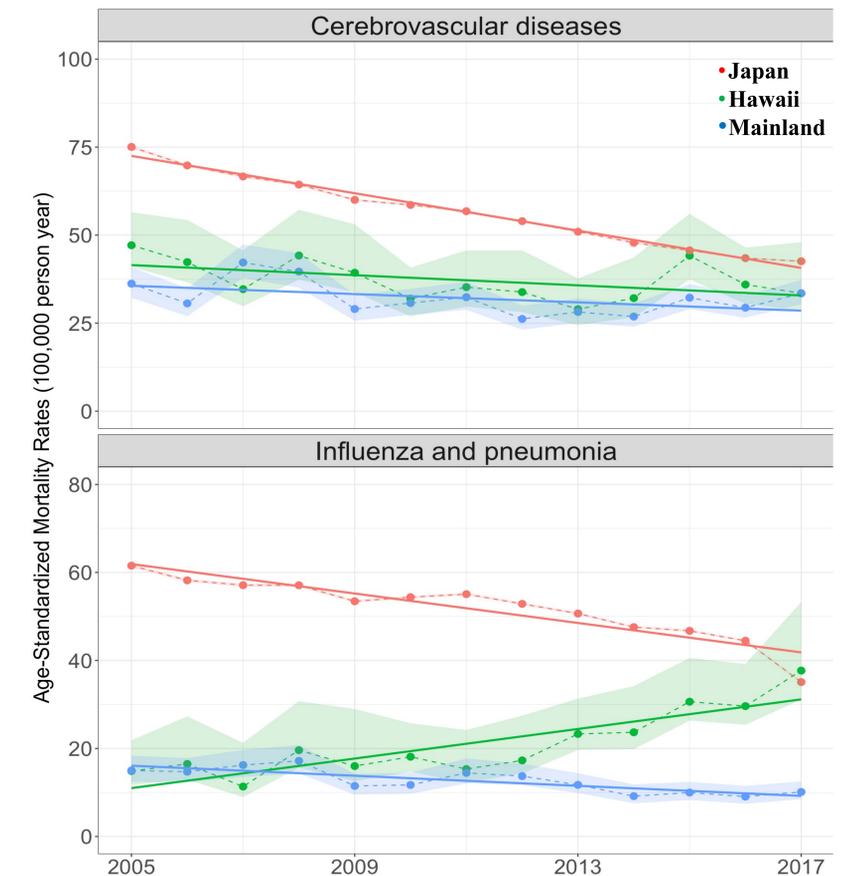
Overall AMRs (2005 - 2017)

Causes of Death	Japanese (Japan)	Japanese American (Hawaii)	Japanese American (U.S. Mainland)
Malignant neoplasm	183.60 (183.44-183.77)	118.16 (115.08-121.5)	120.38 (118.39-122.41)
Diseases of heart	96.94 (96.82-97.06)	104.84 (102.23-107.71)	97.93 (96.25-99.66)
Cerebrovascular diseases	59.3 (59.1-59.3)	36.63 (35.07-38.47)	31.69 (30.75-32.69)
Alzheimer diseases	3.52 (3.50-3.54)	14.47 (13.73-15.54)	21.43 (20.71-22.19)
Influenza and pneumonia	54.27 (54.19-54.35)	21.44 (20.35-22.81)	12.09 (11.53-12.71)
Accidents (unintentional injures)	23.83 (23.77-23.90)	21.00 (19.26-23.06)	17.52 (16.67-18.41)
Diabetes mellitus	7.07 (7.03-7.10)	13.70 (12.70-15.00)	15.26 (14.58-15.99)
Chronic lower respiratory diseases	9.21 (9.17-9.24)	10.57 (9.79-11.67)	13.68 (13.06-14.35)
Nephritis	11.94 (11.90-11.98)	9.10 (8.37-10.15)	6.67 (6.24-7.15)
Essential hypertension	1.55 (1.53-1.56)	5.60 (5.04-6.50)	7.51 (7.06-8.00)

Key Findings

- Native Japanese have much higher AMRs of cancer, cerebrovascular diseases, and influenza and pneumonia than JAs (Hawaii and Mainland), possible reasons including aging population in Japan, discrepancy in diet habits, and different flu vaccination rates.
- AMRs of diabetes and essential hypertension are higher in two JA groups compared to native Japanese, possible explanations including westernization of diet for Japanese Americans (consuming more sugar and fat).
- We didn't observe significant difference in AMRs for heart diseases among three groups, which is different from the results in NI-HON-SAN study, we think this may be due to westernization of lifestyles for Japanese.

Annual AMRs by Geography (2005 - 2017)



Cerebrovascular diseases

AMRs of cerebrovascular diseases for native Japanese decreased much faster than that of Japanese Americans groups over years, probably due to change of diet habits for native Japanese (drop of salt intake).

Influenza and pneumonia

Surprisingly, Japanese Americans in Hawaii experienced an inverted (increasing) AMRs trend for influenza and pneumonia compared to the other two groups. It may be caused by increasing tourism and low flu vaccination rates in Hawaii.

Discussion

Limitations

- Misclassification on race and causes of death for each decedent.
- Discrepancy in reporting habits for death cause.
- Sampling error in population data.

Conclusion

- Still on going, need to be determined.

Next Steps

- Further examine death causes in cancer and heart diseases.
- Explore Japanese infant mortality across region and sex.

Paper Reference

