



Risk Factors of Heart Disease among Asian and Pacific Islander Adults (18 + Years Old) in Los Angeles County



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BACKGROUND

- In Los Angeles County (LAC), there are approximately 1.1 million Asian/Pacific Islander (A/PI) adults, representing 14.6% of the overall population.¹ A/Pis are the second fastest growing minority group. About 70% of A/Pis are foreign born and nearly 57% speak primarily a language other than English at home.²
- A/Pis overall are better educated, have higher household incomes, and lower poverty rates.^{3,4} A/Pis tend to be healthier than other racial and ethnic groups. A/Pis have the highest life expectancy (82.4 yrs for males and 86.9 yrs for females) than any ethnic group in LA County.⁵

OBJECTIVES

- Heart disease is the leading cause of death among A/Pis in Los Angeles County.⁶ Understanding risk factors of heart disease among A/Pis can help guide health promotion and intervention efforts.

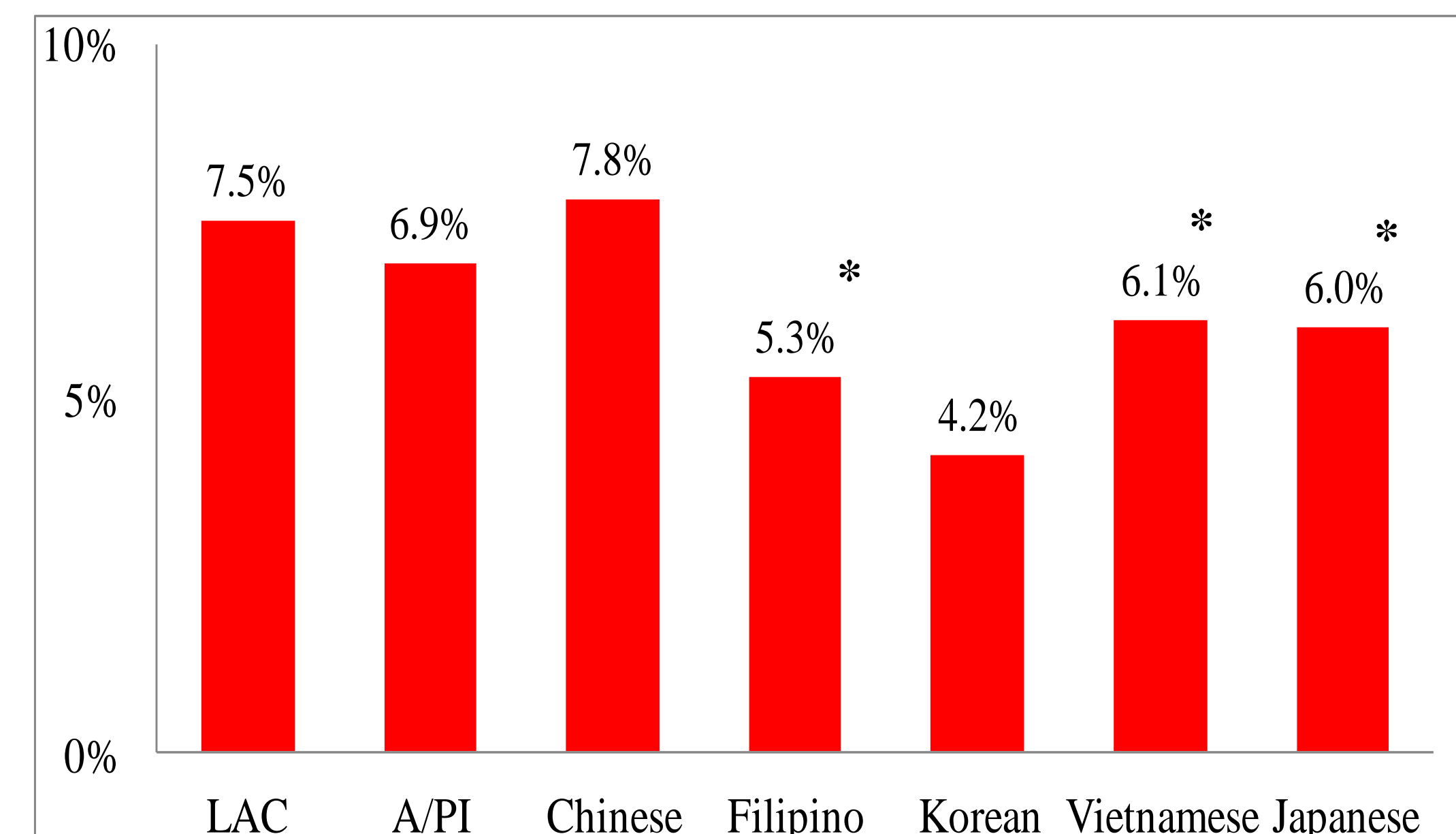
METHOD

- A total of 24,015 adults (ages 18 years or older) residing in Los Angeles County were interviewed for the 2002, 2005, 2007 Los Angeles County Health Survey (LACHS). Respondents in each household were randomly selected using an unrestricted random digit dial (RDD) sampling methodology, which included all eligible LA County households with landline telephones.
- Interviews were conducted in English, Spanish, Chinese, Korean, Vietnamese, and Armenian (in 2005). One quarter (25%) of all interviews in the 2002, 2005, 2007 LACHS Adult Survey were completed in non-English languages.
- A total of 2,501 A/PI adults were interviewed. The sample size (N) of five major A/PI ethnicity subgroups were the following: Chinese (n=905), Filipino (n=353), Korean (n=481), Vietnamese (n=173), and Japanese (n=282). (Note: respondents could report more than one Asian ethnicity)
- Risk factors for cardiovascular disease included cigarette smoking, minimal to no physical activity, obesity, diabetes, hypertension, and high cholesterol.
- At risk for heart disease was defined as having two or more of risk factors listed above.
- Rates were age-adjusted, using the 2000 US standard population, to assess risk factors for heart disease among all A/Pis and among Chinese, Filipino, Korean, Vietnamese, and Japanese subgroups.
- Logistic regression, controlling for age, was used to determine statistical difference of risk factors for heart disease between the specific A/PI subgroup with the other four A/PI subgroups combined. Likelihood ratio tests with p<0.05 were considered statistically significant differences.
- All analyses were conducted using Statistical Analysis System (SAS, Version 9.2).

RESULTS

- The age-adjusted rate of ever being diagnosed with heart disease was 6.9% in A/PI adults, lower than the LAC rate of 7.5%. Among A/PI subgroups, Chinese adults had the highest rate of ever being diagnosed with heart disease (7.8%), while Korean adults had the lowest rate (4.2%) (Figure 1).

Figure 1: Age-adjusted Rates of Adults (18+ years old) for ever Diagnosed with Heart Disease in LA County

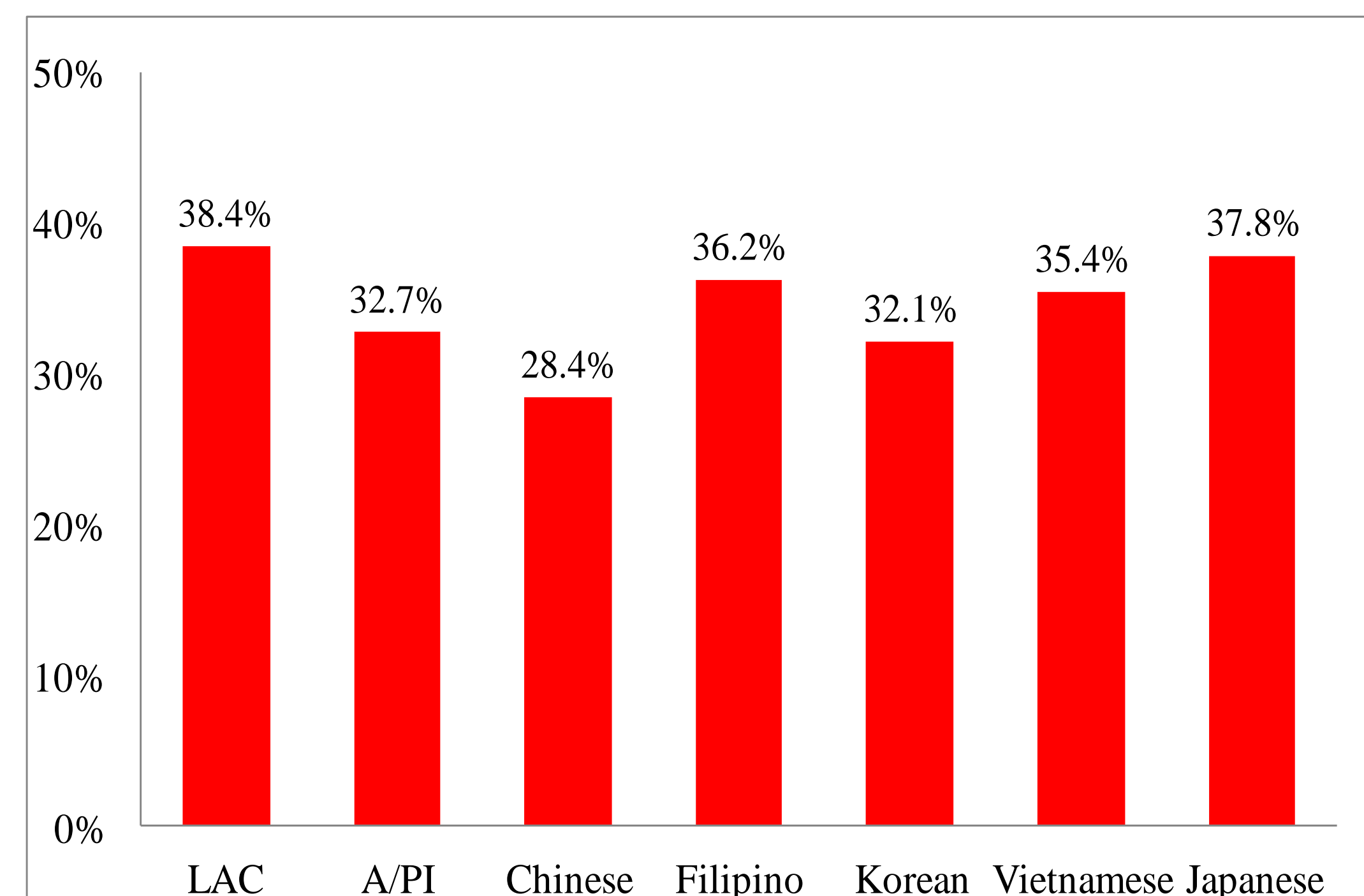


Source: 2002, 2005, 2007 LACHS

* The estimate is statistically unstable

- The age-adjusted rate of "At Risk for Heart Disease"[¶] was 32.7% in A/PI adults, lower than the LAC rate of 38.4%. Among A/PI subgroups, Japanese adults had the highest rate (37.8%), while Chinese had the lowest rate (28.4%) (Figure 2).

Figure 2: Age-adjusted Rates of Adults (18+ years old) for At Risk for Heart Disease[¶] in LA County



¶ Source: 2005, 2007 LACHS

- Although the risk for heart disease among A/PI adults (32.7%) was lower than LAC (38.4%), there are differences with regards to the risk factors for heart disease: cigarette smoker, minimal to no physical activity, obesity, diabetes, hypertension, and high cholesterol (Table 1).
- While the age-adjusted rates of A/PI adults were lower than LAC among those who smoke cigarettes (12.0% vs. 14.0%), were obesity (6.9% vs. 20.6%), and were diagnosed with diabetes (7.1% vs. 8.5%), hypertension (21.3% vs. 24.2%), and high cholesterol (24.6% vs. 27.5%), rates were higher for minimal to no physical activity (46.3% vs. 39.0%).

RESULTS (Continued)

- Furthermore, rates for the risk factors of heart disease differed within A/PI ethnic subgroups:
 - The percent of adults who smoke cigarettes was significantly lower among Chinese (8.3%) and significantly higher among Koreans (17.1%).
 - The percent of Filipinos and Vietnamese adults who reported minimal to no physical activity was significantly lower (43.3% and 33.8%, respectively) than other A/PI subgroups, while Koreans reported significantly higher rate of minimal to no physical activity (55.2%).
 - Obesity rates were significantly higher among Japanese adults (7.4%) than other A/PI subgroups.
 - Rates of diabetes and hypertension were significantly lower among Chinese adults (4.4% and 18.4%, respectively) and significantly higher among Filipinos adults (9.0% and 26.1%, respectively), than other A/PI subgroups.
 - High cholesterol was significantly lower among Korean adults (20.1%) than other A/PI subgroups.

Table 1. Age-adjusted Rates (%) of Adults (18+ years old) for the Risk Factors of Heart Disease

Health Conditions	LAC	A/PI	Chinese	Filipino	Korean	Vietnamese	Japanese
Current Smoker	14.0	12.0	8.3	13.6	17.1	13.6	13.8
Minimal to No Activity	39.0	46.3	48.1	43.3	55.2	33.8	42.9
Obesity	20.6	6.9	4.3	6.5	4.8*	-	7.4
Diabetes	8.5	7.1	4.4	9.0	6.6	5.7*	8.8
Hypertension	24.2	21.3	18.4	26.1	19.3	26.7	23.9
High Cholesterol	27.5	24.6	24.3	28.7	20.1	25.0	28.7

- Source: 2002, 2005, 2007 LACHS except High Cholesterol (2005, 2007)
- *Estimate is statistically unstable and should be viewed with caution.
- For purposes of confidentiality, results with cell sizes < 5 are not reported.
- Data for the Asian subgroups are highlighted with notations that show whether a particular Asian subgroup fares **better** (gray background) or **worse** (orange background) than the other Asian four subgroups combined, based on statistical comparisons for p<0.05.

- Summarizing by A/PI subgroup:
 - Chinese adults were significantly less likely than the other A/PI subgroups to be cigarette smokers (8.3%), have diabetes (4.4%) and hypertension (18.4%).
 - Filipino adults were significantly more likely than the other A/PI subgroups to be diagnosed with diabetes and hypertension, and less likely to have minimal to no physical activity.
 - Korean adults were significantly more likely than the other A/PI subgroups to be cigarette smokers and to have minimal to no physical activity, and less likely to have high cholesterol.
 - Vietnamese adults were significantly less likely than the other A/PI subgroups to have minimal to no physical activity, and borderline more likely to have hypertension.
 - Japanese adults were significantly more likely than the other A/PI subgroups to be obese, and borderline more likely to have diabetes, hypertension, and high cholesterol.

CONCLUSIONS

- In Los Angeles County, heart disease remains a public health challenge. Disparities in the risk factors for heart disease prevalence due to race and socioeconomic status emphasize the necessity of increasing awareness of the disease, including its prevention and management.
- This study indicates the necessity of customized prevention activities to address different health problems among subgroups of A/PI (e.g., to increase physical activity among Koreans, decrease rates of obesity among Japanese, and decrease smoking rates among Koreans).
- Targeted interventions include the need for linguistically and culturally appropriate materials and outreach.

LIMITATIONS

- The data is self-reported.
- Only households with landline phones were sampled (i.e., non-telephone and cell-phone only households and homeless population were excluded).
- Data represents the non-institutionalized population (i.e., excludes individuals living in group quarters, such as nursing homes, college dormitories or jails).

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ACKNOWLEDGEMENTS

- Office of Health Assessment and Epidemiology
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