

# ASIAN, NATIVE HAWAIIAN, AND PACIFIC ISLANDER SUBPOPULATIONS: METHODS TO IMPROVE INFORMATION ABOUT THEIR HEALTH CARE QUALITY



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## Background

- The number of Asian Americans, Native Hawaiians and Other Pacific Islanders (AANHPI) is projected to more than double to 43.2 million by 2050.<sup>1</sup> Subpopulation-specific health care information is critical for ensuring quality and addressing disparities.
- The ability to assess the quality of health care among AANHPIs has been inhibited by a paucity of reliable data. Key factors include inconsistent use of national standardized race and ethnicity classifications to collect these data, and gaps in data reporting due to statistically unreliable estimates.
- As a result, data about AANHPI are often aggregated into a single category, masking disparities and ignoring the heterogeneity of these populations.

## Objectives

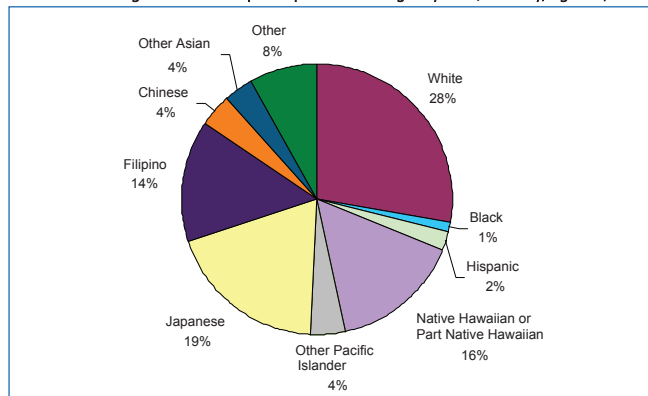
- The Agency for Healthcare Research and Quality (AHRQ) contracted with Thomson Reuters with the following aims:
  - To examine whether there are disparities in health care quality among AANHPI subgroups in Hawai'i based on risk-adjusted rates of potentially preventable hospitalizations among adults.
  - To expand race/ethnicity disparity information presented in future *National Healthcare Quality Reports* and *National Healthcare Disparities Reports*.

## Study Design and Methods

- Differences in the rates of potentially preventable hospitalizations as measured by AHRQ Prevention Quality Indicators (PQIs) were analyzed across AANHPI subgroups. The PQIs focus on hospitalizations for ambulatory care sensitive conditions (ACSCs)<sup>2</sup> and are of value for comparing system performance.<sup>3,4</sup>
- Used 2006 HCUP State Inpatient Databases (SID) for Hawai'i for the numerator and population data from the Hawai'i Health Survey for the denominator of each PQI.
  - The Hawai'i SID is the only HCUP database that categorizes patients who are Native Hawaiian, Other Pacific Islander, Japanese, Chinese, Filipino, and Other Asian. Data are provided to HCUP by the Hawai'i Health Information Corporation (HHIC).
  - The annual Hawai'i Health Survey (HHS), collected by the Office of Health Status Monitoring, Hawai'i Department of Health, is a statewide household survey providing demographic information for assessing population changes during the intercensal decade.<sup>5</sup>
- Applied PQI Version 3.1, adjusted for age and gender.<sup>6</sup>
  - Selected three composite PQIs (overall, acute conditions, and chronic conditions) and eight chronic condition indicators (e.g., asthma, hypertension, diabetes).
  - Produced rates specific to adults age 18+ in race/ethnicity and AANHPI subgroups. Results for AANHPI subgroups were compared to Whites and to one of the AANHPI subgroups.
  - Missing data elements (patient age in 0.01 percent of records, gender in less than 0.001 percent of records, and patient race in 8.1 percent of records) were assigned values by hot deck imputation method.

## Results

Exhibit 1. Percentage of Hawai'i Hospital Inpatient Discharges by Race/Ethnicity, Age 18+, 2006



- After Whites, the AANHPI subgroups of Japanese, Native Hawaiian, and Filipino account for the largest share of Hawaii hospital discharges age 18+.

## Results

Exhibit 2. PQI Composite Rates (Per 100,000 Population Age 18 and Older) by Race and Ethnicity for Hawai'i, 2006

| Race/Ethnicity                                     | Overall (PQI 90) | Acute (PQI 91) | Chronic (PQI 92) |
|--|------------------|----------------|------------------|
| White  | 946              | 428            | 518              |
| Black  | 1,862*           | DSU            | 1,391*           |
| Hispanic   | 2,383*           | 858*           | 1,524*           |
| Asian, Native Hawaiian, and Other Pacific Islander | 1,046*           | 402            | 644*             |
| Hawaiian & Pacific Islander                        | 1,475*           | 485            | 991*             |
| Native Hawaiian                                    | 1,278            | 410            | 868*             |
| Other Pacific Islander                             | 6,074*           | 1,889*         | 4,185*           |
| Asian  | 865*             | 364*           | 501              |
| Chinese  | 829              | 355            | 475              |
| Filipino   | 1,592*           | 608*           | 984*             |
| Japanese   | 625*             | 299*           | 326*             |
| Other Asian  | 1,856*           | 686*           | 1,169*           |

DSU: Data do not meet the criteria for statistical reliability, data quality, or confidentiality.  
 \* p-value compared to Whites < 0.01

- The aggregation of AANHPIs masks considerable variation in composite PQI rates across the subgroups that make up this larger population.

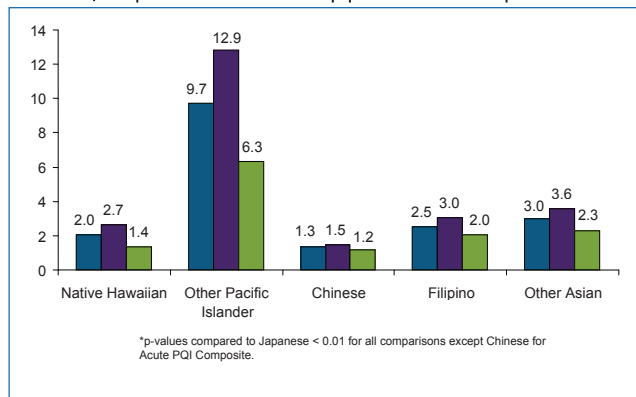
Exhibit 3. Selected Chronic PQI Rates (Per 100,000 Population Age 18 and Older) by Race and Ethnicity for Hawai'i, 2006

| Race/Ethnicity                                     | Diabetes                         |                                 |                                 | Respiratory Disease |                 | Heart Disease        |             |                 |
|--|----------------------------------|---------------------------------|---------------------------------|---------------------|-----------------|----------------------|-------------|-----------------|
|  | Short-Term Complications (PQI 1) | Long-Term Complications (PQI 3) | Lower Limb Amputations (PQI 16) | COPD (PQI 5)        | Asthma (PQI 15) | Hypertension (PQI 7) | CHF (PQI 8) | Angina (PQI 13) |
| White  | 41                               | 43                              | 21                              | 95                  | 70              | 8                    | 214         | 31              |
| Black  | DSU                              | DSU                             | DSU                             | DSU                 | DSU             | DSU                  | DSU         | DSU             |
| Hispanic   | DSU                              | DSU                             | DSU                             | 169                 | DSU             | DSU                  | 836*        | DSU             |
| Asian, Native Hawaiian, and Other Pacific Islander | 33                               | 88*                             | 37*                             | 63*                 | 96*             | 17*                  | 301*        | 22              |
| Hawaiian & Pacific Islander                        | 45                               | 138*                            | 65*                             | 94                  | 151*            | 22*                  | 478*        | 25              |
| Native Hawaiian                                    | 45                               | 113*                            | 55*                             | 85                  | 134*            | 20*                  | 419*        | 21              |
| Other Pacific Islander                             | DSU                              | 626*                            | DSU                             | DSU                 | 315*            | DSU                  | 2,055*      | DSU             |
| Asian  | 23*                              | 67*                             | 26                              | 51*                 | 72              | 15*                  | 234         | 20*             |
| Chinese  | DSU                              | 92*                             | 49*                             | 36*                 | 33*             | DSU                  | 258         | DSU             |
| Filipino   | 44                               | 101*                            | 31                              | 105                 | 192*            | 35*                  | 436*        | 43              |
| Japanese   | 14*                              | 50                              | 19                              | 38*                 | 32*             | 7                    | 158*        | 13*             |
| Other Asian  | DSU                              | 211*                            | DSU                             | 90                  | 100             | DSU                  | 541*        | DSU             |

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 \* p-value compared to Whites < 0.01.

- Differences - between the aggregate AANHPI population and subgroups, and between these subgroups and Whites - were also observed across individual PQIs.

Exhibit 4. PQI Composite Rates for AANHPI Subpopulations Relative to Japanese



- Among AANHPI subgroups, Japanese have the lowest rates for the vast majority of PQIs measured (and was used as the reference group). PQI composite rates vary as much as 10-fold, with Other Pacific Islanders having the highest relative rates on each of the three composite PQIs.

## Conclusions

- It is meaningful to disaggregate the AANHPI population because important differences among AANHPI subgroups and their health care quality emerge. These results suggest that, at least in Hawai'i, Japanese - not Whites - are the "healthiest" subgroup.<sup>7</sup>
- More detailed information about quality among race/ethnicity subgroups also offers insights into designing programs and policies for improving disparities in health care quality, e.g., more precise and efficient targeting of interventions.
- Examining quality of care disparities among AANHPIs in Hawai'i was possible because of the state's demographics and high-quality data collection.
  - Adult AANHPI subgroups are large enough to have sufficient power for analyses.
  - Hospital discharge data are collected using detailed AANHPI subgroupings, and similar detail is collected by the State for the population data.
- Thoughtful and coordinated planning of demographic and hospital administrative data can support assessments of quality for numerically small subgroups. This analysis is the first time that PQI software has been applied to Hawai'i data in a way that allows reporting of race/ethnicity at the level of detail collected by hospitals.

## What Other States Can Do

- It is feasible to measure health care quality among small subgroups using administrative data, thereby improving the granularity of race/ethnicity data available to policymakers.
- Policymakers in other states can look to Hawai'i as a model. States that have racially diverse populations provide a national resource for examining differences between racial/ethnic subgroups.
- The ability to conduct analyses of numerically small but distinct subpopulations is likely to grow in importance as the U.S. continues to become more racially/ethnically diverse and as national standards are adopted locally.
  - A more detailed coding scheme for race and ethnicity has been prepared by the Centers for Disease Control and Prevention (CDC)<sup>8</sup> and incorporated into the hospital uniform bill.
  - IOM recently recommended that states require collection of OMB race/ethnicity categories and the use of granular "ethnicities" that are locally relevant and from a standardized national list.

## Caveats

- Focused on a single state that is geographically isolated and which historically has not had a dominant ethnic/racial group, a unique set of circumstances that may limit the generalizability of the results.
- Data collected for administrative purposes may not be complete or accurate, and these data attributes may vary across hospitals. Also, the Hawai'i discharge data include only non-federal, non-rehabilitation community hospitals.
- Differences in PQI rates could be affected by differences in the rates of underlying diseases.

## References

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- For more information about the annual Hawai'i Health Survey, see <http://hawaii.gov/health/statistics/nhs/index.html>.
- Detailed information about the PQIs is available at: [http://www.qualityindicators.ahrq.gov/pqi\\_overview.htm](http://www.qualityindicators.ahrq.gov/pqi_overview.htm).
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- See <http://www.cdc.gov/neds/datamodels/> for the CDC Race and Ethnicity Code Set.

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