

Assessing the Data Quality of the Native Hawaiian and Pacific Islander National Health Interview Survey (NHPI NHIS)

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NHPI NHIS: Background

Native Hawaiian and Pacific Islander Population

Numerically small (0.4% of U.S. population)

Limited reliable national health data

National Health Interview Survey (NHIS)

Conducted by the National Center for Health Statistics (NCHS)

Data collected by U.S. Census Bureau

In-person household interview

~35,000 households annually

Disaggregated NHPI health statistics since 1999, but often unreliable

Only ~100-250 NHPI households annually



Native Hawaiian and Pacific Islander National Health Interview Survey

Special Sampling Frame

- NHPI households in 1 year of the **American Community Survey (ACS)**



Standard NHIS Methods

- 2014 **NHIS instrument** + special screening
- **NHIS field staff**
- Standard NHIS data processing and file creation



Customized Field Methods

- **Customized interviewer training**
- **Customized respondent & outreach materials**
- **Extensive outreach effort**



A screenshot of the National Health Interview Survey (NHIS) website. The page title is "National Health Interview Survey" and the subtitle is "Native Hawaiian and Pacific Islander (NHPI) National Health Interview Survey (NHIS)". The page includes a navigation menu with links for "About NHIS", "2014 Briefing", "What's New", "Questionnaires, Datasets, and Related Documentation", "Survey Methods and Data Linked to NHIS", "NHIS Data Release Program", "Special Topics", "Native Hawaiian and Pacific Islander NHIS", "2014 Data Release", "Frequently Asked Questions", "NHIS on Disability", and "Asia, Canada/United States Survey of Health". The main content area features a "Public Use Data Release is now available!" announcement and a grid of photos of diverse people. The footer includes the text "The NHPI NHIS was patterned after the NHIS. The NHIS is the nation's largest in-person household health survey and is a primary tool for assessing the health of the nation. The survey collects information on health status and conditions, disability, access to and use of health services, health insurance coverage, stressors, risk factors, and health-related behaviors."

NHPI NHS Chartbooks

https://www.cdc.gov/nchs/data/series/sr_03/sr03_040.pdf
https://www.cdc.gov/nchs/data/series/sr_03/sr03_041.pdf



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Health Conditions and Behaviors of Native Hawaiian and Pacific Islander Persons in the United States, 2014

Vital and Health Statistics

July 2017

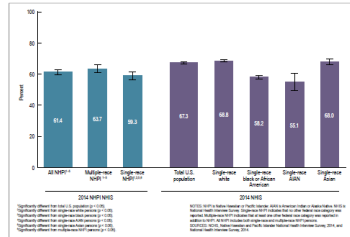
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General Health Status

Figure 1. Age-sex-adjusted percentage of persons of all ages who had excellent or very good health, by race: United States, 2014



- Among the total NHPI population, the percentage who had excellent or very good health was 61.4%, which was lower than the percentages among the total U.S. (67.3%), white (68.8%), and Asian (65.1%) populations, and higher than the percentages among the black (62.2%) and Asian (65.1%) populations (Figure 1, Table 1).
- Among the multi-race NHPI population, the percentage who had excellent or very good health was 63.7%, which was lower than the percentages among the total U.S. (67.3%), white (68.8%), and Asian (65.1%) populations, and higher than the percentages among the black (62.2%) and Asian (65.1%) populations.
- Among the single-race NHPI population, the percentage who had excellent or very good health was 60.1%, which was lower than the percentages among the total U.S. (67.3%), white (68.8%), and Asian (65.1%) populations, and higher than the percentages among the black (62.2%) and Asian (65.1%) populations.
- The percentage of single-race NHPI persons who had excellent or very good health (60.1%) was lower than the percentage among multi-race NHPI persons (63.7%).

Age-sex-adjusted percent distributions of respondent-assessed health status among persons of Native Hawaiian and Pacific Islander detailed race: United States, 2014

	Health status					
	Excellent or very good		Good		Fair or poor	
	Crude percent (standard error)	Age-sex-adjusted percent (standard error)	Crude percent (standard error)	Age-sex-adjusted percent (standard error)	Crude percent (standard error)	Age-sex-adjusted percent (standard error)
All NHPI*	66.5 (0.26)	23.7 (0.23)	9.8 (0.14)	67.3 (0.27)	23.3 (0.22)	9.4 (0.13)
Multi-race NHPI	67.6 (0.32)	23.1 (0.25)	9.4 (0.16)	68.8 (0.30)	22.4 (0.25)	8.8 (0.14)
Single-race NHPI†	59.1 (0.67)	27.6 (0.57)	13.2 (0.37)	58.2 (0.62)	27.9 (0.56)	13.9 (0.36)
Native Hawaiian	57.2 (3.07)	29.5 (2.82)	13.2 (1.41)	55.1 (2.91)	30.5 (2.75)	14.4 (1.37)
Samoan	67.9 (0.97)	25.1 (0.90)	7.0 (0.42)	68.0 (0.94)	24.8 (0.89)	7.2 (0.41)
Guamanian or Chamorro	65.5 (0.89)	24.8 (0.90)	8.6 (0.52)	61.4 (0.81)	26.6 (0.89)	12.1 (0.83)
Other Pacific Islander	66.9 (1.71)	24.2 (1.67)	8.9 (0.75)	61.1 (1.59)	26.1 (1.73)	12.8 (0.98)
NHPI total	63.4 (3.05)	26.3 (2.45)	10.3 (1.48)	57.5 (2.86)	27.6 (2.29)	14.9 (2.02)
Native Hawaiian	71.0 (2.73)	19.3 (2.05)	9.9 (1.50)	66.7 (2.36)	19.9 (2.24)	13.4 (1.67)
Pacific Islander	67.3 (3.44)	25.2 (3.15)	7.5 (1.00)	60.4 (3.18)	28.7 (2.96)	10.8 (1.22)
Single-race NHPI*	69.1 (1.25)	22.0 (1.13)	8.9 (0.58)	63.7 (1.31)	24.9 (1.21)	11.4 (0.72)
Native Hawaiian	65.3 (3.36)	24.3 (1.25)	10.4 (0.73)	61.7 (1.34)	26.1 (1.29)	12.2 (0.80)
Pacific Islander	62.4 (2.18)	19.8 (1.82)	3.8 (0.68)	71.2 (3.48)	21.0 (2.45)	**8 (0.35)
Samoan	81.4 (3.69)	13.9 (2.96)	*4.1 (1.88)	69.1 (3.83)	19.9 (4.21)	10.9 (2.67)
Guamanian or Chamorro	87.7 (2.32)	10.3 (2.19)	*2.0 (0.71)	80.4 (3.31)	14.3 (3.26)	2.3 (0.52)
Other Pacific Islander	76.6 (6.27)	*16.4 (5.71)		59.1 (8.98)	34.9 (8.68)	
NHPI total	62.1 (1.21)	27.5 (1.20)	10.3 (0.77)	59.3 (1.28)	28.2 (1.29)	12.5 (0.89)
Native Hawaiian	62.0 (2.29)	27.8 (2.03)	10.2 (1.02)	60.4 (2.23)	28.3 (1.99)	11.3 (1.09)
Pacific Islander	62.0 (2.04)	27.5 (2.04)	10.2 (0.94)	58.5 (1.95)	28.0 (2.05)	13.5 (1.10)
Samoan	55.8 (4.13)	31.4 (2.84)	12.7 (2.28)	53.1 (3.68)	31.0 (2.42)	15.9 (2.45)
Guamanian or Chamorro	60.5 (3.22)	24.8 (2.44)	14.6 (2.47)	60.8 (3.22)	23.9 (2.84)	15.4 (1.68)
Other Pacific Islander	65.9 (3.86)	26.3 (3.54)	7.9 (1.07)	60.2 (3.71)	28.9 (3.33)	10.9 (1.26)

* Estimates are considered unreliable. Data preceded by an asterisk have a relative standard error (RSE) greater than 30% and less than or equal to 50%, and should be used with caution. Data not shown have an RSE greater than 50%.
 † Includes other races not shown separately.
 ** Includes all other specific NHPI racial identities, such as Tongan, Fijian, and Marshallese, as well as general NHPI racial identities, such as Polynesian, Micronesian, Malenian, and Pacific Islander. It also includes those who reported more than one Pacific Islander racial identity. It does not include those who indicated Native Hawaiian in addition to one or more Pacific Islander races. The racial identity Polynesian is considered Pacific Islander, not Native Hawaiian.
 * Indicates at least one other federal race category was reported in addition to NHPI.
 † Indicates no other federal race category was reported.

NOTES: Native Hawaiian and Pacific Islander NHPI persons reported on the NHPI population. Sources: Distribution of Population, and Other Pacific Islander persons together in data for NHPI total used using the projected 2000 National Health Interview Survey.

SOURCES: NCHS, Native Hawaiian and Pacific Islander National Health Interview Survey, 2014, and National Health Interview Survey, 2014.



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Health Care Access and Utilization Among Native Hawaiian and Pacific Islander Persons in the United States, 2014

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Research Questions

Is the 2014 NHPI NHIS sample representative of the civilian non-institutionalized NHPI population of the United States?

- ❑ What patterns of differences, if any, exist between the NHPI sample obtained in the NHPI NHIS and the NHPI samples obtained in two national benchmark surveys?

Research Methods: Data Sources

- ❑ All NHPI persons and NHPI households identified in **a recent single year of the ACS**
- ❑ All NHPI persons and households identified in **the combined 2010-2014 years of the annual NHIS**

Research Methods: Analysis

- ❑ Comparison of weighted estimates of 8 person level and 10 household level demographic characteristics
 - ❑ 2014 NHPI NHIS compared with ACS Frame and 2010-2014 NHIS
- ❑ Comparison of weighted estimates of 18 health characteristics in various age groups (24 comparisons)
 - ❑ 2014 NHPI NHIS compared with 2010-2014 NHIS

Results: Person-Level NHPI Population Estimates



Measure	NHPI NHIS estimate <i>differs</i> from both ACS Frame and 2010-2014 NHIS estimates?
% Male	No
Age distribution	No
Hispanic ethnicity	Yes
Single-race NHPI	No
Among multiple-race NHPI , other race	No
Marital Status	Yes
Educational attainment	No
Place of birth and citizenship status	No

Results: Person-Level NHPI Population Estimates



Measure	ACS Frame	2010-2014 NHIS	2014 NHPI NHIS
% Male			
Age distribution			
% Hispanic ethnicity	13.5	17.1	10.0
% Single-race NHPI			
Among multiple-race NHPI, other race			
Marital Status: % Separated	2.4	2.1	7.2
Educational attainment			
Place of birth and citizenship status			

Results: Household-Level NHPI Population Estimates



Measure	NHPI NHIS estimate <i>differs</i> from both ACS Frame and 2010-2014 NHIS estimates?
All residents were single-race NHPI	No
Number of NHPI residents	Yes
Number of residents	No
At least 1 Hispanic resident	Yes
Number of children in household	No
Maximum educational attainment	No
Immigrant status of residents	No
Tenure	Yes
State	No
Region	No

Results: Household-Level NHPI Population Estimates



Measure	ACS Frame	2010-2014 NHIS	2014 NHPI NHIS
All residents were single-race NHPI			
Number of NHPI residents: 1	45.6	46.2	36.9
7+	3.6	2.8	5.2
% with at least 1 Hispanic resident			
Number of children in household			
Maximum educational attainment			
Immigrant status of residents			
Tenure: % Renter			
State			
Region			

Results: Household-Level NHPI Population Estimates



Measure	ACS Frame	2010-2014 NHIS	2014 NHPI NHIS
All residents were single-race NHPI			
Number of NHPI residents: 1	45.6	46.2	36.9
7+	3.6	2.8	5.2
% with at least 1 Hispanic resident	21.6	21.2	14.8
Number of children in household			
Maximum educational attainment			
Immigrant status of residents			
Tenure: % Renter	49.5	48.2	37.1
State			
Region			

Results: NHPI Population Health Estimates



Measures

Adult obesity	Child chickenpox
Adult ever diabetes	Child respiratory allergies in past 12 months
Adult ever hypertension	Child skin allergies in past 12 months
Adult ever asthma	Child ever asthma
Adult current asthma	Child current asthma
Adult last dentist visit in past 12 months	Child last dentist visit in past 12 months
Adult flu vaccine in past 12 months	Child flu vaccine in past 12 months
Adult cost barrier to dental	Child cost barrier to dental
Adult usual source of care	Child usual source of care
Adult smoking	Child cold past 2 weeks
Adult aerobic/strengthening	Total population: Cost barrier to care
Total population: Reported general health	Total population: Cost delayed care

Results: NHPI Total Population Health Estimates



Measure	2010-2014 NHIS	2014 NHPI NHIS
Total population: Reported general health		
Total population: Cost barrier to care		
Total population: Cost delayed care		

Results: NHPI Adult Population Health Estimates



Measure	2010-2014 NHIS	2014 NHPI NHIS
Adult obesity		
Adult ever diabetes		
Adult ever hypertension		
Adult ever asthma		
Adult current asthma		
Adult last dentist visit in past 12 months		
% Adult flu vaccine in past 12 months	34.8	42.5
Adult cost barrier to dental		
Adult usual source of care		
Adult smoking: % Former	13.1	19.5
Adult aerobic/strengthening		

Results: NHPI Child Population Health Estimates



Measure	2010-2014 NHIS	2014 NHPI NHIS
Child chickenpox		
Child respiratory allergies in past 12 months		
Child skin allergies in past 12 months		
Child ever asthma		
Child current asthma		
Child last dentist visit in past 12 months	71.8	83.0
Child flu vaccine in past 12 months		
Child cost barrier to dental		
Child usual source of care		
Child cold past 2 weeks		

Conclusions and Implications

- Some demographic differences identified between the 2014 NHPI NHIS sample and two benchmark survey samples
- Health outcomes: similarities and only isolated differences across surveys
- 2014 NHPI NHIS is useful for estimating prevalence and predictors of health-related characteristics of NHPI persons
- Successful federal health surveys of numerically small and hard-to-reach populations are possible

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academic experts, and service providers

Provided support for the NHPI NHIS

The NHPI NHIS respondents

<https://www.cdc.gov/nchs/nhis/nhpi.html>

Thank you!

Mahalo Fa'afetai tele Mālō 'aupito
Mauru' uru Fakafetai
Fakaue lahi Faka fetai Fãiåk se'ea Kia Ora
Kotoa nui Meitaki maata Si Yu'us Må'åse'
Kommol tata Kinisou Kalahngan
Kulo Kamagar Sulang Ko rab'a Tubwa
Vinaka vakalevu Tank iu Tank yiu
Tenkyu tru Merci Wela'lin