

Utah Pacific Islanders



2011



UTAH DEPARTMENT OF
HEALTH

Office of Health Disparities

Utah Pacific Islanders 2011 Summary & Recommendations

In 2011, the Utah Department of Health interviewed 605 adult Utah Pacific Islanders (PIs) to learn about the health needs of this growing population. This was the first statewide health survey conducted in three languages: Samoan, Tongan, and English, and may have been the first study of its kind addressing mainland Pacific Islanders in the United States. Utah PIs were involved in all stages of implementation: suggesting questions, reviewing the questionnaire, pilot-testing, translation, survey promotion, and interviewing respondents.

Maternal & Infant Health



- 86.6% of PI mothers and 78.2% of PI fathers agreed that the father's involvement in the family helped the mothers.
- Social support for breastfeeding was weak. 39.9% of PIs reported discomfort when women breastfeed in public places. Those interviewed in Tongan had a particularly high rate of discomfort (65.1%).
- 21.9% of PIs were fertile, sexually active, and not planning a pregnancy, but not doing anything to prevent pregnancy.
- Few PIs disagreed with guidelines about early prenatal care (2.6%), breastfeeding until age one (21.9%), and waiting 18 months after giving birth before becoming pregnant again (23.6%).
- Compliance with the guidelines was low with 48.7% of infants born to women without early prenatal care¹, 53.4% of new mothers not breastfeeding 2-6 months postpartum², and 36.5% with an interpregnancy interval less than 18 months.¹ Statewide rates were 28.1%¹, 32.5%², and 27.5%¹, respectively.

Disease & Risk Behavior



- At 13.7%, the PI adult diabetes rate is nearly double the statewide rate (6.9%).^{3,4}
- PIs interviewed in Tongan were particularly likely to have diabetes, with a rate of 44.0%.
- Arthritis and asthma rates were similar to those statewide.^{3,4,5}
- 25.2% of PIs reported high blood pressure. When adjusted for age, PIs were more likely to report high blood pressure than Utahns statewide (23.1%).^{4,5}
- At 10.3%, the PI smoking rate was similar to the statewide rate.^{3,4} PIs under 35 were more likely to smoke (14.7%).
- Using a scale customized for PIs, 50.9% were obese.⁶ This rate is more than double the statewide obesity rate (23.1%).^{3,4}
- Although only 15.1% of PIs were at healthy or underweight BMIs according to the customized PI scale, 33.1% of PIs perceived their weight as healthy or underweight.

Utah Pacific Islanders 2011 Summary & Recommendations

Healthcare Services



- 16.3% of PIs reported that someone in their household had been unable to receive needed medical care, tests, or treatments during the past year, usually due to financial barriers.
- 66.2% of PIs reported that they had received a Hepatitis B vaccination.
- 96.9% of PI parents reported that their children had received all their recommended vaccinations.
- 22.8% of PIs had experienced racism during the past year and 5.7% had experienced racism in a health care setting.
- 21.0% of Tongan and 40.3% of Samoan speakers reported that someone in their doctor's office spoke their language.
- 81.3% of PIs reported that they could usually or always understand their healthcare providers. Foreign language speakers and less educated PIs were less likely to understand their providers.
- Only 46.6% of PIs over age 50 had been screened for colon cancer and 37.7% of PI women over 40 had been screened for breast cancer. Statewide screening rates are 68.0% and 67.0%, respectively.^{3,4}
- When asked about preferences for home visiting programs, 74.2% of PIs said it was not important to them that home visiting program staff be PI. More PIs preferred child development than other educational backgrounds for visiting staff.

Social Determinants of Health



- PIs with low incomes were more likely to worry about buying nutritious meals and less likely to get needed medical care.
- PIs interviewed in Tongan and Samoan were more likely to be obese than those interviewed in English. Those interviewed in Tongan were also more likely to have diabetes.
- 30.7% of PIs did not have any adverse childhood experiences and 10.7% of PIs experienced five or more adverse childhood experiences.⁷
- Males were more likely to report adverse childhood experiences compared to females. PIs with no adverse childhood experiences were less likely to ever smoke.⁷

"This research is a crucial insight into the health care needs of our people. It will be invaluable in addressing current Pacific Islander health issues and driving further research. Gathering data from a diverse demographic as multilingual and multicultural as Pacific Islanders is an ambitious endeavor, and I commend the investigators on welcoming the involvement and feedback of Pacific Islander community leaders, consultants, and data collectors throughout the development of this study. I look forward to innovative interventions and further collaborative efforts stemming from the information we have been able to learn about our Pacific Islander communities."

-Jacob Fitisemanu,
Healthcare Access for
Minorities Advisory
Board



Utah Pacific Islanders 2011 Recommendations

Health Promotion Priorities

- Health promotion for PIs should emphasize obesity, diabetes, pregnancy health, social support for breastfeeding, and preventive care.
- Educate about obesity, including risks, food label reading, and making quick, easy, healthy meals inexpensively.
- Share benefits of healthy pregnancy spacing with both men and women.
- Teach Tongan and Samoan-speakers how to find multilingual providers or arrange for interpretation through their health plans.
- Share the results and implications of the PI Study with the community.

Intervention Strategies

- Use culturally appropriate verbal and visual methods for health promotion, not just written materials.
- Link people to resources to promote healthy living, preventive care and low cost/free health screenings.
- Include PI actors in existing media campaigns addressing obesity, birth outcomes, and preventive care; explore funding options for new campaigns.
- Use a PI-specific obesity scale for assessing Body Mass Index among PIs; avoid promoting Caucasian weight ideals to PIs.

- Screen for mental health issues in the primary care setting and provide referrals as appropriate.
- Explain screening and health care processes and inform about benefits of early screening.

Partnership Opportunities

- Collaborate with church leaders who have significant Pacific Islander representation in their congregations. Involve clergy and other PI opinion leaders in health promotion.
- Encourage PIs to join community-based organization boards and write grants to support the PI community.
- Involve elder women in promoting breastfeeding.
- Learn from older PI women and traditional healers about culturally appropriate care for PI pregnant women and educate them about healthy pregnancy guidelines.
- Promote PI-specific best practices for health promotion from experts in other countries such as Tonga, Samoa, and New Zealand.

Policy & Systems Change

- Support policies that lower the cost of healthy food and increase the cost of unhealthy food.
- Encourage provision of physical and mental health care in the same location.

- Encourage health plans and other organizations to offer financial and practical incentives (e.g., baby products, nutritious recipe books, etc.) to reward members for disease management, screening, and health education activities.
- Fund programs that offer peer support for prenatal care and breastfeeding, such as home visiting, Centering Pregnancy, and WIC.
- Provide community organizations with resources to support intervention, such as breast pump room supplies and DVD players to play "For Me, For Us" and other health promotion videos.

Future Research

- Study factors contributing to low rates of prenatal care, screenings, and other preventive care among PIs.
- Explore the differences between PI men and women in adverse childhood experiences.⁷
- Qualitatively investigate barriers to healthy pregnancy spacing and research new strategies to promote healthy pregnancy spacing.
- In future studies about PIs, include a demographic question asking respondents if they identify themselves as Tongan, Samoan, Hawaiian or other PI.

Recommendations by the Utah Department of Health,
Office of Health Disparities Reduction Advisory Boards:

- Birth Outcomes in Minorities Advisory Board
 - Obesity in Minorities Advisory Board
 - Healthcare Access for Minorities Advisory Board
- (Advisory Board member rosters are listed in Acknowledgments.)

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Throughout this report, following each rate estimate, the 95% confidence interval is listed in parentheses. The confidence interval is the range in which we can be 95% confident that the actual prevalence falls.

Summary & Recommendations





Pregnancy & Infant Health Attitudes

Health Guideline

% Who Disagree

A healthy pregnant woman should visit a doctor during her first three months of pregnancy.

2.6% (1.5-4.5)

Mothers should not stop breastfeeding their babies until at least the baby's first birthday.

21.9% (18.1-26.2)

After a woman has a baby, she should wait at least 18 months before getting pregnant again.

23.6% (19.8-28.0)

Most Utah Pacific Islanders agreed with the pregnancy and infant health guidelines presented in the survey. Agreement with the guideline

to get early prenatal care was particularly strong, with almost all respondents (97.4% [95.5-98.5]) agreeing that a healthy pregnant woman should visit a doctor during her first three months of pregnancy.



In spite of apparent agreement with these guidelines, compliance was low. Pacific Islanders were less likely to have early prenatal care,¹ continue to breastfeed their infants 2-6 months postpartum,² or space pregnancies at least 18 months apart than other Utahns.¹ Their infant mortality rate was higher than that of any other Utah racial/ethnic group.⁸

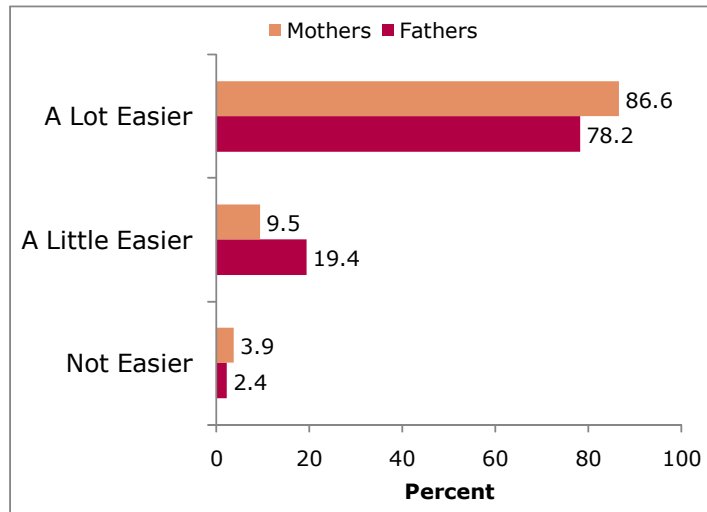
	Pacific Islander Utahns	All Utahns	Disparity
Infant Mortality per 1,000 Live Births	8.9 (5.8-13.0) ⁸	4.8 (4.5-5.1) ⁸	✓
Infants Born to Women Without Early Prenatal Care	48.8% (46.1-51.5) ¹	27.7% (27.4-27.9) ¹	✓
Not Breastfeeding 2-6 Months Postpartum	53.4% (41.3-65.5) ²	32.5% (31.4-33.6) ²	✓
Interpregnancy Interval ≤18 Months	36.5% (32.6-40.4) ¹	27.5% (27.1-27.9) ¹	✓
Interpregnancy Interval ≤6 Months	11.1% (9.0-13.3) ¹	4.3% (4.1-4.4) ¹	✓

Social Support for Mothers & Children

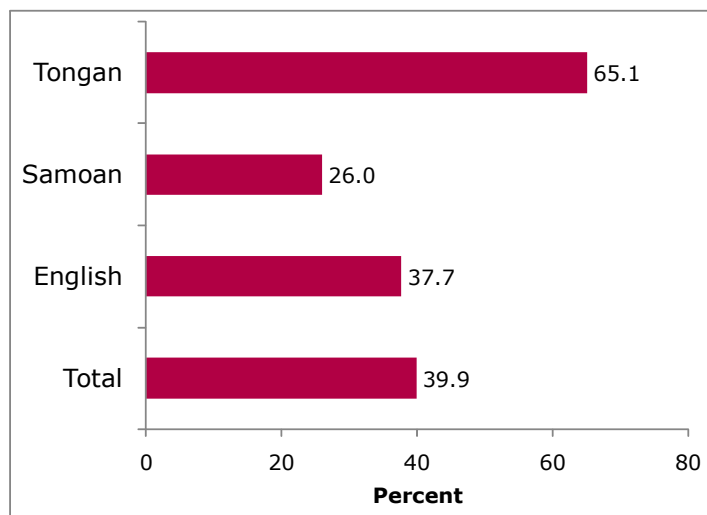
Father involvement is a strength of the Utah Pacific Islander community. Fathers were asked if their own involvement had made things easier for the mothers of their children. Mothers were asked if the involvement of their children's fathers had made things easier for themselves. A majority of both mothers (86.6% [80.0-91.3]) and fathers (78.2% [69.3-85.1]) agreed that the fathers' involvement had made things a lot easier for mothers.

However, social support for breastfeeding in public was less prevalent, with about two of five respondents (39.9% [35.4-44.5]) reporting that they are uncomfortable when mothers breastfeed their babies near them in a public place such as a shopping center or bus station. Those interviewed in Tongan were the least likely to be comfortable with breastfeeding in public places, with 65.1% (52.8-75.8) reporting discomfort. There were no significant differences in comfort with public breastfeeding by gender, with 42.8% (36.2-49.7) of men and 37.0% of women (31.2-43.2) reporting discomfort, nor were there significant differences by age.

Percent of parents reporting that father involvement has made things easier for the mother



Percent reporting that they are uncomfortable when mothers breastfeed near them in public places, by interview language



Family Planning

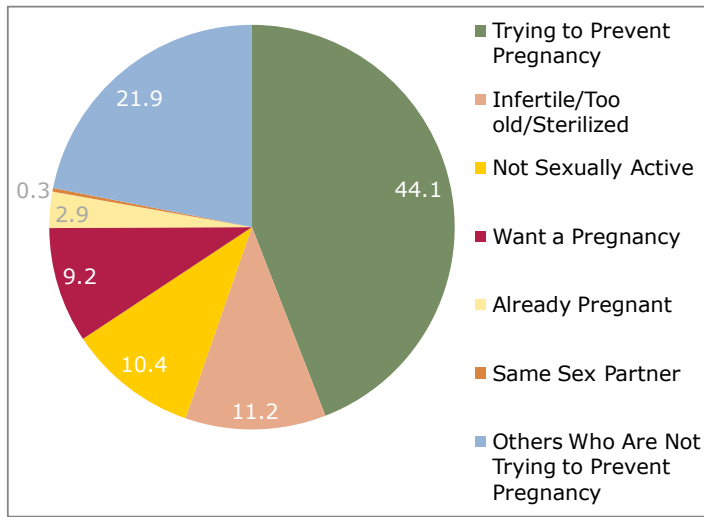
Family planning helps couples space pregnancies far enough apart to optimize health outcomes for mothers and babies. Current national guidelines recommend waiting

until the previous child is at least 18 months old before becoming pregnant again.⁹

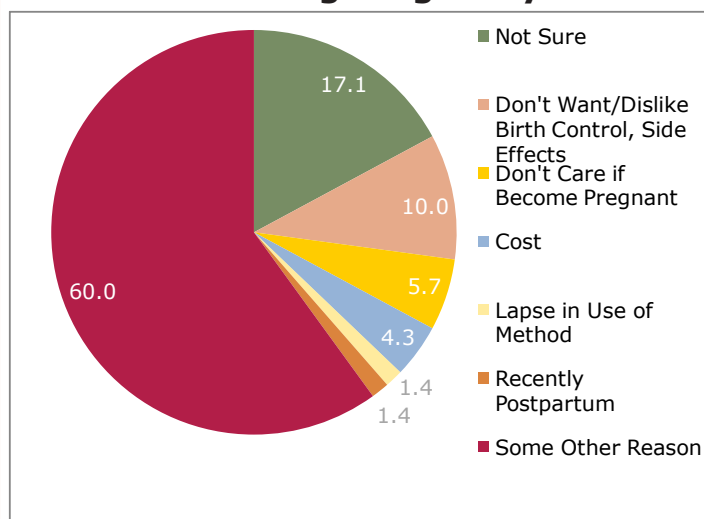
Utah Pacific Islanders were asked about their family planning practices and 21.9% reported that they were not planning a pregnancy but not doing anything to prevent pregnancy. People who were not sexually active, infertile or sterilized, already pregnant, or homosexual were not included in this group.

People within this group of fertile, sexually active people not planning a pregnancy were asked why they were not trying to prevent a pregnancy. Unfortunately, most of these responses were not captured by the survey tool, falling under "some other reason." After some other reason, the most common response was "I don't know/Not sure." Disliking birth control, indifference about pregnancy, cost of contraception, lapse in use of contraception, and recently postpartum were also mentioned. None of the respondents mentioned religious reasons or breastfeeding as barriers to contraception.

Are you doing anything to keep yourself/your partner from becoming pregnant?



Reasons for Not Trying to Prevent Pregnancy Among Fertile Couples Not Planning Pregnancy



Disease Prevalence

The adult diabetes rate of Utah Pacific Islanders (13.7% [11.2-16.6]) was approximately twice as high as the statewide rate (6.5% [6.0-7.1])^{3,4}. Pacific Islanders interviewed in Tongan were particularly likely to have diabetes, with a rate of 44.0% (32.4-56.3).

Of Pacific Islander women with diabetes, 32.0% (20.6-46.1) were diagnosed with gestational diabetes during pregnancy before they developed chronic diabetes.

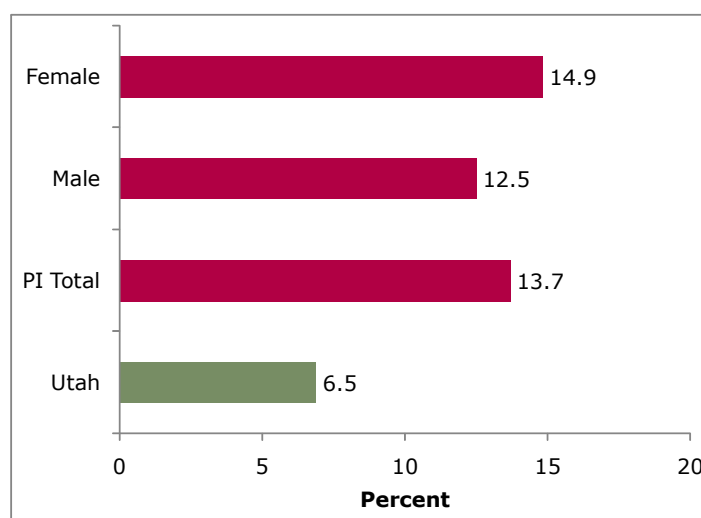
When adjusted for age, Pacific Islanders were more likely to have high blood pressure than Utahns statewide.^{4,5} High blood pressure can lead to heart attack or stroke. Of Pacific Islanders with high blood pressure, 78.5% (70.4-84.9) were trying to control their blood pressure by changing their eating habits and 74.1% (66.3-80.7) were cutting down on salt.

Obesity is a risk factor for diabetes and high blood pressure. The high obesity rate among Utah Pacific Islanders, and particularly among those interviewed in Tongan and Samoan, is likely correlated with the high diabetes rate.

Arthritis and asthma rates among Pacific Islanders were similar to the statewide rates.^{3,4,5}



Adult Diabetes Statewide³ and Among Utah Pacific Islanders by Gender



	Pacific Islander Utahns	All Utahns (from Utah BRFSS)	Disparity
Arthritis	17.3% (14.4-20.7)	21.4% (20.4-22.4) ^{4,5}	
Asthma	8.3% (6.1-11.3)	9.1% (8.2-10.1) ^{3,4}	
Diabetes	13.7% (11.2-16.6)	6.5 (6.0-7.1) ^{3,4}	✓
High Blood Pressure	25.2% (21.6-29.0)	23.1% (22.0-24.2) ^{4,5}	✓

Disease & Risk Behavior

Obesity

Obesity is usually defined as a body mass index (BMI) over 30. At 63.6% (58.9-68.0), a majority of Utah Pacific Islanders were obese. The obesity rate statewide was less

than half that (21.9-24.3) in 2010.^{3,4}

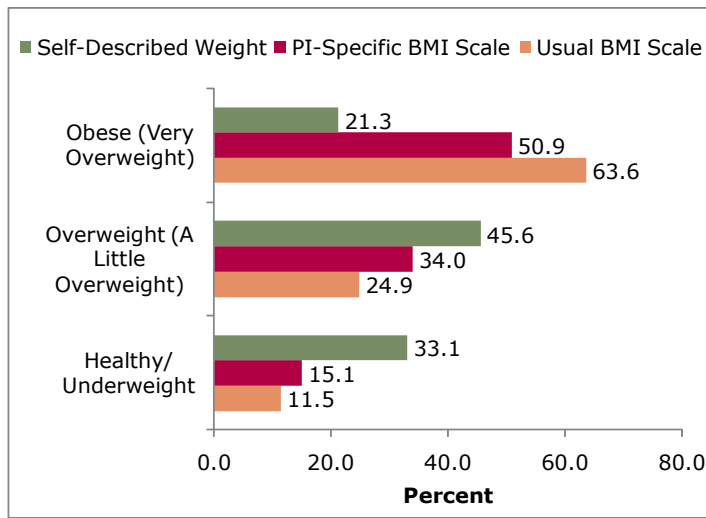
However, some studies suggest that Pacific Islanders have a body type that can be healthy with a larger BMI than can be tolerated by people of European descent.¹⁰ Researchers in New Zealand have developed a BMI scale specifically for people of Pacific Island descent.⁶ Using this scale, about half of Utah Pacific Islander adults (50.9% [46.2-55.6]) are still identified as obese.

Many overweight Pacific Islanders were not aware that they were overweight. Although only 15.1% (11.8-19.0) of PIs were at healthy or underweight BMIs according to the customized scale, 33.1% of PIs perceived their weight as healthy or underweight.

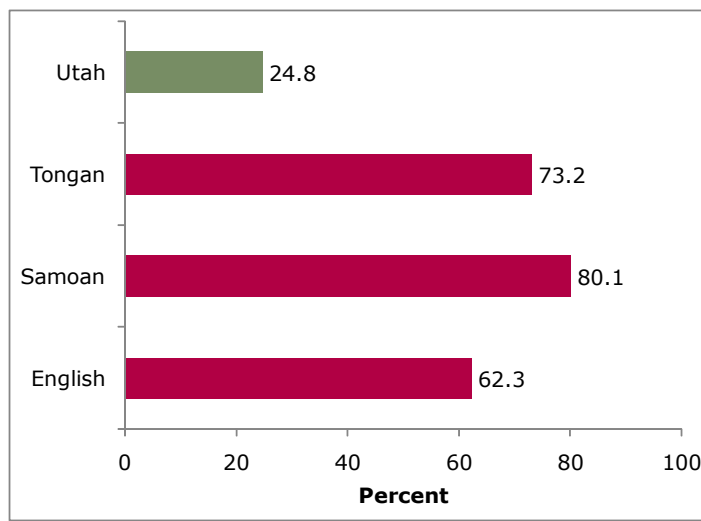
Among Utah Pacific Islanders, those interviewed in English (62.3% [57.3-67.1]) had lower obesity rates than those interviewed in Tongan (73.2% [60.6-82.9]) and Samoan (80.1% [53.1-93.5]). However, those interviewed in English were more likely to perceive themselves as overweight compared with Samoan and Tongan speakers.

Limiting sugary drinks helps control obesity, but 16.4% (13.1-20.3) reported that they drink soda pop and 23.7% (20.0-28.0) report drinking fruit juice with added sugar daily.

Body Size by Self Perception, Pacific Island (PI) Specific BMI Scale & Traditional BMI Scale



BMI >30 Statewide³ and Among Utah Pacific Islanders by Interview Language



Tobacco

The Utah Pacific Islander cigarette smoking rate was similar to the statewide rate, with 10.3% (7.5-13.6) of respondents reporting that they are current smokers. Statewide, 9.1% (8.3-10.0) of Utahns smoke.^{3,4}

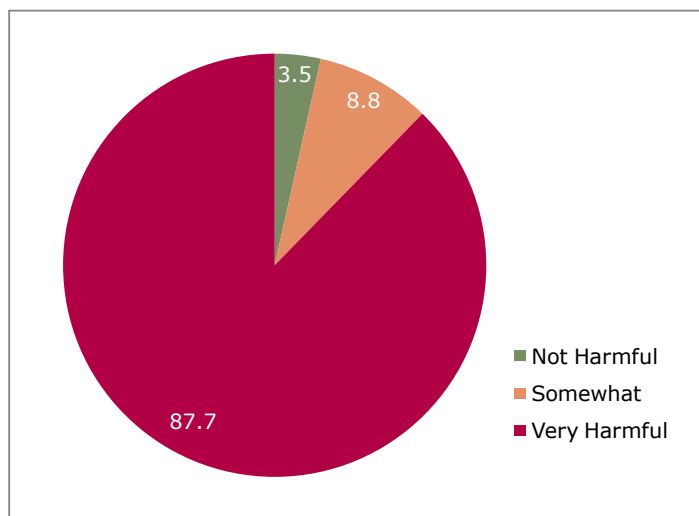
Utah Pacific Islanders under 35 years of age were more likely to smoke (14.7% [9.8-21.0]) than those who were older.

Only 1.7% (0.7-3.7) of respondents reported using chewing tobacco.

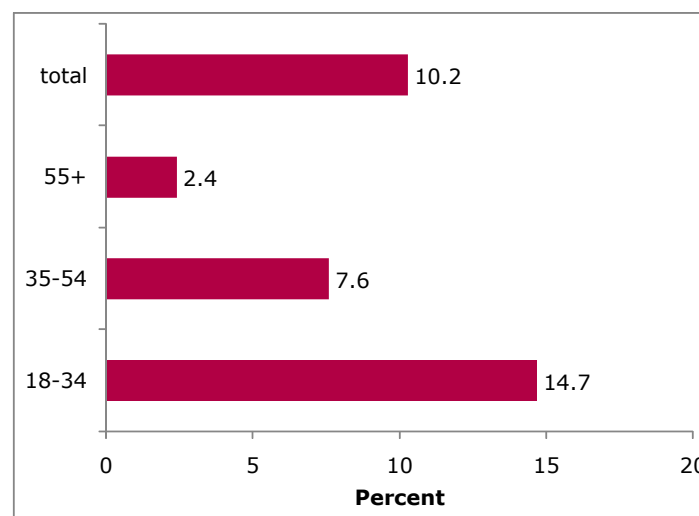
A large majority of respondents, 87.7% (84.1-90.6) believed that breathing secondhand smoke is very harmful to one's health and 3.7% (2.2-6.2) reported that they are exposed to secondhand smoke at home.

Pacific Islanders with less education or who reported more adverse childhood experiences⁷ were more likely to smoke than other Pacific Islanders.

Beliefs About Secondhand Smoke



Smoking Rate by Age





Health Screenings & Immunization

About two-thirds of Utah Pacific Islander adults surveyed (66.2% [61.4-70.7]) reported that they had received a complete, three-dose, Hepatitis B vaccination. Respondents with incomes over \$75,000 (78.2% [66.4-86.6]) and college graduates (80.9% [72.8-87.0]) were more likely to report Hepatitis B vaccination. Nationally, 23.4% (20.5-26.5) of U.S. adults reported that they had been vaccinated for Hepatitis B.¹¹ However, 64.1% (62.8-65.4) of U.S. infants and 79.8% (74.2-85.4) of Utah infants currently receive this vaccine.¹²

Almost all parents surveyed reported that their children had received all of their recommended vaccinations: 96.9% (94.4-98.3). However, the survey tool did not verify that parents knew all of the vaccinations their children were supposed to have received.

The study asked parents with children who had not been vaccinated for the barriers preventing vaccination, but there were too few respondents who did not vaccinate to analyze these responses.

Women ages 40 and older should receive a mammogram to screen for breast cancer at least once every two years.¹³ People over age 50 should be screened for colon cancer.¹⁴ Pacific Islanders were less likely to receive these cancer screenings than Utahns statewide.^{3,4}

Utah Pacific Islanders who had not been diagnosed with diabetes were asked if they had been screened for diabetes in the past three years and 48.4% (43.4-53.5) of these respondents reported that they had been screened.



	Pacific Islander Utahns	All Utahns (from 2010 BRFSS)	Disparity
Breast Cancer Screening (Women Ages 40+)	37.7% (30.3-45.7)	67.0% (65.1-68.8) ^{3,4}	✓
Colon Cancer Screening (Ages 50+)	46.6% (39.5-53.9)	68.0% (66.4-69.5) ^{3,4}	✓

Barriers to Receiving Needed Care

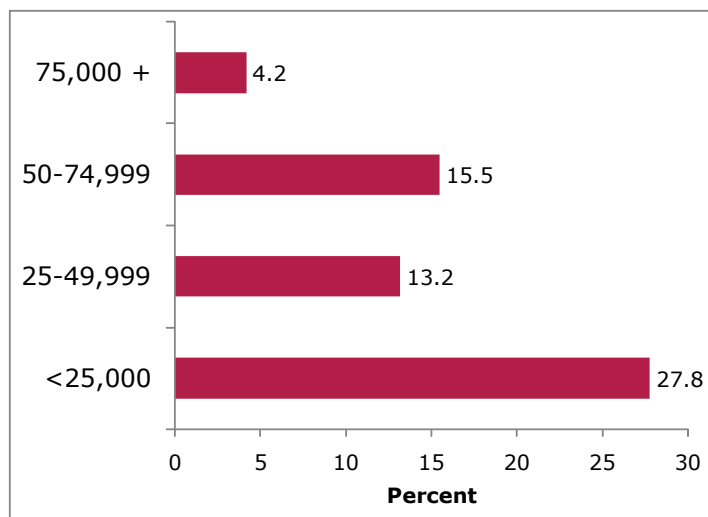
Utah Pacific Islanders were asked if anyone in their household was unable to obtain needed medical care, tests, or treatments during the past 12 months and 16.3% (13.0-20.2) reported this problem.

Most respondents who were unable to attain needed medical care for members of their households gave financial reasons, including lack of insurance, not being able to afford the care, and the insurance company not covering the cost of care.

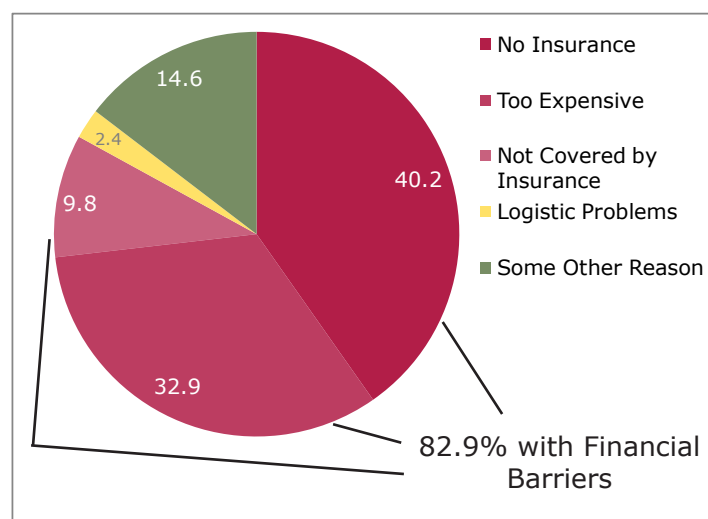
Fewer respondents gave logistic reasons, including lack of child care or time. None of the respondents attributed their inability to get care to transportation problems, language barriers, inability to get time off work, racism, or not knowing where to get care.

People with low incomes were more likely to report that they could not attain needed medical care, with 27.8% (20.6-36.3) of people with incomes under \$25,000 reporting this problem, compared to 4.2% (1.2-13.6) of people with incomes over \$75,000.

Percent Unable to Attain Needed Medical Care by Income



Main Barrier to Receiving Medical Care Among Pacific Islanders Unable to Access Care in Past Year





Experiences with Racism

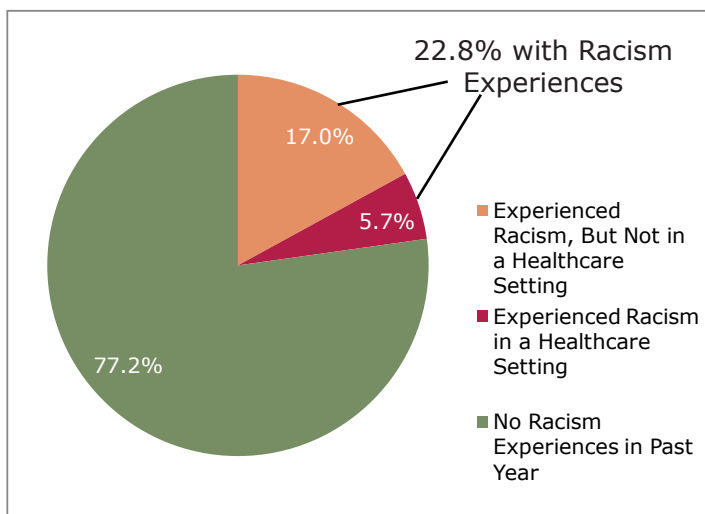
The Utah Pacific Islanders surveyed were asked if they had experienced racism or discrimination during the past year; 22.8% (18.7-35.1) reported that they had this experience.

There were no significant differences in experience with racism by gender or income. However, respondents over age 65 (8.1% [3.5-17.4]) and respondents who preferred to speak Tongan (6.4% [2.4-16.0]) were significantly less likely to report that they had experienced racism.

Pacific Islanders who had both experienced racism and who visited a healthcare provider within the past year were asked

if they had experienced racism or discrimination in a healthcare setting; 32.0% of these people (22.7-42.9) reported that they had this experience.

Experiences with Racism in the Past Year



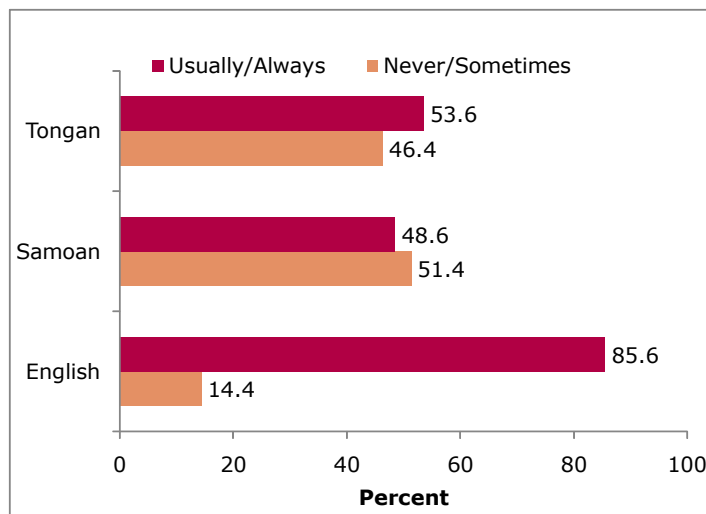
Linguistically Appropriate Healthcare

A minority of people interviewed in Tongan (21.0% [10.9-36.6]) or Samoan (40.3% [18.8-66.4]) reported that someone at their doctor's office spoke their preferred language. Those people surveyed in foreign languages were also less likely to report always or usually understanding their health care providers.

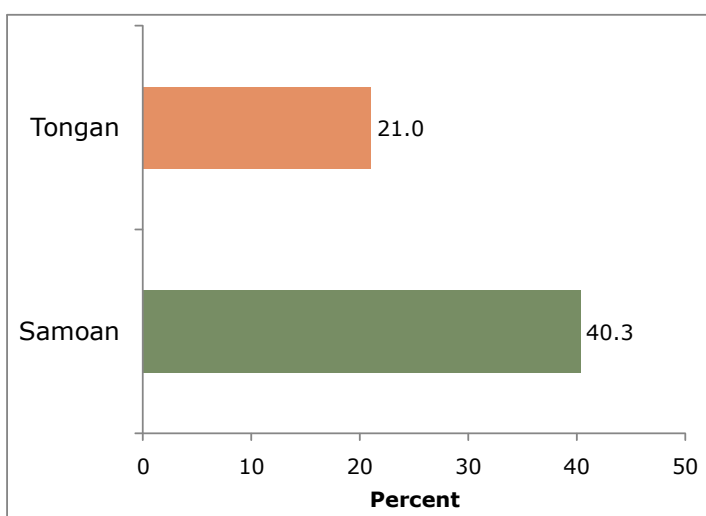
While only 4.5% (3.1-6.5) of all respondents reported that they never understood their healthcare providers, 22.3% (12.2-37.2) of respondents with less than a high school education reported this problem. Overall, 81.3% of Pacific Islanders reported that they could usually or always understand their healthcare providers.

There were no significant differences in foreign language services or understandable care by the respondent's income or disease status.

Reported Frequency with which Healthcare Providers Explained Things in a Way That was Understood, by Interview Language



Foreign Language Speakers Reporting that Someone at the Doctor's Office Spoke their Language





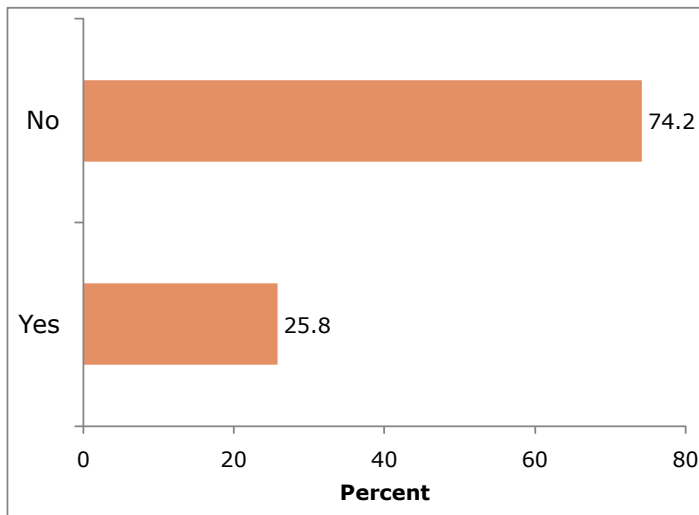
Home Visiting Program Preferences

Home visiting programs provide helpful information and resources to support a healthy pregnancy and child development through the child's first two years of life.

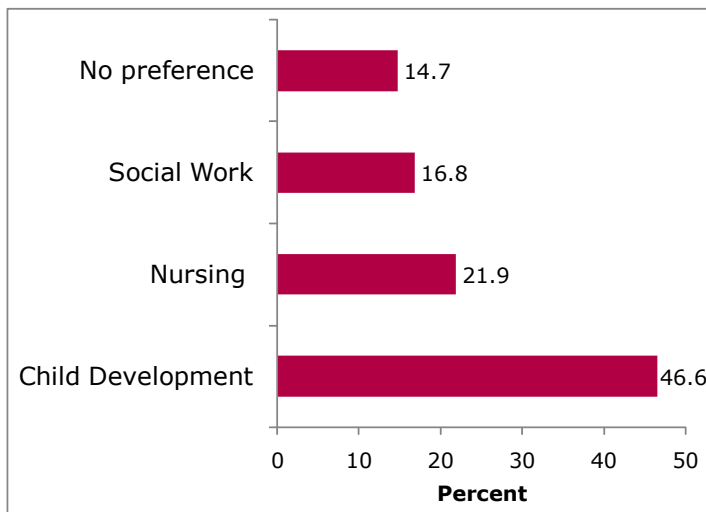
Utah Pacific Islanders were asked about their preferences for the racial and educational background of home visitors. Nearly three-fourths (74.2% [69.9-78.1]) said that it was not important to them that a home visitor be of Pacific Islander race. Nearly half of respondents (46.6% [41.8-51.4]) preferred that home visitors have child development training.

People over 65 years of age were less likely to have a preference about the type of training of a home visitor, but more likely to prefer that a home visitor be a Pacific Islander. Of Utah Pacific Islanders over 65, 56.2% (43.7-68.0) felt that it was important that a home visitor be a Pacific Islander. The responses of older respondents about educational background were fairly evenly divided, with 24.4% (14.2-38.6) preferring nursing, 19.7% (10.9-32.9) preferring child development and 16.6% (8.4-30.3) preferring social work. However, the largest percentage of Pacific Islanders over 65, 39.4% (26.8-53.4), had no preference about educational background.

Is it important to you that a home visitor be a Pacific Islander?



Would you prefer a home visitor who was trained in child development, nursing, or social work?



Hours Worked

Of all Utah Pacific Islanders, 24.3% (20.6-28.4) reported that they did not work and 22.8% (18.0-29.0) reported that they worked more than full-time (>40 hours/week).

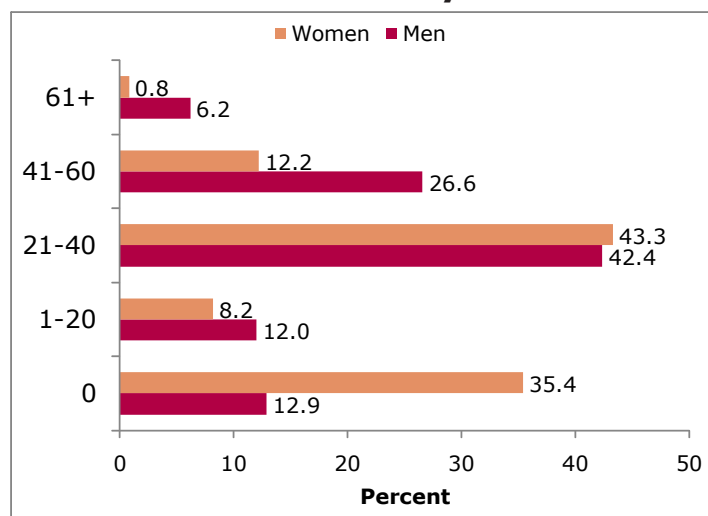
Utah Pacific Islander men (87.1% [91.1-81.8]) were more likely than women (64.6% [70.3-58.4]) to be in the workforce.

People who worked more hours were likely to make more money than those who worked fewer hours. Of those making more than \$75,000/year, 41.0% (27.5-63.8) worked more than full-time but 8.4% (4.2-17.5) of people with incomes under \$25,000/year also worked more than full-time. Of people with incomes over \$75,000/year, 12.3% (5.9-23.8) did not work, while 34.1% (26.7-42.3) of people with incomes under \$25,000/year did not work.

There were no statistically significant differences in hours worked by disease or risk behavior rates.



Hours Worked by Gender



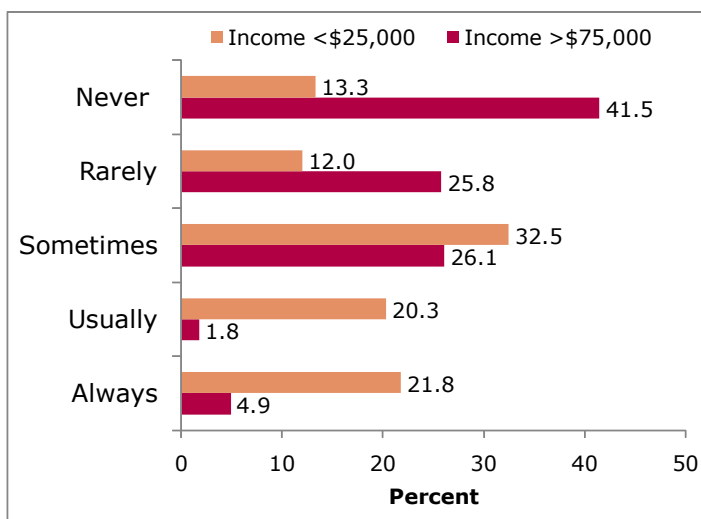
Income & Education

People with low incomes were more likely to report frequent worry about having enough money to buy nutritious meals for their families. There were no statistically significant differences in food security by disease or risk behavior rates.

Low income was also associated with inability to attain needed medical care.

Pacific Islanders with incomes over \$75,000 had a lower rate of diabetes (3.9% [1.4-9.9]) than all Pacific Islanders (13.7% [11.2-16.6]).

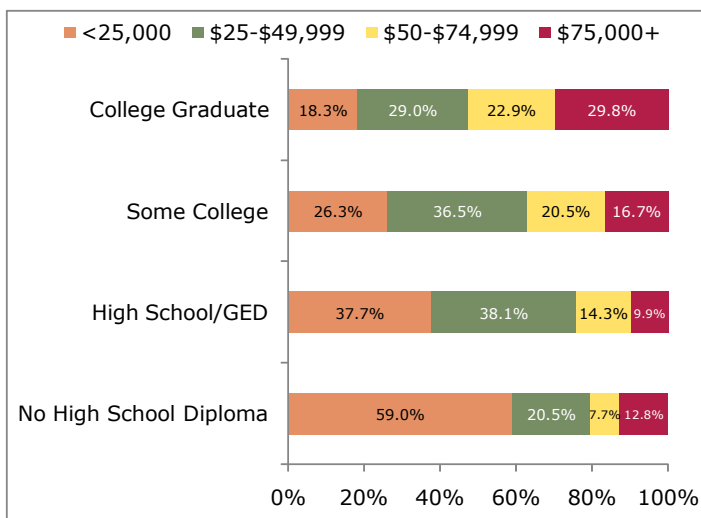
Frequency of Reported Worry About Having Enough Money to Buy Nutritious Meals, by Income



Pacific Islanders with more education were more likely to have higher incomes than those with less education. However, people of all income levels were in every educational category.

Pacific Islanders with more education were less likely to smoke than those with less education.

Proportion at Various Income Levels by Educational Attainment



Adverse Childhood Experiences

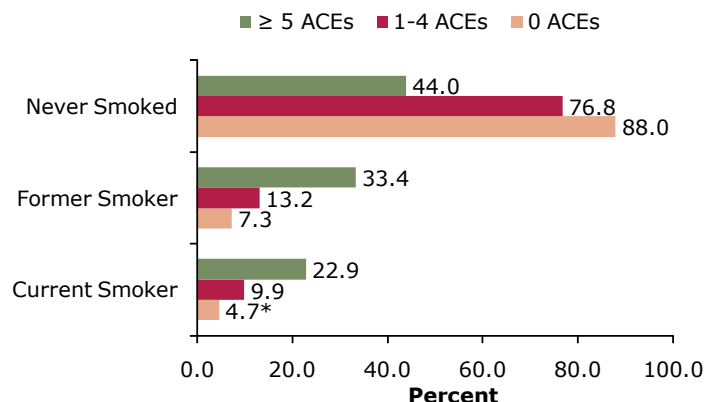
Adverse childhood experiences (ACEs) include verbal, physical, or sexual abuse, as well as family dysfunction (e.g., an incarcerated, mentally ill, or substance-abusing family member; domestic violence; or absence of a parent because of divorce or separation).¹⁵ ACEs have been linked to adverse health outcomes such as violence, obesity, diabetes, cardiopulmonary disease, and other negative physical and mental health behaviors later in life.¹⁶

significantly more likely to report verbal abuse, physical abuse, and child neglect compared to females.

Respondents with an ACE score ≥ 5 had a significantly higher prevalence of current smoking than those with an ACE score of 0 and a significantly higher prevalence of former smoking than those with an ACE score of 0 and 1-4. Those with an ACE score of 0 were significantly

Of surveyed adults, 30.7% reported they did not have any adverse childhood experiences (0 ACEs), 58.6% reported they experienced one to four adverse childhood experiences (1-4 ACEs), and 10.7% reported they experienced five or more adverse childhood experiences (≥ 5 ACEs). Among the nine adverse childhood experience questions that were asked, the most prevalent was verbal abuse at 40.7%. Males were

ACE Score by Smoking Status



*Insufficient number of cases to meet the UDOH standard for data reliability, interpret with caution.

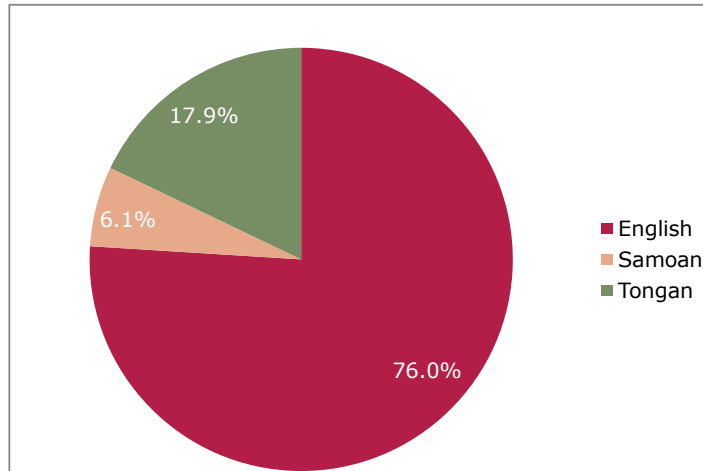
Adverse Childhood Experience	Total	Female	Male
Verbal abuse	40.7 (36.1-45.4)	34.1 (28.0-40.2)	47.7 (40.9-54.5)
Physical abuse	36.5 (32.0-41.0)	30.1 (24.3-35.9)	43.1 (36.4-49.9)
Witness domestic violence	31.3 (26.9-35.7)	25.8 (20.1-31.5)	37.2 (30.5-43.9)
Household member in prison	21.0 (16.9-25.0)	16.2 (11.2-21.2)	25.9 (19.5-32.3)
Household alcohol abuse	16.0 (12.5-19.5)	12.3 (8.0-16.6)	19.9 (14.4-25.4)
Neglected as a child	15.4 (12.1-18.8)	9.6 (5.9-13.4)	21.5 (16.0-30.0)
Parents separated / divorced	13.4 (10.1-16.6)	11.6 (7.3-15.9)	15.2 (10.2-20.2)
Mentally ill household member	12.9 (9.6-16.1)	14.7 (9.9-19.4)	11.0 (6.6-15.4)
Sexual abuse	8.9 (6.1-11.6)	9.9 (5.9-14.0)	7.8 (4.1-11.5)
ACE Category Score	Total	Female	Male
0	30.7 (26.5-34.9)	35.6 (29.6-41.6)	25.2 (19.4-31.0)
1-4	58.6 (54.0-63.3)	56.1 (49.7-62.4)	61.5 (54.8-68.3)
≥ 5	10.7 (7.6-13.8)	8.3 (4.4-12.2)	13.2 (8.3-18.2)

Demographics of Survey Population

Most survey respondents preferred the English language, followed by Tongan and Samoan. People interviewed in

Tongan and Samoan were more likely to be obese than those interviewed in English and those interviewed in Tongan were more likely to have diabetes.

Preferred Language



The Pacific Islanders surveyed had lower incomes and less education on average than the statewide Utah numbers reported by the U.S. Census Bureau American Community Survey (ACS), 2007-2009.^{17,18} However, the ACS estimates were also higher for these measures for Utah Pacific Islanders. The ACS estimated that only 17.2% of Utah Pacific Islanders had incomes under \$25,000 and

34.4% had incomes over \$75,000.¹⁷

Among survey respondents, 34.1% had incomes under \$25,000 and only 15.5% had incomes over \$75,000. The ACS estimated that 65.2% of Utah Pacific Islanders had attended college, while only 47.0% of survey respondents had attended college.¹⁸

	Utah Pacific Islanders (participating in survey)	Utah Statewide Population (from 2007-2009 ACS) ^{17,18}
Gender		
Male	48.5%	50.0%
Female	51.5%	50.0%
Age		
18-34	33.8%	41.1%
35-49	33.4%	26.0%
50-64	20.9%	19.9%
65 +	11.9%	12.9%
Educational Attainment		
< High School	8.0%	9.6%
High School/GED	45.0%	25.2%
Some College	28.3%	36.4%
College Graduate	18.7%	28.8%
Income		
< 25,000	34.1%	17.2%
25-49,999	34.6%	26.1%
50-74,999	15.8%	22.2%
75,000 +	15.5%	34.4%

Methods

The Utah Department of Health interviewed 605 Utah adult Pacific Islanders by telephone for this study. These people were selected through a sample based on surnames. The Utah Department of Health Vital Records Department queried its birth certificate database to draw surnames of men and women who had a child within the past five years and who identified their race as Pacific Islander. The investigators removed Anglo and Hispanic names from the list.

The primary sponsor and coordinator of the survey was the Office of Health Disparities Reduction at the Utah Department of Health, which used funding appropriated by the Utah Legislature, as well as funding from a grant from the U.S. Department of Health and Human Services, Office of Minority Health. Additionally, nine other programs at the Utah Department of Health contributed financially and to the content of the questionnaire, including the Home Visiting Program, Data Resources, Diabetes Prevention and Control, Tobacco Prevention and Control, Heart Disease and Stroke Prevention, Cancer Control and Prevention, Asthma Prevention and Control, Arthritis Prevention and Control, and Immunization. Other Utah Department of Health employees, Office of Health Disparities Reduction Advisory Boards, the University of Utah Pacific Islander Medical Student Association, and two Pacific Islander community-based organizations, The Queen Center and the National Tongan American Society, also contributed to the content of the survey. The UDOH Survey Center implemented the survey.

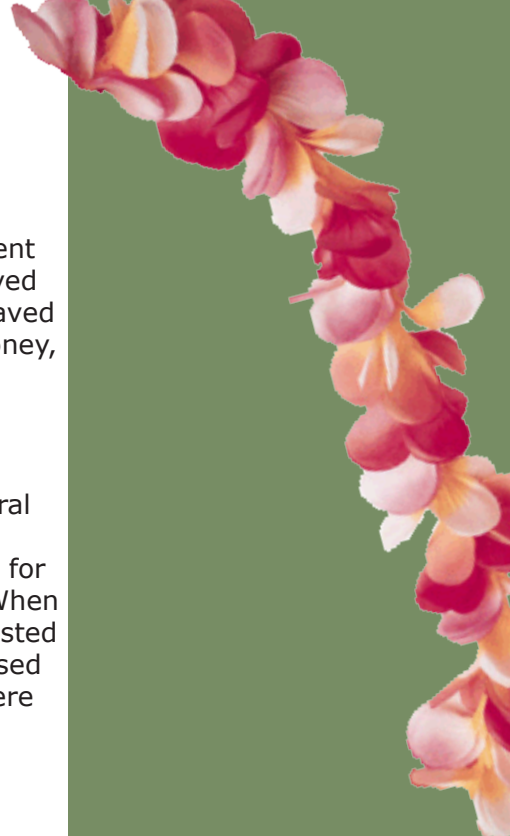
Utah Pacific Islander community members were involved in designing the questionnaire, pilot-testing the instrument, translating the instrument, recruiting Pacific Islander

interviewers, and promoting the survey. This community involvement raised interest in the study, improved its cultural appropriateness, and saved the Utah Department of Health money, since many of these efforts were completed voluntarily.

Most of the questions used in the survey were based on the Behavioral Risk Factor Surveillance System (BRFSS) developed by the Centers for Disease Control and Prevention. When no appropriate BRFSS question existed to meet the research questions posed by collaborators, new questions were designed by the investigators.

A total of 25 bilingual (English/Samoan, English/Tongan) Pacific Islanders reviewed and suggested revisions to the questionnaire. Among the reviewers were community leaders, public health professionals, healthcare providers, and the University of Utah Pacific Islander Medical Student Association. The survey was piloted by calling phone numbers of Utah Pacific Islanders provided by local Pacific Islander organizations. Once the English version was completed, the survey was translated into Samoan and Tongan. Bilingual professionals were charged to ensure the linguistic and cultural appropriateness of the content.

This was the first project the Utah Department of Health Survey Center had completed in any language other than English or Spanish. The Utah Department of Health hired and trained three Tongan-speaking interviewers and two Samoan-speaking interviewers to complete the survey in addition to the English-speaking interviewers already on staff.





Comparison to Utah BRFSS

The state of Utah had the largest proportion of Pacific Islanders of all states besides Hawaii in 2009.¹⁹ However, only 1.1% of the Utah population identified as Pacific Islander or part Pacific Islander.¹⁹ Because of the small numbers of Pacific Islanders, statewide surveillance surveys, such as the Behavioral Risk Factor Surveillance Survey (BRFSS), rarely reached a large enough sample of Pacific Islanders to obtain reliable estimates without aggregating several years of data, making the estimates less current or useful for examining trends.

Analyses of Utah vital records indicated that Utah Pacific Islanders had unique health problems that merited further investigation through a behavioral survey, such as high infant mortality and diabetes death rates.²⁰ However, only 61 Pacific Islanders were reached by the Utah BRFSS in 2010. Moreover, the Utah BRFSS was offered in the English and Spanish languages only while 13.9% of Utah Pacific Islanders spoke languages other than English at home, usually Pacific Island languages.¹⁸ Surveying census tracts with a high proportion of Pacific Islanders was an inefficient option because all Utah census tracts had a Pacific Islander penetration of less than 20%.¹⁹

The Pacific Islander survey generated estimates of health status among Utah Pacific Islanders with smaller confidence intervals than those derived from the Utah BRFSS. The project was also less expensive than the Utah BRFSS. However, it is unknown if the survey results are comparable to the BRFSS because the methodology differs. Studies have found that Korean-Americans, Vietnamese-Americans, and Jewish-Americans with specific surnames do not differ demographically from

other people of the same ethnicity.²¹ Such an analysis of Pacific Islander surnames has not been completed.

The survey undersampled young people, possibly because the study did not include households that exclusively use cell phones.¹⁸ Younger people are more likely to use cell phones exclusively than older people.²² The Utah BRFSS does sample cell phones.

The survey found differences in health status and behaviors between people interviewed in English, Samoan and Tongan, with foreign language speakers having higher rates of diabetes and obesity than English speakers. The obesity and diabetes rates for Pacific Islanders were higher in the Pacific Islander Survey than the rates for Pacific Islanders from the BRFSS.^{3,4} This finding suggests that surveys such as the Utah BRFSS that exclude Samoan and Tongan speakers may inaccurately estimate health status in the Pacific Islander population.

References & Notes

1. Utah Vital Records, Birth Certificate Database, 2009-2010. Number of infants born to pregnant women receiving prenatal care in the first trimester as a percentage of the total number of live births.
2. Utah Pregnancy Risk Assessment Monitoring System, 2004-2008.
3. Statewide rate is from Utah Behavioral Risk Factor Surveillance System, 2010.
4. The values given are crude rates that represent the number of people affected in the respective population. Age-adjusted rates were used to compare populations with different age distributions. Please note that the sampling methods used to conduct the 2011 Utah Pacific Islander Survey differ from the statewide BRFSS. This may affect comparability of results. Age-adjustment was to the U.S. 2000 Standard Population using these age categories: 18-34, 35-49, and 50+. See Table A.
5. Statewide rate is from Utah Behavioral Risk Factor Surveillance System, 2009.
6. According to the New Zealand Pacific Islander scale, overweight is a BMI higher than 26, instead of 25, and obese is a BMI higher than 32, instead of 30. See <http://www.everybody.co.nz/tool-06fb03f0-0ebf-4c02-8551-c1db35f6fb7b.aspx>
7. See Page 19 for a complete explanation of the term, "adverse childhood experiences."
8. Utah Vital Records, Birth-Death Linked Infant Mortality (birth cohort), 2006-2009.
9. <http://health.utah.gov/precon/plan/pregnancy-spacing/>
10. See http://apjcn.nhri.org.tw/server/apjcn/volume18/vol18.3/finished/13_1503_404-411.pdf and <https://researchspace.auckland.ac.nz/bitstream/handle/2292/4675/15608799.pdf?sequence=1>
11. <http://www.cdc.gov/vaccines/stats-surv/nis/downloads/nis-adult-summer-2007.pdf>
12. Estimated Vaccination Coverage for Hepatitis B Vaccine Among Children from Birth to 3 Days of Age by State and Local Area. National Immunization Survey, Q1/2010-Q4/2010.
13. <http://ww5.komen.org/BreastCancer/GeneralRecommendations.html>
14. <http://www.cancer.org/Healthy/FindCancerEarly/CancerScreening-Guidelines/american-cancer-society-guidelines-for-the-early-detection-of-cancer>
15. Adverse Childhood Experiences Reported by Adults – Five States, 2009. MMWR 59(49); 1609-1613
16. Vincent J. Felitti, MD. The Relationship of Adverse Childhood Experiences to Adult Health: Turning Gold into Lead, Kaiser Permanente Medical Care Program.
17. American Community Survey. 2007-2009 American Community Survey 3-Year Estimates. Washington, D.C.: U.S. Census Bureau, 2009. Pacific Islander estimates are Native Hawaiian and Other Pacific Islander alone.
18. American Community Survey. 2007-2009 American Community Survey 3-Year Estimates. Washington, D.C.: U.S. Census Bureau, 2009. Pacific Islander estimates are Native Hawaiian and Other Pacific Islander alone or in combination with one or more other races.





References and Notes

19. American Community Survey. 2005-2009 American Community Survey 5-Year Estimates. Washington, D.C.: U.S. Census Bureau, 2009.

20. Center for Multicultural Health. Health Status by Race and Ethnicity 2010. Salt Lake City: Utah Department of Health, 2010.

21. HS Himmelfarb, RM Loar, SH Mott. "Sampling by Ethnic Surnames: the Case of American Jews." *Public Opinion Quarterly* 47 (1983): 247-260; Sasao, Toshiaki. "Using Surname-Based Telephone Survey Methodology in Asian-American Communities: Practical Issues and Caveats." *Journal of Community Psychology* 22 (1994): 283-295; SH Shin, EY Yu. "Use of surnames in ethnic research: the case of Kims in the Korean-American population." *Demography* 21 (1984): 347-60.; Taylor V, Nguyen, T, Hoai Do H, et al. "Lessons Learned from the Application of a Vietnamese Surname List for Survey Research." *Journal of Immigrant and Minority Health* 13.2 (2011): 345-351.

22. Gardyn, R. "Make a Connection." *American Demographics* 23.12 (2011): 17.

Table A: Age-Adjusted Rates

	PI Survey Age-Adjusted Rate	BRFSS Statewide Age-Adjusted Rate
Arthritis	21.0 (17.9-24.5)	23.2 (22.3-24.1)
Asthma	8.5 (6.4-11.2)	9.0 (8.2-9.9)
Diabetes	18.4 (15.6-21.6)	6.9 (6.4-7.5)
Gestational Diabetes	32.3 (20.6-46.8)	Not available
High Blood Pressure	31.0 (27.6-34.7)	24.6 (23.6-25.6)
Obese	64.4 (60.2-68.4)	24.0 (22.9-25.1)
Cigarette Smoking	8.5 (6.4-11.2)	8.9 (8.2-9.6)
Diabetes Screening	53.1 (48.4-57.6)	Not available.
Colon Cancer Screening	47.1 (39.9-54.2)	68.0 (66.4-69.5)
Breast Cancer Screening	36.1 (29.1-43.7)	41.1 (39.8-42.5)

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The National Tongan American Society

The Queen Center

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UDOH Programs that contributed financially to this
project are cited in the Methods section.

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Heidi Smith, HealthInsight

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