

Differences in Chlamydia Positivity—Asian and Native Hawaiian/Other Pacific Islander Women Age 15-24 In Region IX and X Infertility Prevention Project (IPP) Family Planning Clinics

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Background

In 1977, the Office of Management and Budget (OMB) issued a directive that established four racial categories—American Indian or Alaskan Native; Asian or Pacific Islander, Black, and White—and two ethnicity categories—Hispanic origin and Not of Hispanic origin. In 1997, OMB announced revised standards for federal data on race and ethnicity with six racial categories—American Indian or Alaska Native; Asian; Black or African American; Native Hawaiian or Other Pacific Islander; White; and Some Other Race—and two ethnicity categories—Hispanic or Latino and Not Hispanic or Latino. In 2000, the Census adopted these standards and added “Native Hawaiian and Other Pacific Islander” as a racial group, separate from “Asian.” That year, the Infertility Prevention Project (IPP) in Regions IX and X began collecting data reflecting these changes.

Objectives

- 1) Describe the epidemiology of and risk factors for chlamydia (CT) among Asian and Native Hawaiian/Other Pacific Islander women age 15-24 screened in Region IX and X IPP family planning (FP) clinics in 2008
- 2) Identify potential implications for service delivery

Methods

Data sources

We analyzed CT positivity (CT+) among Asian, Native Hawaiian/Other Pacific Islander, and non-Hispanic White women age 15-24 screened in Region IX (N=19,643) and X (N=58,902) IPP FP clinics in 2008. All Region X IPP FP clinics used a common data form to collect individual-level measures. Information collected included age, race, ethnicity, reason for visit (routine, exposed to CT in last 60 days), self-reported behavioral risks in last 60 days (multiple sex partners, new sex partner, symptomatic sex partner), other risks (condom use at last sex, positive CT in last 12 months), clinical findings (mucopurulent cervicitis, friable cervix, ectopy, pelvic inflammatory disease), and chlamydia test result.

Statistical Analyses

We analyzed CT+ among Asian and Native Hawaiian/Other Pacific Islander women by calculating frequencies and percentages for all independent variables in relationship to the dependent variable. For Region X, we performed bivariate analyses for all independent variables in relationship to the dependent variable, and a chi-square test was performed to determine statistical significance. Third, multivariate logistic regression was performed using all variables that were found to be associated with chlamydial infection for the sample.

Results

Of the 19,643 test records in Region IX, 50.3% were among women age 15-19 and 49.7% among those age 20-24. About a quarter (26.4%) of the women in Region IX were Asian or Native Hawaiian/Other Pacific Islander, and nearly three-quarters (73.5%) were non-Hispanic White. Of the 58,902 test records in Region X, 42.7% were among women age 15-19 and 57.3% among those age 20-24. About 7% of the women in Region X were Asian or Native Hawaiian/Other Pacific Islander. The vast majority of women (92.7%) were non-Hispanic White. Among women in Region X, there was not much variation in age and behavioral risks in the last 60 days by race/ethnicity. There was some variation in reason for visit; 37% of non-Hispanic White women had a non-routine reason for visit vs. about half of Asian (50.0%) and Native Hawaiian/Other Pacific Islander (52.0%) women. Table 1 shows characteristics of women in Regions IX and X, and Table 3 shows other characteristics of women in Region X only.

Unadjusted CT+ was highest among Native Hawaiian/Other Pacific Islander women in both Regions IX (12.0%) and X (10.2%). CT+ was lower among Asian women in both Regions IX and X (7.6% and 6.1%, respectively), but was still higher than among non-Hispanic White women (6.2% and 5.9%, respectively). Regardless of race/ethnicity, CT+ was higher among women age 15-19 than among those age 20-24. In Region IX, CT+ was elevated at each age category among Asian and Native Hawaiian/Other Pacific Islander women. In contrast, in Region X, CT+ was higher among non-Hispanic White women age 15-17 than among Asian and Native Hawaiian/Other Pacific Islander women. However, among women age 18-19 and age 20-24, CT+ was higher among Native Hawaiian/Other Pacific Islander women than among non-Hispanic White and Asian women. In addition, among women age 20 to 24, CT+ was higher for both Asian and Native Hawaiian/Other Pacific Islander women.

In the logistic regression analysis, measures independently associated with CT+ included age, race/ethnicity, reason for visit (not routine visit, exposed to CT—last 60 days), behavioral risks in the last 60 days (multiple sex partners, new sex partner, symptomatic sex partner, no condom use at last sex), and one or more clinical findings. Consistent with data from 2000-2006, Native Hawaiian/Other Pacific Islander women in Region X were more likely—specifically, 1.5 times as likely—to test positive for CT than non-Hispanic White women. Reported reason for visit was also independently associated with positivity. Women who had a non-routine reason for visit were nearly 1.3 times as likely to test positive for CT as those who reported that their visits were routine, and women who reported that they were exposed to CT in the last 60 days were more than 4.5 times as likely as those who did not to test positive for CT. In addition, women who reported behavioral risks in the last 60 days were more likely to test positive for CT than those who did not, and those with one or more clinical findings were nearly three times as likely as those with no clinical findings to test positive for CT. Table 4 shows additional multivariate results.

Table 1—Characteristics, Regions IX and X

Characteristic	Region IX	Region X
Age		
15-17	24.1%	19.1%
18-19	26.2%	23.6%
20-24	49.7%	57.3%
Race/Ethnicity		
Asian	13.1%	5.8%
Native Hawaiian/Other Pac Isl	13.4%	1.5%
Non-Hispanic White	73.5%	92.7%

Table 2—CT+ by Age and Race, Regions IX and X

Characteristic	Region IX	Region X
Age		
15-17	8.6%	6.3%
18-19	8.6%	7.2%
20-24	6.1%	5.4%
Race/Ethnicity		
Asian	7.6%	6.1%
Native Hawaiian/Other Pac Isl	12.0%	10.2%
Non-Hispanic White	6.2%	5.9%

Table 3—Other Characteristics, Region X

Characteristic	%
Reason for visit	
Routine	61.4%
Exposed to CT, last 60 days	1.8%
Behavioral risks, last 60 days	
Multiple sex partners	10.2%
New sex partner	20.9%
Symptomatic sex partner	2.3%
Condom use at last sex	23.1%
One or more behavioral risks	76.5%
Positive CT, last 12 months	4.9%
Clinical findings	
None	62.8%
One or more	4.8%
Data not available/no exam	32.4%

Table 4—Multivariate Analysis, Region X

Characteristic	Adj. OR (95% CI)
Age	
15-17	1.17 (1.05-1.30)
18-19	1.36 (1.24-1.49)
20-24	Ref
Race/Ethnicity	
Asian	.983 (.831-1.16)
Native Hawaiian/Other Pac Isl	1.46 (1.13-1.90)
Non-Hispanic White	Ref
Reason for visit	
Not routine visit	1.28 (1.18-1.39)
Exposed to CT, last 60 days	4.64 (3.88-5.55)
Behavioral risks, last 60 days	
Multiple sex partners	1.32 (1.15-1.51)
New sex partner	1.47 (1.32-1.63)
Symptomatic sex partner	2.58 (2.19-3.05)
No condom use at last sex	1.20 (1.09-1.31)
Positive CT, last 12 months	1.72 (1.49-1.98)
Clinical findings	
None	Ref
One or more	2.97 (2.60-3.40)
Data not available/no exam	1.17 (1.07-1.28)

Conclusions

Based on our analysis, Native Hawaiian/Other Pacific Islander women in Region IX and X IPP FP clinics had consistently higher levels of CT than Asian and non-Hispanic White women. In addition, there were significant differences in chlamydial infection between Asian and Native Hawaiian/Other Pacific Islander women.

Our analysis clearly supports the collection of data using the Census 2000 racial/ethnic categories and highlights the importance of exploring racial/ethnic disparities in chlamydia. It also suggests the importance of looking at disparities among racial/ethnic groups beyond White, Black or African American, and Hispanic or Latino and of disaggregating data within the Asian and Native Hawaiian/Other Pacific Islander populations.

In addition, our analysis highlights the need for better assessment of community-level factors affecting CT+ among Asian and Native Hawaiian/Other Pacific Islander women. Our findings indicate that there may be factors other than the more traditional individual-level measures that explain the association between Asian and Native Hawaiian/Other Pacific Islander race and chlamydial infection, such as acculturation and generational issues, socioeconomic status and other behavioral risk factors. Finally, our findings support the current interest in the role of sexual network dynamics in STD transmission and the need for better information on female clients' sexual behaviors and practices, as well as sexual partners.