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Challenging Horizons: Identifying the Burden of Sexually Transmitted Disease (STD) in Indian Country

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Introduction

Sexually transmitted diseases (STDs) including chlamydia, gonorrhea, and syphilis continue to impose a significant health burden on American Indians and Alaska Native (AI/AN) people as compared to other race/ethnicity groups. In 2009, among all races and ethnicities, AI/AN had the second highest rates of chlamydia and gonorrhea, and the third highest rates of primary and secondary syphilis (P&S). In 2009, reported case rates of chlamydia, gonorrhea, and P&S among AI/AN were up to four times higher than comparable rates for whites. The publication of the *Indian Health Surveillance Report on Sexually Transmitted Diseases (STD), 2009* is a collaborative effort between the Centers for Disease Control and Prevention (CDC) and the Indian Health Service (IHS). The most recent report uses 2009 data, and is an update to an earlier report that used data from 2007. Findings from this report are intended to increase awareness regarding the burden of STDs in AI/AN populations, which may lead to improvements in STD testing and clinical care, and increases in funding and research activities related to STD prevention and control in these communities.¹ The surveillance report can be accessed at <http://www.cdc.gov/std/stats/IHS/IHS-Surv-Report-2009.pdf>

Key Points and National Trends in STDs among AI/AN

Chlamydia

- Chlamydia is the most -common nationally notifiable disease in the US. Chlamydial infections disproportionately affect young women and are frequently

For a copy of the IHS STD Surveillance Report, 2009 or for additional information on implementing STD prevention and control activities in Indian Country, contact Scott Tulloch at (505) 248-4344; or scott.tulloch@ihs.gov.

asymptomatic. If untreated, chlamydial infections can result in serious complications, including pelvic inflammatory disease (PID), infertility, and ectopic pregnancy. Chlamydia can be transmitted from mother to child during delivery and can facilitate the transmission of HIV.

- In -2009, among all race/ethnicities, AI/AN had the second highest chlamydia rate (776.5 cases per 100,000 population), which was 4.3 times higher than the rate for whites (178.8 cases per 100,000 population). African-Americans had the highest chlamydia rate (1,559.1 cases per 100,000 population).
- In -2009, 19,618 of 1,244,180 chlamydial infections (1.6%) were reported among AI/AN. The AI/AN chlamydia rate increased by 1.5% during 2008 – 2009 (2008 rate: 788.3 cases per 100,000 population) (Figure 1).
- In 2009, the chlamydia rate among AI/AN women in the US (1,214.9 cases per 100,000 females) was nearly 4 times higher than the rate among AI/AN men (323.8 cases per 100,000 males), likely reflecting a greater number of women screened for this infection.
- Among AI/AN women, the highest age-specific rates of reported chlamydia in 2007 were among 20- to 24-year olds (5,104.4 per 100,000 females) and 15- to 19- year olds (4,619.3 per 100,000 females). These two age groups also represented the highest age-specific rates among all women in the U.S.
- Age-specific - rates among AI/AN men, while substantially lower than the rates in AI/AN women in 2009, were highest among 20-to 24- year-olds (1,367.0 cases per 100,000 males). This age group also had the highest rates among all men in the U.S. (1,120.6 cases per 100,000 males).

Gonorrhea

- Gonorrhea -is the second most common nationally notifiable disease in the US; like chlamydia is a major cause of PID, infertility, and ectopic pregnancy. Gonococcal infections may be transmitted from mother to infant during delivery and can facilitate the transmission of HIV.
- In -2009, among all race/ethnicities, AI/AN had the second highest gonorrhea rate (113.3 cases per 100,000 population), which was 4.2 times higher than the rate for whites (27.2 cases per 100,000 population). African-Americans had the highest gonorrhea rates (556.4 cases per 100,000 population)
- In 2009, 2,917 of 301,174 gonococcal infections (1.0%) reported to CDC occurred among AI/AN. The AI/AN gonorrhea rate increased by 5.5% during 2008 – 2009 (2008 rate: 107.4 cases per 100,000 population). Comparatively, the total US gonorrhea rates decreased by 10.4% during 2008–2009 (Figure 2).
- In 2009, the gonorrhea rate among AI/AN women in the US (147.3 cases per 100,000) females was 1.9 times higher than the rate among AI/AN men (78.2 cases per 100,000 males)

- Among AI/AN women, the highest age-specific rates of reported gonorrhea in 2009 were among 20- to 24- year olds (570.0 cases per 100,000 females) and 15- to 19-year olds (494.9 cases per 100,000 females). These two age groups also represented the highest age-specific rates among all women in the US.
- Age-specific gonorrhea rates among AI/AN men, while substantially lower than the rates in AI/AN women in 2009, were highest among 20- to 24-year olds (244.4 cases per 100,000 males). This age group also had the highest rates among all men in the US. (407.5 cases per 100,000 males).

Primary' and Secondary Syphilis

- Syphilis, in its primary and secondary stages, is a highly infectious, but easily curable STD. If untreated, syphilis can lead to serious long-term complications including stroke, heart disease, and death. Syphilis can be transmitted from untreated mothers to their fetuses, potentially leading to stillbirths and congenital deformities. Syphilis has been shown to facilitate the transmission of HIV two-to-five fold.
- In 2009, among all race/ethnicities, AI/AN had the third highest primary and secondary syphilis (P&S) rate (2.4 cases per 100,000 population), which was similar to the rate for whites (2.1 cases per 100,000 population). African-Americans had the highest P&S rate (19.2 cases per 100,000 population), followed by Hispanics (4.5 cases per 100,000 population)
- In 2009, 61 of 13,997 P&S infections (0.4%) reported to CDC occurred among AI/AN. The AI/AN P&S rate increased slightly to 2.4 cases per 100,000 population during 2008 – 2009 (2008 rate: 2.3 per 100,000 population) (Figure 3).
- In -2009, the male-to-female P&S rate ratio among AI/AN was 4:1, indicating a higher number of cases being diagnosed among men than women. Similarly, for the total US, the male-to-female P&S rate ratio has risen steadily since 1996 to 6.1 in 2009 reflecting an increase in syphilis among men who have sex with men (MSM) during this time.
- In 2009, among AI/AN, age-specific P&S syphilis rates were highest among women aged 25 – 29 years (3.1 cases per 100,000 population) and among men aged 35 – 39 years (11.4 cases per 100,000) population. For the total US, the highest age-specific P&S rates were reported among men and women aged 20 – 24 years (20.7 and 5.6 cases per 100,000 population respectively).

Summary of IHS Area STD Profiles

Chlamydia

- The overall IHS chlamydia rate in 2009 was 816.2 cases per 100,000 population. This was 2.0 times higher than the corresponding US rate (Figure 4).

- Ten of 12 IHS Areas had higher 2009 chlamydia rates compared to the US rate, ranging from 1.2 to 5.7 times higher than the US rate.
- In 2009, all IHS Areas had female chlamydia rates that were between 2.5 and 5.5 times higher than male rates, likely reflecting greater numbers of women screened for this infection.
- During 2008 – 2009, overall chlamydia rates in the US increased 2.8% (from 398.1 to 409.2), while overall IHS chlamydia rates decreased by 0.3%; the IHS Area with the greatest increase was Nashville (14.0%); the California Area had the largest decrease (–13.9%).

Gonorrhea

- In 2009, the overall IHS gonorrhea rate was higher than the US rate (111.6 and 99.1 cases per 100,000 population respectively) (Figure 5).
- Four IHS Areas (Aberdeen, Alaska, Bemidji, Oklahoma City) had 2009 gonorrhea rates that were 1.3 to 6 times higher than the US rate.
- In 2009, the overall IHS female gonorrhea rate was 2.0 times higher than the male gonorrhea rate; all but 2 IHS Areas (Billings and Navajo) had higher female gonorrhea rates than male rates.
- During 2008 – 2009, overall gonorrhea rates in the US decreased 10.5% (from 110.7 to 99.1), while overall IHS gonorrhea rates increased by 11.9%.
- IHS areas with the greatest increases were Alaska Area (88.9%) and Bemidji Area (11.8%); the IHS Areas with the greatest decreases were California (–56.3%) and Portland (–40.9%).

Primary and Secondary Syphilis

- In 2009, the overall IHS P&S rate was 2.2 cases per 100,000 population, compared to 4.6 cases per 100,000 population for the overall US.
- Within IHS, 38 of 41 (93%) P&S cases occurred in 5 IHS Areas in the southwest: Albuquerque (6 cases), Navajo (11 cases), Oklahoma City (6 cases), Phoenix (10 cases), and Tucson (5 cases); 5 IHS Areas had no P&S cases in 2009.
- In -2009, the male-to-female P&S rate ratio among AI/AN was 3:1, indicating more cases being diagnosed among men than women. The US male-to-female ratio was 6:1.
- During 2008 – 2009, overall P&S rates in the US increased from 4.4 to 4.6 cases per 100,000 population; overall IHS rates increased from 2.1 to 2.2 cases per 100,000. The largest increase occurred in the Albuquerque Area (from 0.9 to 6.2 cases per 100,000); the Oklahoma City and Tucson Areas had the largest decreases (–25% and –17% cases per 100,000 population, respectively).

Addressing High STD Rates in AI/AN Communities:

CDC, IHS, Cardea, and partnering tribal organizations developed standard recommendations for STD/HIV testing, treatment, and partner management for AI/AN clinical care sites http://www.npaihb.org/epicenter/project/prt_std_policies. These are described in greater detail in this special issue by Nakatsukasa-Ono, et al. These guidelines are currently in use by multiple IHS service units and comply with IHS Government Performance and Results Act (GPRA) measures on HIV and STD screening. Many of these screening and treatment guidelines can be customized for implementation within electronic health/medical records. In addition to these standard protocols, providers are encouraged to keep the CDC STD treatment guidelines readily available for use in choosing appropriate STD treatment regimens, complying with nationally recommended screening practices, and for use in counseling patients regarding safer sex behaviors. These guidelines can be viewed and downloaded from the CDC's Division of STD Prevention's website at <http://www.cdc.gov/std/treatment>.

High rates of STDs in AI/AN communities mainly affect youth. Adolescents are at higher risk for STDs due to biological predisposition, participation in unprotected intercourse, engagement in multiple sexual partnerships of limited duration, alcohol and drug use, and obstacles in seeking health care. High STD rates in youth are an indicator of unprotected sexual practices that can also lead to unintended pregnancy and HIV infection. High STD rates can also be indicators of limited knowledge; unclear perception of risk; and lack of, inconsistent, or incorrect use of prevention methods, such as condoms. These challenges support the need for increased efforts to improve access, quality, and delivery of STD testing and partner management, and to encourage safer sex practices, including condom use, among populations at risk within AI/AN communities.

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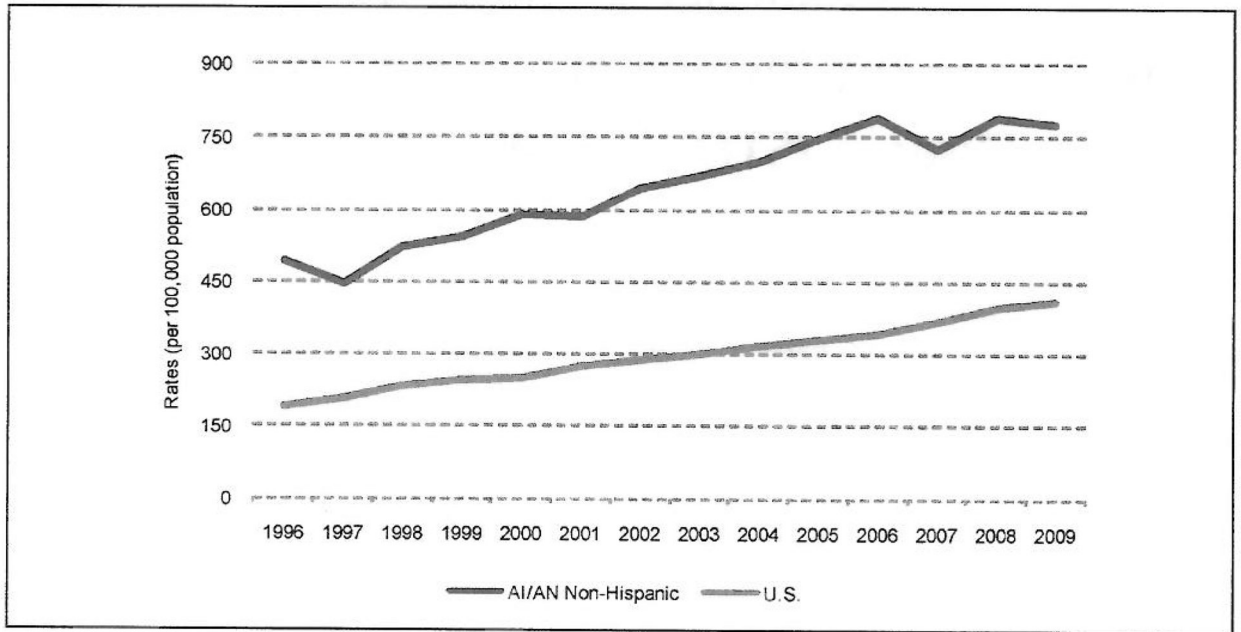


Figure 1.
Total Chlamydia Rates, AI/AN Non-Hispanic and US, 1996 – 2009

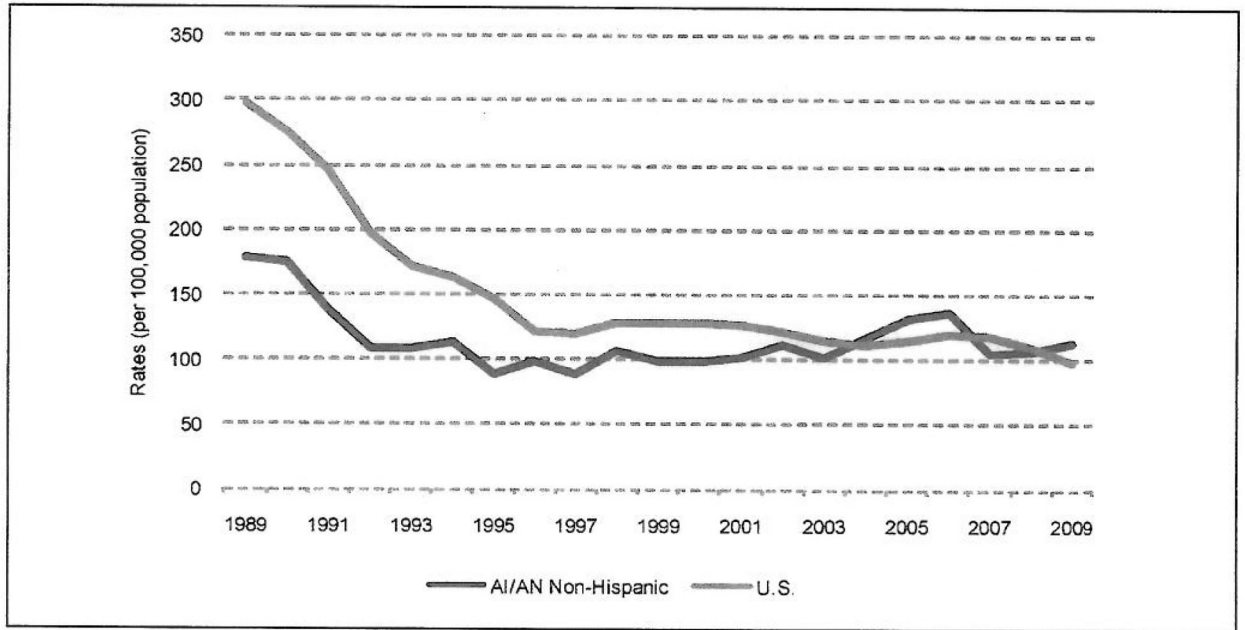


Figure 2.
Total Gonorrhea Rates, AI/AN Non-Hispanic and US, 1989 – 2009

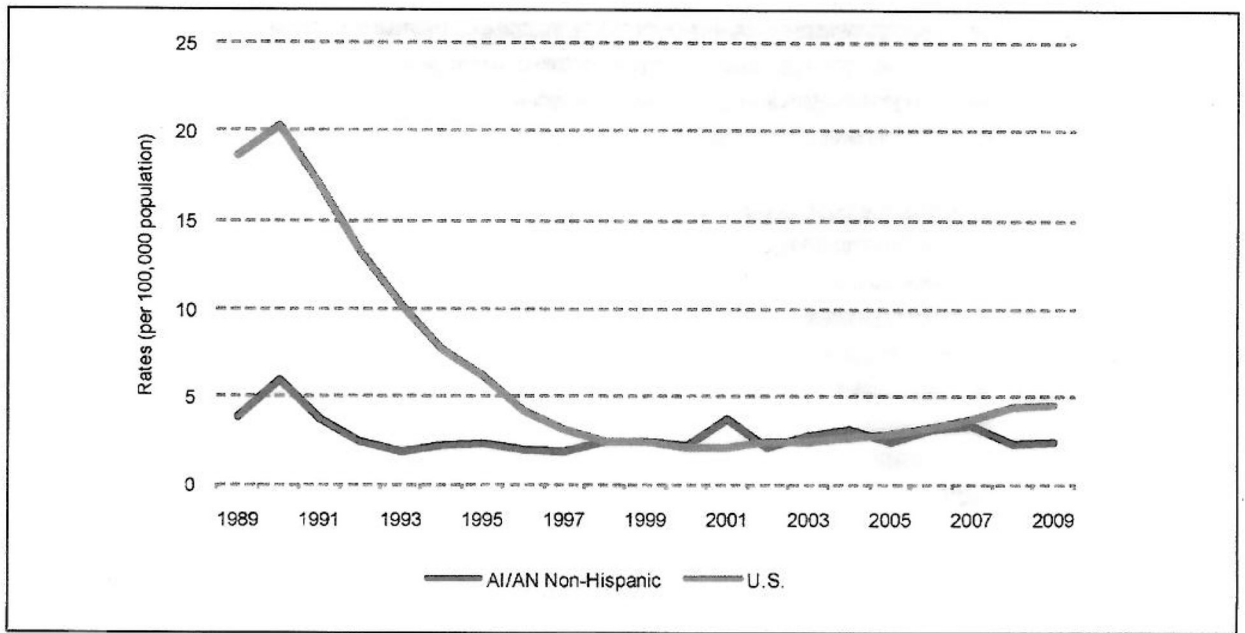


Figure 3.
Total P&S Syphilis Rates, AI/AN Non-Hispanic and US, 1989 – 2009

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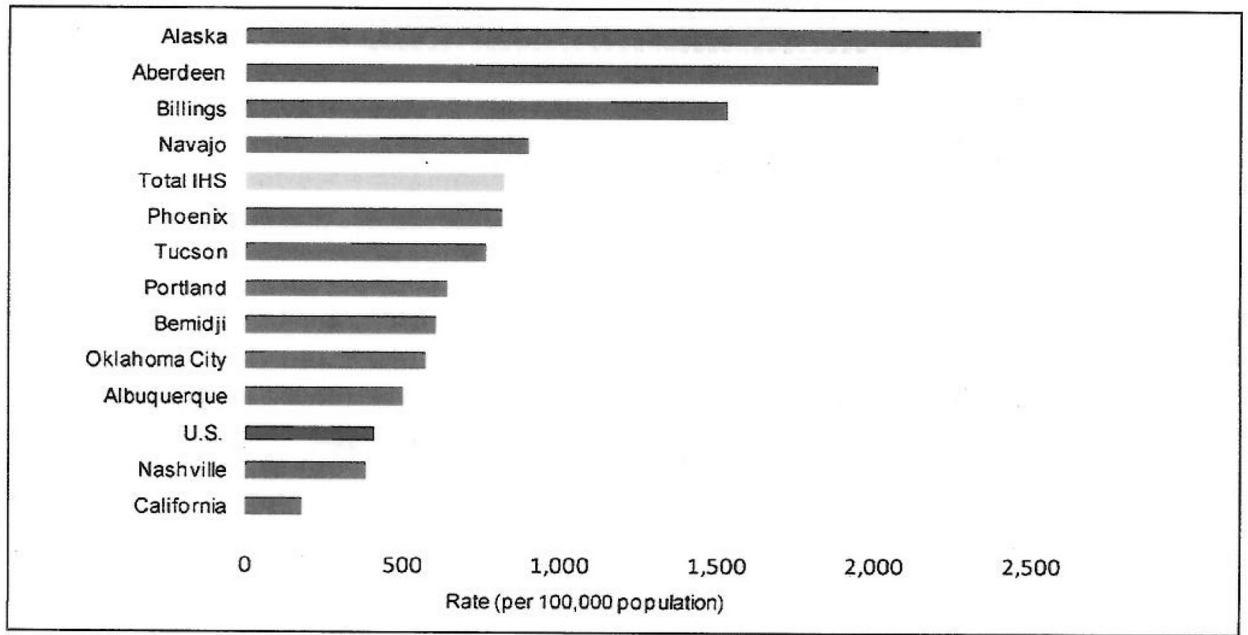


Figure 4.
Chlamydia Rates by IHS Area, 2009

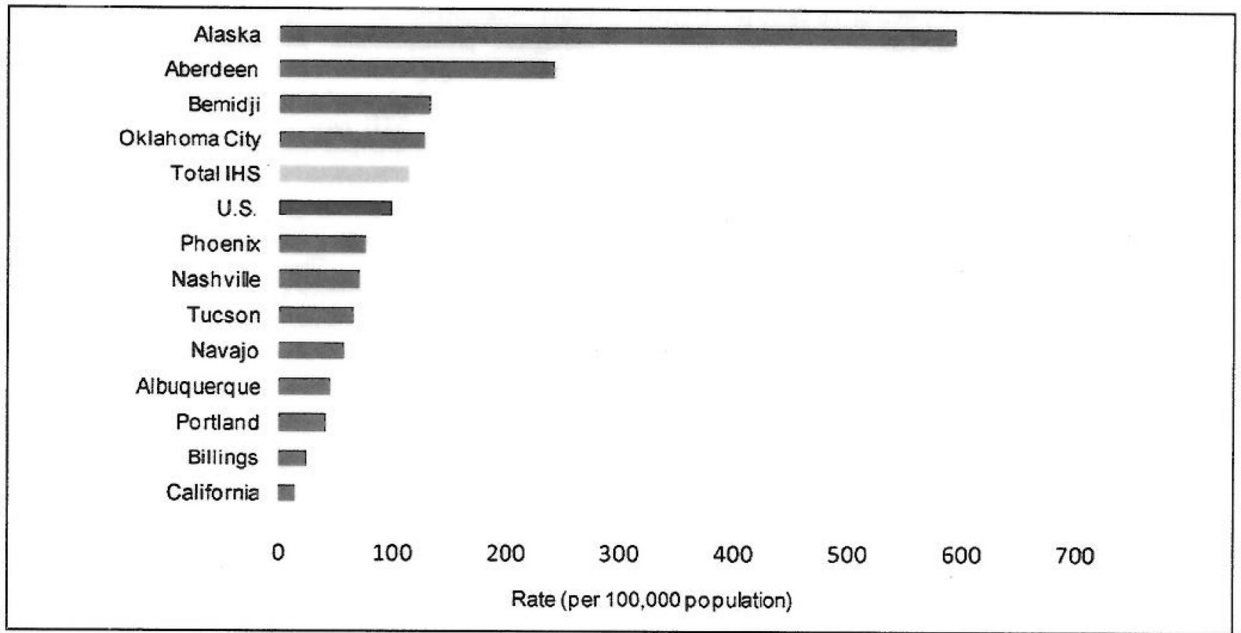


Figure 5.
Gonorrhea Rates by IHS Area, 2009

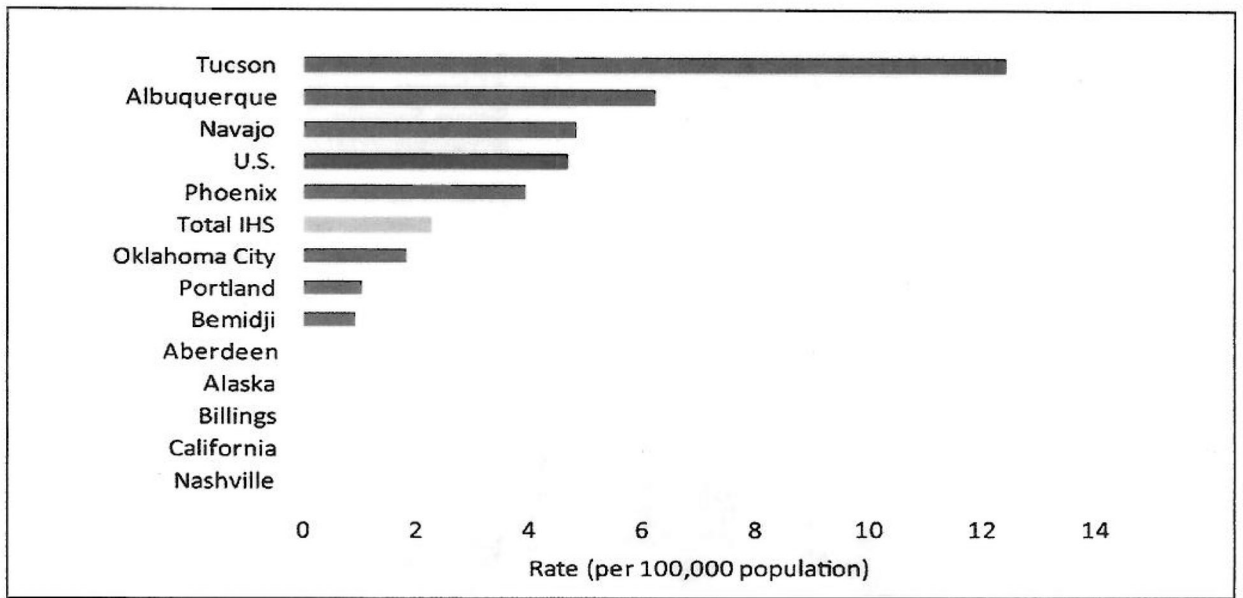


Figure 6.
P&S Syphilis Rates by IHS Area, 2009