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Addressing Increases in Gonorrhea Diagnoses in South Dakota: A Collaboration between the State, IHS, Tribes, and CDC

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Background

Gonorrhea is the second most commonly reported notifiable disease in the US. Since 2009, a growing number of American Indian/Alaska Native (AI/AN) communities have been impacted by increasing rates of gonorrhea. In 2010, gonorrhea rates among AI/AN were 4.6 times the rate among white, non-Hispanics nationally (105.7 per 100,000 among AI/AN compared to 23.1 per 100,000 among whites). South Dakota (SD) state health officials reported increases in gonorrhea infections in 2011, particularly among counties with large American Indian (AI) populations (Figure 1).

For additional information on the recommendations or resources for implementing efforts to expand STD screening, please contact Scott Tulloch by e-mail at *Scott. Tulloch@ihs.gov*, or telephone (505) 443-4344; or Brigg Reilley at *Brigg.Reilley@ihs.gov*, telephone (505) 248-4926.

In 2011, there were 602 reported cases of gonorrhea in the state, representing a 231% increase in reported cases since 2007 and the highest number in a single year since 1987. Although accounting for only 9% of South Dakota's population overall, AI accounted for 67% of gonorrhea cases in 2011. The gonorrhea rate among AI was almost twice the rate among blacks and was 35 times the rate among white, non-Hispanics (557 per 100,000 among AI compared to 315 per 100,000 among blacks and 16 per 100,000 among whites) (Figure 2).

AI in South Dakota have also been disproportionately affected by chlamydia. In 2011, the rate of chlamydia among AI in South Dakota was twice the rate among blacks and 12 times the rate among white, non-Hispanics (1,752 per 100,000 among AI compared to 883 per 100,000 among blacks and 127 per 100,000 among whites) (Figure 3).

In response to the increase of gonorrhea and ongoing high rates of chlamydia among AI in South Dakota, the Aberdeen Area Indian Health Service (AA-IHS), in partnership with the South Dakota Department of Health and three American Indian tribes, requested assistance from the Centers for Disease Control and Prevention (CDC). The primary objectives of the CDC response, also referred to as an Epi-Aid, included assessing and describing current sexually transmitted disease (STD) prevention and control measures, increasing community and provider awareness of STD rates, and developing recommendations to assist in STD/HIV control among AI. HIV was included in the scope of the response out of concern that the increase in STD rates may precede an increase in HIV rates among this population.

Epi-Aid activities and results

The Epi-Aid was initiated in June 2012 and focused on 1) engaging medical providers from participating IHS and tribal health care facilities, 2) evaluating screening practices of respective facilities, and 3) leveraging local media outlets to assist in disseminating information regarding STDs and current regional trends. Specific activities included:

1. Provider education (CME/CNE) including the epidemiology of STDs in South Dakota and tribal-specific STD data, as well as an overview of screening recommendations, diagnosis and treatment guidelines, and partner management. Health care workers were unaware of the high gonorrhea and chlamydia rates and had never seen STD data specific to reservation counties.
2. Evaluation of laboratory testing data that revealed a stable number of gonorrhea/chlamydia tests (dual platform) ordered per month and increasing positivity from 2009 to 2011, indicating that the increases in gonorrhea are likely not due to increased screening (Figure 4).
3. Examination of the four Clinical Reporting System (CRS) STD/HIV screening indicators monitored by IHS that revealed opportunities for improvement in the Aberdeen Area IHS as well as IHS nationally (Table 1).

4. Interviews with two radio stations and a newspaper to inform the community of the high rates of gonorrhea and chlamydia and the opportunities for testing and treatment. Emphasis was placed on the asymptomatic nature of STDs among young men and women and the need to be screened routinely if sexually active.

Recommendations

Based on the needs identified during this investigation, a number of priority recommendations were developed. These included the following:

1. Increased STD screening among sexually active AI per national and IHS guidelines.[1] HIV screening is particularly low and needs to improve in light of the high rates of STDs and in order to detect infection early. Some opportunities to increase screening for chlamydia, gonorrhea, and HIV include the following:
    a. Implementation of “express visits” (walk-in, lab-only visits) that would allow patients to provide a urine sample for gonorrhea and chlamydia testing to intake staff without seeing a clinician.
    b. Urine batching (i.e., screening of urine samples provided for urinalysis, urine culture, urine drug screen, or pregnancy test for gonorrhea and chlamydia).
    c. Screening during well-child exams and school physicals for adolescents and at employee-based physicals, mobile unit screening in high prevalence communities or at community events, and screening in corrections facilities and juvenile detention centers.
2. Implementation of STD screening reminders in the electronic health record (clinical reminder patches).
3. Use of expedited partner therapy (EPT) and the creation of a “quick pick” option in the electronic health record allowing a health care provider to prescribe treatment for the patient as well as their sexual partners to facilitate EPT.[1]
4. Increased community and provider awareness. Some opportunities include:
    a. Use of local and regional media outlets to expand the reach of community education efforts and target service providers with key STD prevention messaging.
    b. Standardization of STD protocols and policies with IHS and tribal health care facilities to solidify screening and treatment practices.

c. Strengthened communication across programs (state, IHS, and tribal) regarding STD trends and prevention activities, including STD data by reservation counties.

d. Analysis and dissemination of CRS data on screening indicators to facility health care providers on at least a quarterly basis.

Beyond South Dakota

Barriers to timely and effective STD management on Indian reservations were identified during this response. Physical barriers such as remoteness of communities, adverse weather conditions, and lack of transportation presented challenges to accessing health care; similarly, the lack of permanent residences of many patients made it difficult for health care workers to provide follow-up. Anecdotally, partner treatment is difficult and is likely low, potentially contributing to higher rates of reinfection among patients presenting for treatment and possibly driving continued increases of STDs in the population. Patient mistrust and perceived concerns of confidentiality related to seeking care in a small community were described. Other barriers include economic difficulties, partner and gang violence, and high teenage pregnancy rates, indicating lack of condom use. Frequent turnover of physicians and nurses in the IHS also means that providers are often unaware of disease concerns in the community and measures in place to address them. These challenges occur in tribal areas in multiple states and should be addressed as part of an STD response plan.

Increasing gonorrhea cases among American Indians is not a problem unique to South Dakota. Since 2009, there have been similar increases in gonorrhea among American Indians/Alaskan Natives in Alaska, Arizona, Montana, New Mexico, and North Dakota. Because the Epi-Aid response was more programmatic as opposed to investigative, the recommendations may be applied to other American Indian populations beyond South Dakota with similar barriers. For example, screening reminders could be implemented in RPMS systems in other IHS Areas to address low screening coverage. According to the Healthcare Effectiveness Data and Information Set (HEDIS), chlamydia screening coverage among sexually active 16 – 24 year old females presenting to Medicaid health management organizations nationally was 58% in 2010,[2] whereas coverage was only 29% among IHS. Expedited partner therapy is potentially allowable or permissible in all of the states and may be a particularly useful tool to treat partners among American Indian communities where access to health care is limited. Finally, high STD rates can be indicators of limited knowledge of risk factors and prevention and treatment methods. Efforts to increase community and provider awareness must accompany efforts to increase screening and treatment and require collaboration between IHS and tribes.

Acknowledgments

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References

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2. National Committee for Quality Assurance. The state of healthcare quality. Washington, DC.: 2011. p. 82-83.

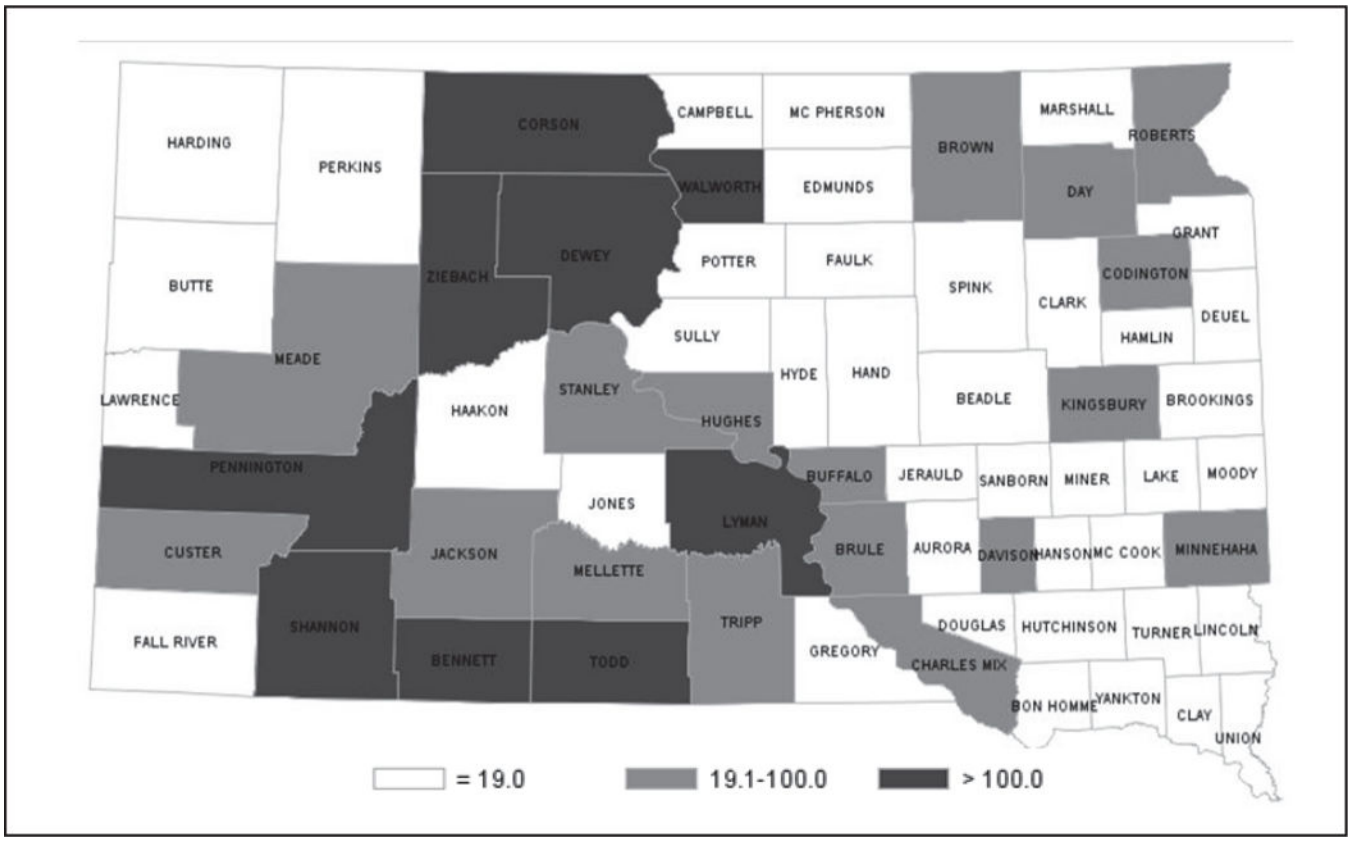

Figure 1.
Gonorrhea rates by county per 100,000 population—South Dakota, 2011

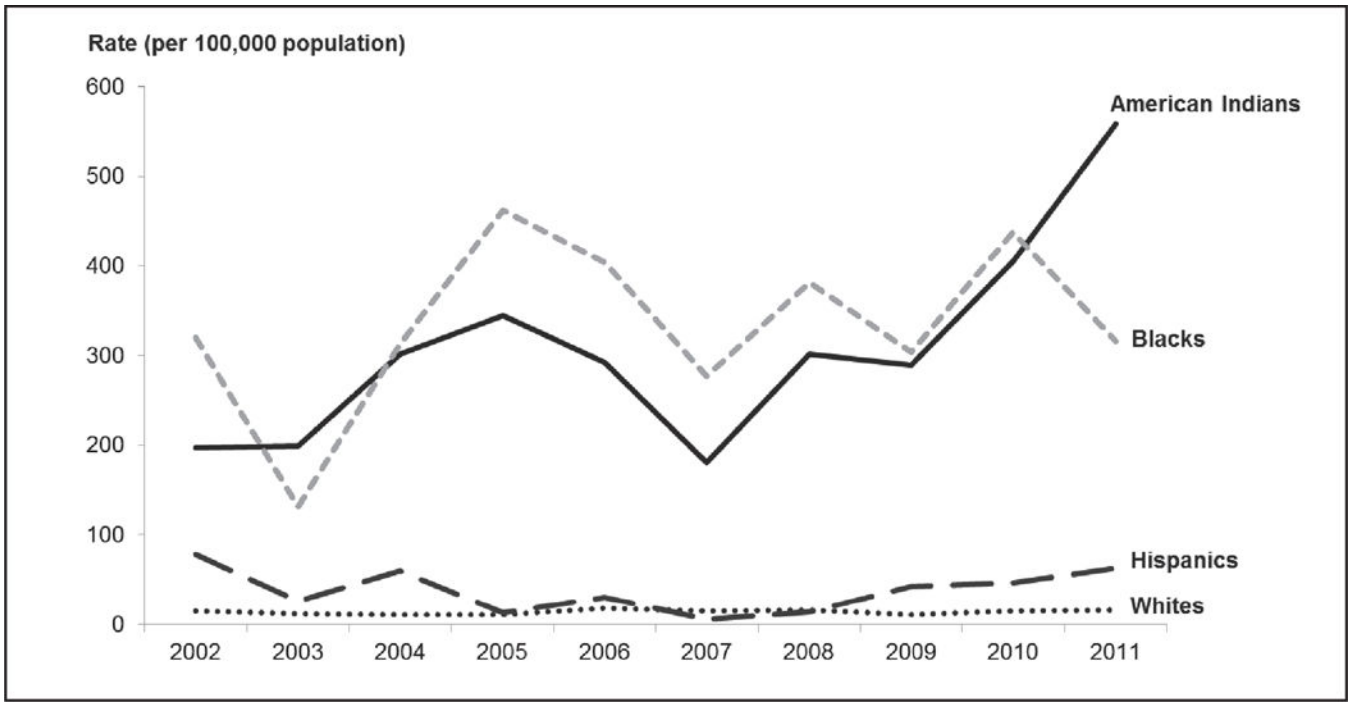

Figure 2.
Gonorrhea rates by race/ethnicity—South Dakota, 2002–2011

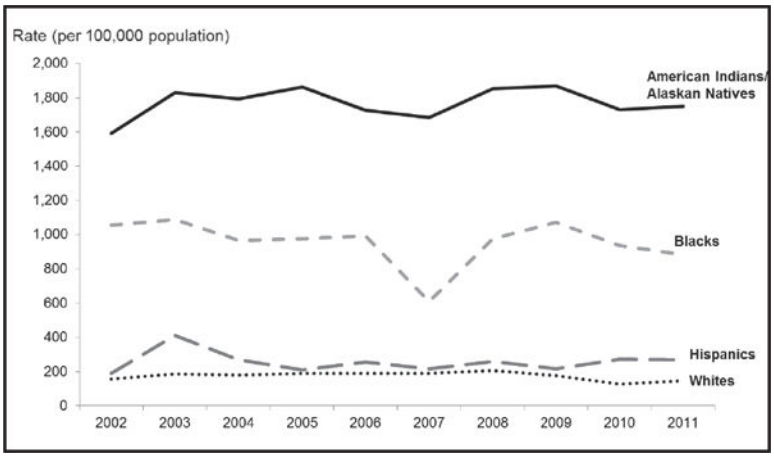

Figure 3.
Chlamydia rates by race/ethnicity—South Dakota, 2010

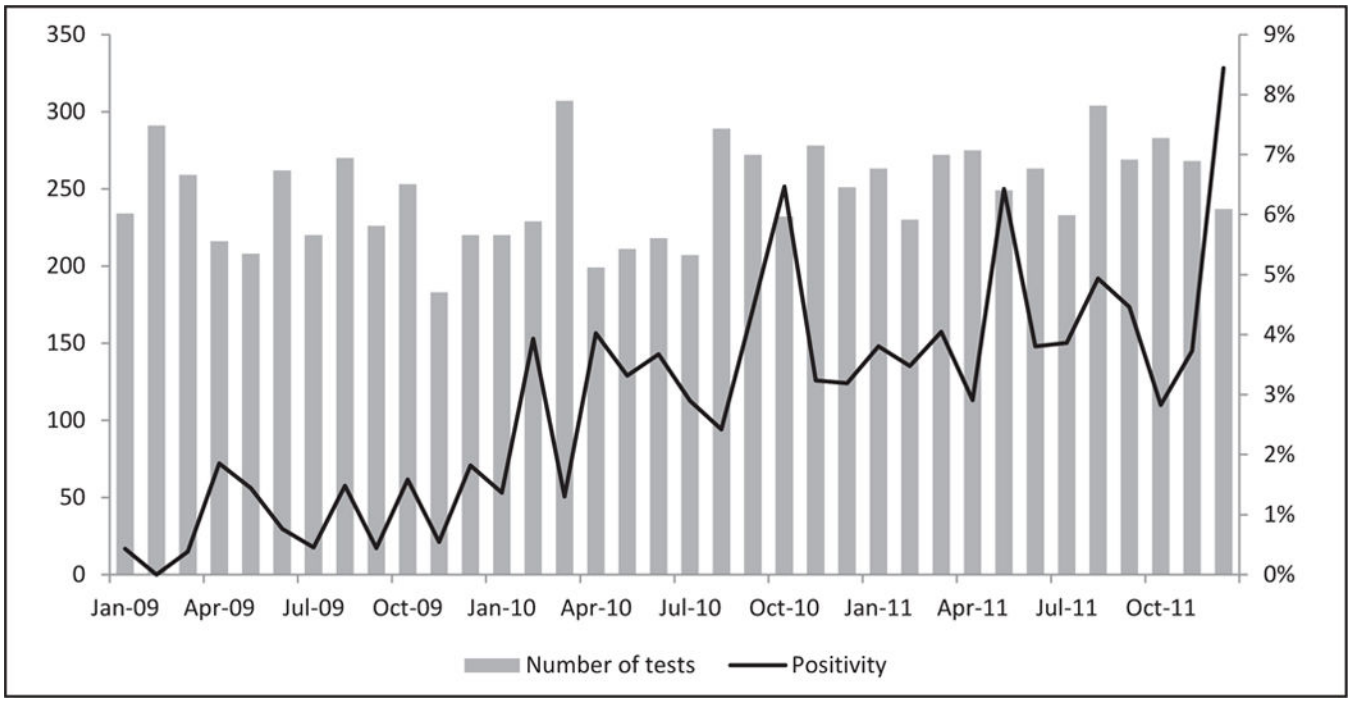

Figure 4.
Number of gonorrhea tests sent to Pine Ridge Lab and positivity of tests, 2009–2011

TABLE 1

Percent of eligible patients screened in the IHS and the Aberdeen Area IHS for four IHS STD screening recommendations

Recommendation	IHS (national data)	Aberdeen Area IHS	Aberdeen Area IHS ranges
Prenatal HIV screening	88%	85%	73–94%
HIV screening of 13–64 year olds	9%	7%	4–23%
Chlamydia screening of 16–25 year old females	29%	35%	23–46%
HIV screening of STD patients	36%	33%	11–63%