

## Managed Public Health in a County Jail

Health care needs of jail inmates often are not addressed, even though these populations experience higher rates of disease and disability than the general population.<sup>1-5</sup> Despite the demonstrated prevalence of public health issues and a legal mandate to provide services, most jails do not have the resources to incorporate assessment routines.<sup>6,7</sup>

An automated interactive voice response screening system was implemented within the central intake unit at the Cuyahoga County, Ohio, jail, a large, urban facility processing an average of 80 offenders daily. Inmates listened to a series of prerecorded questions on the telephone and responded by pressing keys on the telephone.<sup>8,9</sup> A pilot project indicated acceptable validity and internal consistency values for risk subscales.

The intake interview was completed by 2441 respondents, primarily men (91%). About one third (32%) of respondents reported symptoms of general infectious disease. Almost half (47%) reported alcohol or drug use at levels indicating the need for a full substance abuse assessment. One fifth (20%) had tried to obtain assistance for a substance abuse problem within the previous 6 months.

Ten percent of the respondents reported a mental health service history. On a symptom checklist, 19% reported symptoms of schizophrenia, 16% reported symptoms of bipolar disorder, and 32% reported symptoms of major depression.

Half of the respondents reported a risk factor indicating the need for HIV testing. Thirty-eight percent reported engaging in high-risk sexual activity or reported sexually transmitted disease (STD) symptoms. Nineteen percent of female respondents indicated possible pregnancy.

Overall, 30% scored at no risk for any public health concern. Twenty-four percent

of female respondents scored at risk for at least 5 of 7 health issues (general medical, mental health, substance abuse, pregnancy, HIV/AIDS, STDs, TB). More than one fifth (21%) of male respondents scored at risk for at least 5 of 6 health issues (the issues just listed with the exception of pregnancy).

Monitoring risk factors using automated screening systems in county jails may provide short-term indicators to identify preventive strategies, assess their effectiveness, and predict emerging epidemics.<sup>10</sup> Clearly, the initial profile indicates the need to reconsider the fragmented delivery of public health services in this context. The data can serve as a basis for educating the public and policymakers about the complicated nature and magnitude of public health risks in jails and the likely magnitude of resources that will be required. □

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## Anal Sex and HIV Transmission in Women

Among gay men, receptive anal sex is associated with an increased risk of HIV infection. A study of gay men in 3 major US cities revealed a 2.4-fold (95% confi-

dence interval [CI] = 1.4, 4.2) higher risk of HIV infection in men who had receptive anal sex.<sup>1</sup> Similar raised levels of HIV risk have been found in other studies of gay men.<sup>2-4</sup> However, much less is known about the risk of HIV transmission associated with anal sex in women.

We therefore investigated whether anal sex was a risk factor for HIV infection in a group of 145 sex workers recruited between August 1996 and March 1997 from truck stops along South Africa's main national road, midway between the port city of Durban and the commercial city of Johannesburg. The average age of the women was 24 years. They had been involved in sex work for an average of 3 years and had an average of 20 clients per week.

Sixty-two (42.8%) of the 145 sex workers had anal sex with their clients. The prevalence of HIV infection in these women was 61.3% as compared with 42.7% in women who did not have anal sex ( $P > .01$ ). Anal sex was associated with a higher risk (odds ratio [OR] = 2.3, 95% CI = 1.1, 4.7) of HIV infection in a multiple logistic regression model controlling for age, condom use, number of clients per week, and duration of sex work. Stratifying for these variables (Table 1) demonstrated that anal sex was consistently associated with a higher risk of HIV infection.

Anal sex, a common practice among sex workers at these truck stops, is a substantial independent risk factor for HIV infection. Similarly, anal sex was found to be associated with a 1.4-fold<sup>5</sup> to 5.1-fold<sup>6</sup> higher risk of HIV infection in women. A microbicide gel containing nonoxonyl 9 is currently being studied for its efficacy in preventing HIV infection in these women; the confounding effect of anal sex needs to be considered in the design of such studies in the event that vaginal insertion of the microbicide preceding anal sex is misconstrued by the women as a protected coital act. While the collagenase and spermine in semen<sup>7</sup> in combination with abrasions in and bruising of the rectum and anus may be responsible, the pathogenesis leading to raised HIV risk still needs to be elucidated. The potential of anal application of microbi-

**TABLE 1—Prevalence of HIV Infection Among Women Engaging in and Not Engaging in Anal Sex, Stratified for Other HIV Risk Factors**

	HIV Positive, % (No.)		Prevalence Ratio (95% Confidence Interval)
	Women Engaging in Anal Sex	Women Not Engaging in Anal Sex	
No. clients per week			
1-10	62.5 (8)	55.0 (20)	1.1 (0.6, 2.3)
11-20	59.1 (22)	40.0 (35)	1.5 (0.9, 2.6)
21-30	52.2 (23)	36.4 (22)	1.4 (0.7, 2.8)
31-40	88.9 (9)	40.0 (3)	2.2 (1.0, 5.1)
Condom use, % of coital acts			
<25	63.4 (41)	41.8 (55)	1.5 (1.0, 2.2)
≥25	57.1 (21)	44.4 (27)	1.3 (0.7, 2.3)
Duration of sex work, mo.			
1-24	51.7 (29)	52.2 (46)	1.0 (0.6, 1.6)
25-48	72.2 (18)	28.0 (25)	2.6 (1.3, 5.0)
>48	66.7 (15)	36.4 (11)	1.8 (0.8, 4.0)
Age, y			
<20	64.3 (14)	47.8 (23)	1.3 (0.7, 2.5)
21-25	56.5 (23)	47.1 (34)	1.2 (0.7, 2.0)
26-30	72.7 (11)	33.3 (15)	2.2 (0.9, 4.8)
>30	57.1 (14)	30.0 (10)	1.9 (0.7, 5.1)

cidal gels to protect against HIV infection associated with anal sex needs further exploration. Our finding also has important implications for interventions aimed at sex workers; discouraging anal sex and insisting on condom use during anal sex need to be entrenched in health promotion programs targeted at this group. □

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