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## SEXUALLY TRANSMITTED DISEASE CONTROL SERVICES IN A JAIL POPULATION: ANALYSIS AND RECOMMENDATIONS

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**T**HE number of individuals incarcerated at local (nonstate and federal) correctional institutions is surprisingly large. A survey of the inmate population at city and county jails in the United States in February 1978 revealed 158,394 imprisoned.<sup>1</sup> During 1978 51,255 were admitted to New York City municipal prisons, most for relatively short periods of time. \*Since local jails, unlike state and federal prisons, house inmates serving relatively short sentences and those awaiting trial, turnover is much greater in city and county prisons, and this population changes rapidly. Because the prison population has a relatively high incidence and risk for a number of health conditions, including drug addiction, alcoholism, psychiatric disorders, trauma, sexually transmitted diseases, and seizure disorders,<sup>2</sup> the screening for sexually transmitted diseases and appropriate treatment must be of major concern to health officials.

Most health officials prefer to place responsibility for prison health services with the local public health agency. Nevertheless, administration of medical care in prison by the local health care agency can be successful only if cooperation is established with the Department of Correction. Correction officers' efforts are vital to assure health services for the prison population because they locate, deliver, and accompany the inmate to prison clinics for testing, evaluation, treatment, and follow-up care. Effective programs to counter sexually transmitted diseases must be mounted in this setting because of high prevalence, multiple risks of transmission, and the treatment difficulties prison and postincarceration

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\*Al Anderson, New York City Department of Corrections, Division of Public Relations. Personal communication.

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TABLE IA. PRISON RECORD REVIEW OF 87 HIGH TITRES

		<i>Riker's</i>	<i>Brooklyn</i>	<i>Total</i>
Dx and Rx	P & S	2	1	3
	EL < 1	4	1	5
	EL > 1	9		9
Prev. Rx		20		20
Follow-up STS		6		6
Record unavailable		18*		18
H.D. follow-up		15	11	26
<b>Total</b>		<b>74</b>	<b>13</b>	<b>87</b>

\*A thorough record search is underway at present to locate these charts. A recent morbidity check has revealed addresses on nine of the unavailable charts. After the current record search at the prisons, these nine will be initiated to the field.

P&S = primary and secondary syphilis, Dx = diagnosis, Rx = treatment, EL = early latent syphilis, STS = serologic test for syphilis.

afford. We believe that control in prisons is best accomplished when the local health agency's venereal disease control personnel are closely involved in establishing standards and monitoring administrative controls to identify, treat, and prevent the spread of sexually transmitted disease in correctional institutions as part of the local Health Department's prison health services. Our experience has shown that assignment of an epidemiologist as liaison to major correctional institutions is required to insure adequate reporting and follow-up of sexually transmitted diseases. A clinical liaison, such as a nurse-practitioner assigned half-time each to the jail medical service and the sexually transmitted disease clinic, would provide an important educational link and clinical back-up for problems to the remainder of the jail medical staff. This person providing expert care often develops excellent rapport and can motivate inmates to help to locate sexual contacts.

We reviewed charts (see Table IA) of 87 patients with high titer positive treponemal antibody tests ( $RPR \geq 1:16$  and  $VDRL \geq 1:8$ ) over two months at Riker's (January and February 1979) and three months at the Brooklyn House of Detention (December 1978–February 1979). Of these, 25 (29%) had early syphilis (see Table IC). We were unable to evaluate the diagnosis and treatment status of 33 (38%) of the 87 patients with high titres. Looking at it another way, there were 25 (46%) early cases of syphilis out of 54 inmates evaluated. A total of 7,290 serological tests for syphilis were performed during the survey period. This translates into a case finding rate of 343:100,000 (see Table IIB). This is an incomplete accounting of actual prevalence, because, due to inmate move-

TABLE IB. HEALTH DEPARTMENT FOLLOW-UP  
(EARLY RELEASE - COURT NO RETURN, BAIL, DISCHARGED)

		<i>Riker's</i>	<i>Brooklyn</i>	<i>Total</i>
Dx and Rx	P & S	3		3
	EL < 1	2	3	5
	EL > 1			
Prev. Rx		1	1	2
Unable to locate		5	4	9
Insufficient information to investigate			1	1
Pending		4	2	6
Total		15	11	26

TABLE IC. RECORD REVIEW AND HEALTH DEPARTMENT FOLLOW-UP

		<i>Riker's</i>	<i>Brooklyn</i>	<i>Total</i>	<i>%</i>
Dx and Rx	P & S	5	1	6	6.9
	EL < 1	6	4	10	11.5
	EL > 1	9		9	10.3
Prev. Rx		21	1	22	25.3
Follow-up STS		6		6	6.9
Record unavailable		18		18	20.7
Unable to locate		5	4	9†	10.3
Insufficient information to begin investigation			1	1	1.1
Pending		4	2	6	6.9
Total		74	13	87	99.9*

\*Lower than 100% due to rounding off.

†One inmate, lost to follow-up and never treated as far as we know, had a VDRL = R 1:16, a penile lesion, and swollen inguinal nodes.

P&S = primary and secondary syphilis, Dx = diagnosis, Rx = treatment, EL = early latent syphilis, STS = serologic test for syphilis.

ment, early release, and bad locating information, we were unable to evaluate 38% of the high titres. Because of possible seasonal variations, bias may also creep into these findings because the sample was taken during the first two months of winter. In addition, we did not look at the medical records of the 332 patients with low titres with positive treponemal antibody tests (RPR  $\leq$  1:8 and VDRL 1:8 and VDRL  $\leq$  1:4) (see Table III). A properly functioning case reporting system will eventually turn up most treated cases regardless of titre. Those with blood tests taken before the survey period and treated during the survey were not included. For comparison's sake, the 1977 New York City case rate for early

TABLE IIA. 1977 CASES AND RATES PER 100,00  
POPULATION IN NEW YORK CITY AND UNITED STATES

	<i>P &amp; S</i>		<i>EL</i>		<i>Total</i>	
	<i>Cases</i>	<i>Rates</i>	<i>Cases</i>	<i>Rates</i>	<i>Cases</i>	<i>Rates</i>
New York City	1,881	25.1	1,687	22.5	3,568	47.6
United States	20,362	9.5	21,297	9.9	41,659	19.4

TABLE IIB. CASES AND RATES PER 100,000  
POPULATION IN RIKER'S ISLAND AND  
BROOKLYN HOUSE OF DETENTION

	<i>P &amp; S</i>		<i>EL</i>		<i>Total</i>	
	<i>Cases</i>	<i>Rates</i>	<i>Cases</i>	<i>Rates</i>	<i>Cases</i>	<i>Rates</i>
Riker's 1/1/79-2/28/79 5,866 inmates	5	85.2	15	255.7	20	341.0
Brooklyn House of Detention 12/1/78-2/28/79 1,424 inmates	1	70.2	4	280.9	5	351.1
Total 7,290 inmates	6	82.3	19	260.6	25	342.9

TABLE IIC. CASES AND RATES PER 100,000 POPULATION IN  
NEW YORK CITY PRISON SYSTEM

	<i>P &amp; S</i>		<i>EL</i>		<i>Total</i>	
	<i>Cases</i>	<i>Rates</i>	<i>Cases</i>	<i>Rates</i>	<i>Cases</i>	<i>Rates</i>
New York City Prisons 42,116 inmates	4	9.5	21	49.9	25	59.4

syphilis was 48:100,000 while that for the United States was 19:100,000 (see Table IIA).

The New York City Health Department operates a gonorrhea screening program at key public and private sector facilities. The numbers screened, the numbers positive, and the positivity rates for men, women, and total population at Riker's Island for 1978, 1979, and the first six months of 1980 are given in Table IV.

For 1978, the 5.5% positivity rate for women (7% for the last six months in 1978) was the third highest yield out of the major categories.

TABLE III. TOTAL OF HIGH AND LOW TITRES DURING SURVEY

<i>Institution Dates of survey (STS type)</i>	<i>Low titres</i>	<i>High titres</i>	<i>Total</i>
Riker's Island 1/1/79-2/28/79	292	74	366
(RPR) Low titre $\leq$ 1:8 High titre $\geq$ 1:16			
Brooklyn House of Detention 12/1/78-2/28/79	40	13	53
(VDRL) Low titre $\leq$ 1:4 High titre $\geq$ 1:8			
Total	332	87	419

TABLE IV. POSITIVITY RATES FOR GONORRHEA SCREENING — RIKER'S ISLAND, 1978 THROUGH JUNE 1980

	<i>Numbers screened</i>			<i>Numbers positive</i>			<i>Positivity rate</i>		
	<i>1978</i>	<i>1979</i>	<i>1980 1st half</i>	<i>1978</i>	<i>1979</i>	<i>1980 1st half</i>	<i>1978</i>	<i>1979</i>	<i>1980 1st half</i>
Men	1637	7834	6431	227	446	180	13.9%	5.7%	2.8%
Women	5038	4244	1935	275	193	60	5.5%	4.5%	3.1%
Total	6675	12,078	8366	502	639	240	7.5%	5.3%	2.9%

The second highest yielding category, "Private Physicians", had 15 positive cultures out of 203 specimens (7.4%).

The high rate of venereal disease in the New York City prison system is due to many factors. The most obvious are the comparatively high rate in New York City and the quite sexually active and young prison population. The first factor has been discussed. The United States (1977) primary and secondary syphilis rate per 100,000 is 89.1 in the 15-to-34-year age range. Eighty percent of primary and secondary cases occurred in this age group.<sup>3</sup> The importance of rapid evaluation, identification, and treatment in municipal correctional institutions is quite evident when we examine the high failure rate of contact tracing once detainees leave prison.

Another problem unique to prisons is that, in many cases, the evaluation of syphilitic infections is complicated by biologically false positive

screening test results due to illicit drug use. In one New York City prison a history of illicit drug use was reported by 41% of the inmate population.<sup>4</sup> Of these, 33.3% used heroin and 18% methadone. Kaufman et. al.<sup>5</sup> found a high rate of biological false positive reactions among drug addicts. Prevalence rates for syphilis were cited as 6.1% and 8.7% in groups with history of drug addiction. These authors cited previous studies that indicated a prevalence of less than 1% in the general population. Our recent survey of biological false positive reactions at Rikers Island and the Brooklyn Detention Center indicated a prevalence of 4.7% among the inmate population. This relatively high rate of false positive reactions presents an additional difficulty in detention centers' efforts to secure rapid medical evaluation. Our experience and analysis of disease incidence and existing health care delivery problems at correctional institutions has resulted in the formulation of the following recommendations to effect improved disease control. We believe that these clinical and administrative procedures will substantially improve sexually transmitted disease control services to prisoners.

SEXUALLY TRANSMITTED DISEASE SERVICES IN A  
PRISON OR JUVENILE DETENTION CENTER SETTING  
PROBLEMS AND RECOMMENDATIONS

A) Complete Physical Examination

- 1) To include symptoms and history (lesions on genitalia, rashes on body, penile discharge, vaginal discharge, etc.).
- 2) Routine serologic tests for syphilis on all admissions, quantitative if lesions are present at the intake examination. Specific treponemal tests for syphilis on patients with positive serological tests who are lesion free to rule out biological false positive tests following complete physical examination and laboratory screening procedures.
- 3) Darkfield or fluorescent antibody examination of all anogenital lesions and any lesions suggesting syphilis in other parts of the body. This will facilitate a rapid diagnosis and treatment and reduce investigative failures due to delays in processing laboratory results.
- 4) Gram stained smears are imperative for immediate diagnosis and treatment of urethral gonorrhea in symptomatic men. Urethral cultures or cultures of urine sediments should also be performed to detect asymptomatic cases.

- 5) Cervical, anal, and urethral cultures for gonorrhea should be performed on all women routinely upon entrance to the institution. Anal and pharyngeal cultures for gonorrhea should be routinely available for all homosexual inmates and women practicing fellatio or anal intercourse following complete physical examination and laboratory screening procedures.
  - 6) The physician should also be concerned about the presence of signs and symptoms of other venereal diseases, especially nongonococcal urethritis, herpes infection, condylomata acuminata, Donovanosis, lymphogranuloma venereum, candidiasis, trichomoniasis, such sexually transmitted enteric diseases as amebiasis, giardiasis, and shigellosis.
  - 7) A follow-up serologic test for syphilis should be required for all inmates remaining in an institution one month following initial examination. This will facilitate identification of any patient who may have been incubating disease and who was seronegative prior to incarceration. Also, a follow-up test should be done on all new, diagnosed, and treated cases of syphilis and all previously diagnosed and treated cases. Follow-up serologic tests for syphilis should be done at least once a month after initial treatment, particularly important for those individuals treated other than with penicillin.
- B) Confidentiality of all medical records is important and should be a guaranteed right of all patients. Novick, in his definitive work on health problems in prison settings, states that, "Custodial authorities are not competent to waive the physician-patient privilege for residents of the facility."<sup>6</sup> Because the correctional authorities need medical information concerning patients to be prepared for medical emergencies and to provide proper custodial arrangements, a method to provide this information and still keep confidentiality must be found. Appropriate systems could be easily instituted to facilitate communication and to maintain the inmates' privacy rights. A color code might be utilized for this purpose. In this way, the medical staff is not divulging the actual reason for seeing the patient, thus keeping it confidential.
- C) Record Keeping Systems That Allow for Rapid and Effective Follow-Up of Positive Serological Tests for Syphilis and Cases
- 1) It is important that an efficient record keeping system be implemented that allows for a rapid follow-up of patients with positive tests for syphilis and treated cases. Speed in follow-up is important

because of the rapid turnover characteristic of local correctional institutions. A complete log book system, with all positive tests entered, including disposition, would:

- a) Facilitate rapid evaluation.
- b) Improve diagnosis and treatment within a shorter time frame.
- c) Reduce the number of inmates lost to evaluation and treatment because of early release. (Court—no return, bailed and discharged).
- d) Aid in chart review activities of physicians by maintaining all positive test results in one location. Because inmates are frequently transferred, administration of care becomes complicated. Procedures should be implemented to provide laboratory test results rapidly to each new location, especially because many inmates are released as early as the fourth day of incarceration. Revisit examinations should be given high priority. Telephone reporting of results is strongly recommended.

D) The Health Care Liaison—Public Health Advisor

Involvement of the local health department's venereal disease control bureau in the prison system is of primary importance to monitor the entire health care process including diagnosis, treatment, and follow-up of venereal disease.

A health agency disease control representative should be responsible for interviewing venereal disease contacts and initiating appropriate follow-up activities to facilitate control. The health department representative should also provide continuing medical education for prison health physicians. Seminars should be scheduled on a regular basis and conducted by a physician from the local disease control agency. Such seminars could raise awareness of the prison medical staff and disseminate diagnosis, treatment, and epidemiologic information. The disease control liaison might also provide education for the inmates. The liaison could improve clerical and administrative systems.

#### CONCLUSION

Local health departments, particularly disease control divisions, have an obligation to identify high-risk populations and to devote available resources to improve the health status of such groups. Providers of care, both public and private, share that obligation and should strive to maintain



and to improve systems of communication with public health agencies.

Screening activities at intake examination can identify patients needing treatment for infectious diseases. It is suspected that many of these individuals would not be identified by more conventional program mechanisms. Efforts to insure rapid diagnosis and treatment must be concentrated by the establishment of clinical and administrative procedures to facilitate rapid follow-up and to insure appropriate patient management.

Such programs in local correctional facilities will not be successful unless the disease control agency is actively involved in planning, evaluation, and management of care. We strongly suggest that municipal disease control programs evaluate sexually transmitted disease services at local prisons. Each agency would be wise to analyze needs and to prepare guidelines to assist the correction department in fulfilling its responsibilities to inmates.

#### ACKNOWLEDGMENT

Grateful acknowledgment is given to Mr. John J. Rall, former Administrative Coordinator of Scientific Activities, Bureau of Venereal Disease Control, New York City Health Department, for his assistance in the preparation of this manuscript.

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