HIV Prevalence and Care in the New York State Department of Corrections

991

Contact:
Lou Smith, MD, MPH
AIDS Institute, NYSDOH
ESP, Corning Tower
Albany, NY 12237
lou.smith@health.ny.gov

Lou Smith[1, 2], Brenda Moncur[1], Bridget J. Anderson[1], James Tesoriero[1], Carl Koenigsmann[3], Heidi Reukauf[1], Deepa Rajulu[1], Dan O'Connell[1]

[1]AIDS Institute, New York State Department of Health, Albany, New York [2]University at Albany, School of Public Health, Albany, New York [3]NYS Department of Corrections and Community Supervision

BACKGROUND

- In 1988, a New York State (NYS) Department of Health (DOH) unlinked seroprevalence study showed that nearly 1 in 5 persons entering the NYS Department of Corrections and Community Supervision (DOCCS) prison system had HIV.
- Historically, more persons with HIV have been under custody in NYS prisons that in any other state corrections system.[1]
- Serial NYSDOH unlinked seroprevalence studies of ***incoming*** inmates have shown decreasing HIV seroprevalence, with 2.4% of males and 3.7% of females seropositive in 2012.
- Recent NYSDOH medical record reviews show that ≥90% of inmates who are stably placed and accept HIV care for a year show viral load (VL) suppression while incarcerated.
- Efforts were recently undertaken to characterize the currently under custody population of persons living with a diagnosis of HIV infection (PLWDHI).
- This analysis documents the prevalence of diagnosed HIV infection among DOCCS inmates on December 31, 2014, and care measures for the last half of 2014.

METHODS

- The NYSDOH HIV surveillance system aggregates legally mandated reports from medical providers and laboratories as well as information from selected public health datasets on PLWDHI, inclusive of demographics, risks, diagnosis date, and CD4 lymphocyte and HIV RNA PCR (VL) testing.
- An extract from the DOCCS administrative datasets was prepared inclusive of information on all 49,224 inmates under custody at any time from 5/9/2013 to 12/31/2014.
- The DOCCS extract was matched to the HIV surveillance registry using probabilistic matching software (IBM's Quality Stage) on June 22, 2015. Transact-SQL was used for descriptive analysis.
- Prevalence was assessed as of 12/31/2014 (Table 1).
- HIV care was assessed for PLWDHI with diagnosis before 07/01/2014 and who were under custody continuously from 07/01/2014 to 12/31/2014 (Tables 2 and 3).
- "In care" was defined as ≥1 VL or CD4 lymphocyte test between 07/01/2014 and 12/31/2014.
- PLWDHI were considered as known to DOCCS if the DOCCS administrative data set included a medical diagnosis code indicative of HIV infection.

RESULTS

HIV Prevalence

- On December 31, 2014, a diagnosis of HIV infection had been documented in 1,104 of the 49,244 DOCCS under custody persons, yielding an overall HIV prevalence among the DOCCS under custody population of 2.3%.
- Among under custody men, HIV prevalence was 2.2%.
- HIV prevalence of DOCCS under custody women was 3.7%.
- Under custody PLWDHI were predominately male (93%), middle aged (78% 40 and older), and minority (84% black or Hispanic).
- HIV prevalence increased with age and was higher for PLWDHI of color.

Table 1: Under Custody PLWDHI, Total Persons Under Custody, and Prevalence by Sex, Age, and Race/Ethnicity Subgroups

	PLWDHI, Under Custody		Total Persons Under Custody		Prevalence
	No.	%	No.	%	%
Total	1,104		49,224		2.3%
Sex at birth					
Male	1,027	93%	47,115	96%	2.2%
Female	77	7%	2,109	4%	3.7%
Age (years)					
16-29	76	7%	15,247	31%	0.5%
30-39	173	16%	13,916	28%	1.2%
40-49	367	33%	10,799	23%	3.4%
50-59	382	35%	7,107	14%	5.4%
over 60	106	10%	2,155	4%	4.9%
Race/Ethnicity					
White, non-Hispanic	140	13%	12,207	25%	1.1%
Black, non-Hispanic	635	57%	24,557	50%	2.6%
Hispanic/Latino	296	27%	10,906	22%	2.7%
Other/missing*	33	3%	1,554	3%	2.1%

*Other/missing category includes Asian, Native American, other race/ethnicity, and persons with missing race/ethnicity data.

Data Source: PLWDHI determined through HIV surveillance registry and DOCCS match. All demographic data is from the DOCCS Administrative dataset.

- From July through December, 2014, 885 PLWDHI were under continuous custody. 779 (88%) were assessed as in care.
- Of those, 724 (92.9%) were virally suppressed (VL ≤ 200 copies/ml) based on the last VL obtained in the assessment period.
- The HIV diagnosis of 803 persons (90.7%) was known to DOCCS per the medical diagnosis list.

HIV Care

Table 2: Characteristics of Continuously Under Custody PLWDHI by Care Status

	In Care		Not in Care		Total
	No.	%	No.	%	No.
Total	779	88%	106	12%	885
Sex at birth					
Male	720	88%	102	12%	822
Female	59	94%	4	6%	63
Age (years)					
19-29	49	89%	6	11%	55
30-39	120	89%	15	11%	135
40-49	249	87%	36	13%	285
50-59	282	89%	36	11%	318
60 and older	79	86%	13	14%	92
Race/Ethnicity					
White, non-Hispanic	65	90%	7	10%	72
Black, non-Hispanic	388	87%	58	13%	446
Hispanic/Latino	285	88%	38	12%	323
Other*	41	93%	3	7%	44
Risk					
MSM	143	93%	11	7%	154
MSM/IDU	79	90%	9	10%	88
IDU	290	90%	33	10%	323
Heterosexual	108	90%	12	10%	120
Other/Unknown	159	80%	41	20%	200
Stage					
AIDS, ever	566	94%	39	6%	605
HIV, never AIDS	213	76%	67	24%	280
HIV diagnosis timing					
<3 years prior	28	88%	4	12%	32
3+ year prior	751	88%	102	12%	853

*Includes Asian/Pacific Islander, Native American/Alaska Native, and multirace.
Data Source: NYSDOH HIV Surveillance Registry.

Table 3: Care Indicators among Continuously Under Custody PLWDHI *

	No.	% of under custody PLWDHI in care	% of under custody PLWDHI
		(n=779)	(n=885)
VL ≤200 copies/ml*			
Yes	724	93%	82%
No	55	7%	6%
CD4 (cells/mm3)*			
0-199	47	6%	5%
200-499	349	45%	39%
500 +	383	49%	43%

*Based on last CD4 or VL between July 1, 2014 and December 31, 2014.
Data Source: NYSDOH HIV Surveillance Registry.

CONCLUSIONS

- This work represents the first direct measure of diagnosed HIV infection prevalence among those under custody in NYS DOCCS.
- This comprehensive assessment shows that DOCCS was aware of at least 90% of under custody PLWDHI. Inmates may not disclose to DOCCS because they are not aware of their own status, or they may choose not to disclose out of fear of stigmatization or other negative consequences.
- Most (88%) under custody PLWDHI had evidence of care in the assessment period, with documented viral suppression in 93% of those with care. The viral suppression rate for all PLWDHI in NYS with any care in 2013 was 82%.
- This and future matches are intended to enhance NYSDOH and DOCCS collaboration in offering all under custody PLWDHI the benefits of care.
- In follow-up, NYSDOH staff are confidentially contacting under custody PLWDHI not known to DOCCS to encourage linkage to care. DOCCS will follow-up with persons who have disclosed but had no evidence of care. Assessment of linkage for persons released from custody is underway.
- Efforts and interventions such as these are key to realizing the goals of NYS's "Ending the Epidemic" initiative[2] for all New Yorkers.

LIMITATIONS

- This assessment has limitations. These datasets are large, complex multisource entities that may have incomplete or conflicting information.
- Errors may have occurred in matching.
- VL or CD4 as a proxy for HIV medical care may under- or over-estimate actual care visits.
- This analysis cannot assess persons with undiagnosed HIV infection.

REFERENCES

[1]U.S. Department of Justice Bureau of Justice Statistics. HIV in Prisons, 2001-2010. Revised March 24, 2015. Accessed at http://www.bjs.gov/index.cfm?ty=pbdetail&iid=4452 Jan. 22, 2016.

[2]http://www.health.ny.gov/diseases/aids/ending_the_epidemic/. Accessed Jan. 22, 2016.

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