

Abstract #: 2779
Poster Board #: 219

BACKGROUND

- Both city residents and non-city residents may seek HIV-related care and services in urban areas.
- HIV surveillance methods assessing the magnitude of the HIV/AIDS epidemic, including those who are newly diagnosed and those who are seeking care in urban areas, may or may not include those living outside the city depending on the goals of the analysis.
- Enumerating and characterizing non-residents are important to quantify public funding needed to support services in these urban areas.
- This analysis examines the population of persons newly diagnosed with HIV in New York City (NYC) in 2005 and the population of persons receiving HIV-related care in NYC in 2005 who live outside the city.

METHODS

Population

- Two adult (13+) cohorts were created based on HIV surveillance data:
- All newly diagnosed HIV cases in NYC in 2005.
 - All HIV-infected persons receiving HIV-related care in NYC in 2005 based on report of CD4 or viral load.

Data Sources and Collection

- The NYC Department of Health and Mental Hygiene (DOHMH) receives all reports of HIV cases and clinical and diagnostic tests ordered by NYC providers. These data include ZIP code of residence which was used to classify cases as NYC residents or non-residents.
- Demographic, clinical and HIV transmission factor data were obtained by medical record review.
- Reports of CD4 < 500 and HIV RNA viral load tests are reported electronically from laboratories.
- Surveillance data used for this analysis were reported to the NYC DOHMH by June 30, 2007.

Analysis

- We determined:
 - Number and percentage of persons newly diagnosed in NYC in 2005 who live outside the city
 - Number and percentage of persons receiving HIV-related care in NYC in 2005 who live outside the city
- Chi-square tests were used to assess demographic differences based on sex, age, race/ethnicity, HIV transmission category, country of birth, and clinical status (HIV non-AIDS vs. AIDS) in persons:
 - newly diagnosed with HIV in NYC in 2005 who live in the city vs. those who live outside the city
 - receiving HIV-related care in NYC in 2005 who live in the city vs. those who live outside the city
- We defined HIV-related care as having a CD4 or viral load test performed in a 12-month period as suggested by the Health Resources and Service Administration (HRSA) for estimates of unmet need.
- For HIV-related care analysis, persons were assigned to a jurisdiction outside NYC if any CD4 or viral load test was performed while they lived outside NYC during the 12-month period.
- Persons whose residential ZIP code was unknown were excluded.
- Analyses were performed using SAS 9.1.

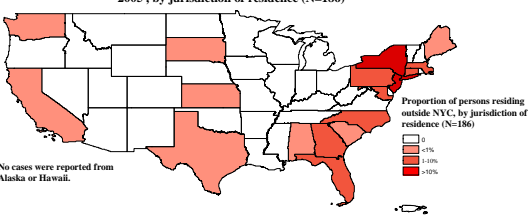
RESULTS

Non-residents diagnosed with HIV in New York City in 2005

Table 1. New HIV Diagnoses in New York City in 2005, by Residence at Time of Diagnosis and Demographic Characteristics (N=3,916)

	Total		Residence					
			NYC			Outside NYC		
	N	%	N	%	N	%	Row %	P value
Total	3,916	100.0	3,730	100.0	186	100.0	4.7	p<0.0017
Sex								
Male	2,852	72.8	2,698	72.3	154	82.8	5.4	
Female	1,064	27.2	1,032	27.7	32	17.2	3.0	
Race/Ethnicity								p<0.0001
Black	2,053	52.4	1,983	53.2	70	37.6	3.4	
Hispanic	1,108	28.3	1,082	28.5	26	14.2	4.2	
White	644	16.4	577	15.5	67	36.0	10.4	
Other/unknown	111	2.8	108	2.9	3	1.6	2.7	
Age at diagnosis								p=0.07
13 - 19	146	3.7	135	3.6	11	5.9	7.5	
20 - 29	866	21.9	814	21.8	42	22.6	4.9	
30 - 39	1,186	30.3	1,131	30.3	55	29.6	4.6	
40 - 49	1,070	27.3	1,013	27.2	57	30.6	5.3	
50 - 59	487	12.4	467	12.5	20	10.8	4.1	
60+	171	4.4	170	4.6	1	0.5	0.6	
Median age at diagnosis	38		38		37			p=0.34
Origin of birth								p=0.33
Foreign	942	24.1	895	24.3	46	19.4	3.8	
US	1,751	44.7	1,662	44.5	89	47.2	5.0	
US Dependency	125	3.2	121	3.2	4	2.2	3.2	
Unknown	1,098	28.0	1,040	27.9	58	31.2	5.3	
Transmission risk								p<0.0001
Men who have sex with men	1,481	37.8	1,380	37.0	101	54.3	6.8	
Injection drug use history	200	5.1	275	7.4	15	8.1	2.2	
Heterosexual	807	20.6	783	21.0	24	12.9	3.0	
Unknown	1,338	34.2	1,252	34.6	86	24.7	3.4	
Clinical status as of 12/31/2005								p=0.0076
HIV (non-AIDS)	2,320	59.3	2,191	59.0	129	70.5	5.8	
AIDS	1,453	36.5	1,400	38.0	53	29.1	3.6	

Figure 1. Proportion of persons residing outside NYC diagnosed with HIV in NYC in 2005, by jurisdiction of residence (N=186)



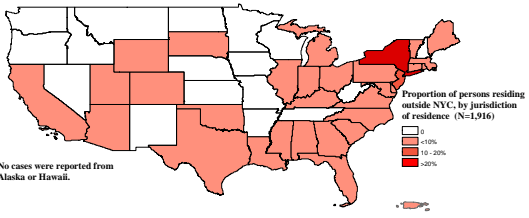
- Among 3,916 new diagnoses in NYC in 2005, 186 persons (4.7%) lived outside NYC. Among those who lived outside NYC, 77 persons (41.4%) lived in New York State, 77 persons (41.4%) lived in New Jersey and 32 persons (17.2%) lived in 15 other jurisdictions including Washington, DC (Figure 1).
- Table 1 shows that non-residents were significantly (p<0.0001) more likely to be white (36.0% vs. 15.5%) and men who have sex with men (MSM) (54.3% vs. 37.0%).
- The five diagnostic providers reporting the largest number of non-residents in NYC were clinics or private physician offices in neighborhoods with higher concentrations of MSM.

Non-residents receiving HIV-related care in New York City in 2005

Table 2. Persons who Received a CD4 or Viral Load Test in NYC in 2005 by Residence at Time of Test and Demographic Characteristics (N=53,610)

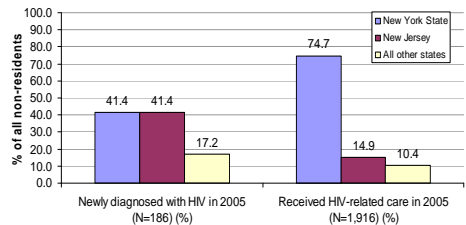
	Total		Residence					
			NYC			Outside NYC		
	N	%	N	%	N	%	Row %	P value
Total	53,610	100.0	51,694	100.0	1,916	100.0	3.6	p<0.0001
Sex								
Male	36,099	67.3	34,598	66.9	1,501	78.3	4.2	
Female	17,511	32.7	17,096	33.1	415	21.7	2.4	
Race/Ethnicity								p<0.0001
Black	24,954	46.5	24,323	47.1	631	32.9	2.5	
Hispanic	17,649	32.7	17,130	33.1	519	21.9	2.4	
White	10,076	18.8	9,240	17.9	836	43.6	6.3	
Other/unknown	1,031	1.9	1,001	1.9	30	1.6	2.9	
Age at test (years)								p=0.43
13 - 19	994	1.7	988	1.7	6	0.3	0.2	
20 - 29	3,164	5.9	3,055	5.9	109	5.7	3.4	
30 - 39	11,679	21.8	11,265	21.8	414	21.6	3.5	
40 - 49	21,737	40.5	20,949	40.5	788	41.1	3.6	
50 - 59	12,394	23.1	11,940	23.1	454	23.7	3.7	
60+	3,732	7.0	3,619	7.0	113	5.9	3.0	
Median age at test	44		44		44			p=0.64
Origin of birth								p<0.0001
US	29,952	55.1	28,513	55.2	1,039	54.2	3.5	
US Dependency	3,173	5.9	3,104	6.0	69	3.6	2.2	
Foreign	7,724	14.4	7,511	14.5	213	11.1	2.8	
Unknown	13,161	24.5	12,566	24.3	595	31.1	4.5	
Transmission risk								p<0.0001
Men who have sex with men	15,356	28.6	14,544	28.1	812	42.4	5.3	
Injection drug use history	11,940	22.3	11,585	22.5	355	18.5	2.3	
Heterosexual	10,088	18.8	9,801	19.0	287	15.0	2.8	
Perinatal	841	1.6	804	1.6	37	1.9	4.4	
Other	282	0.5	240	0.5	22	1.1	8.4	
Unknown	15,123	28.2	14,639	28.3	484	25.3	3.2	
Clinical status as of 12/31/2006								p<0.0001
HIV (non-AIDS)	15,369	28.6	14,695	28.4	674	35.7	4.4	
AIDS	36,543	70.4	35,309	70.6	1,234	64.3	3.3	

Figure 2. Proportion of persons residing outside NYC who received HIV-related care in NYC in 2005, by jurisdiction of residence (N=1,916)



- Among 53,610 persons receiving HIV-related care in NYC in 2005, 1,916 (3.6%) lived outside NYC. Among those who lived outside NYC, 1,432 persons (74.7%) lived in New York State, 285 persons (14.9%) lived in New Jersey and 199 persons (10.4%) lived in 32 other jurisdictions including Washington, DC, Puerto Rico, and the U.S. Virgin Islands (Figure 2).
- Table 2 shows that non-residents receiving care were significantly (p<0.0001) more likely to be white (43.6% vs. 17.9%), MSM (42.4% vs. 28.1%) and not have progressed to AIDS (35.7% vs. 29.4%).
- The five providers reporting the largest numbers of non-residents receiving HIV-related care in NYC were large hospitals dispersed throughout the city.

Figure 3. State of residence for non-residents newly diagnosed with HIV or receiving HIV-related care in New York City, 2005



SUMMARY/IMPLICATIONS

- Most persons newly diagnosed with HIV or receiving HIV-related care in NYC live in NYC (>95%), but a substantial number do reside elsewhere:
 - 186 persons diagnosed with HIV in NYC reside outside the city
 - 1,916 persons receiving HIV-related care in NYC reside outside the city
- Non-residents are more likely to be white MSM than residents.
 - This group may be less likely to use public funds for care than other racial/risk groups.
- Care recipients are more likely than newly diagnosed persons to live in New York State (outside NYC) versus other states (Figure 3).
 - New York State AIDS Drug Assistance Program (ADAP) provides free health care to uninsured or underinsured New York State residents with HIV/AIDS, which may explain this difference.
- Accurately characterizing both residents and non-residents who are diagnosed with HIV or receiving HIV-related care in urban areas such as NYC assists in accurate resource allocation.

LIMITATIONS

- ZIP code information from CD4 and HIV RNA viral load records has not been verified for persons receiving HIV-related care.
- CD4 counts greater than 500 cells or 14% of total lymphocytes and undetectable viral loads did not become reportable in New York State until June 2005.
- CD4 or viral load tests conducted outside NYC are not included, which may lead to an underestimation of the number of NYC residents receiving HIV-related care.
- Address of residence on record may not reflect the actual residence if not provided to medical provider (e.g. persons who use a local residence to receive care but actually live elsewhere).

ACKNOWLEDGMENTS

We would like to thank the field surveillance staff of the HIV Epidemiology and Field Services Program who reviewed medical records for newly diagnosed cases.