

# Risk factors for delayed initiation of medical care after diagnosis of HIV, New York City: Impact of transmission risk, race, and site of diagnosis on transition to care

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## Background

- The full benefit of timely HIV diagnosis is realized only if there is timely transition to medical care
- The Centers for Disease Control and Prevention (CDC) and the Department of Health and Human Services (DHHS) recommend that HIV-related medical care with regular monitoring of viral load and CD4 count be initiated as early as possible after diagnosis



## Methods

- We measured time to first primary care visit in persons newly diagnosed with HIV (non-AIDS) and determined risk factors for delayed initiation of care.
- Routinely reported laboratory tests that are standard components of an initial workup for HIV (viral load and CD4 count) were used to indicate first primary care visit.
- Initiation of care was considered delayed if there was an interval of >3 months between the diagnostic Western Blot test and the first laboratory test indicating care.
- Analysis included all persons diagnosed by positive Western Blot in calendar year 2003, residing in New York City at the time of diagnosis, living as of June 30, 2005, and having a known provider (N=1,891).
- Analysis was based on surveillance data reported to the NYC DOHMH HIV Epidemiology Program through March 31, 2006, in compliance with New York State public health law, which requires named reporting of HIV and AIDS diagnoses, HIV-related illness, positive Western Blot (WB) tests for HIV antibody, viral load and CD4 values, and HIV genotypes.

## Results

Time from Initial Diagnosis to First Primary Care Visit  
Persons Diagnosed with HIV (non-AIDS) by Positive WB Test in New York City, 2003

	Within 3 months		More than 3 months		Total
Total	1,221	64.6	670	35.4	1,891
Sex					
Male	794	63.9	449	36.1	1,243
Female	427	65.9	221	34.1	648
Race/ethnicity					
Black	612	60.7	397	39.3	1,009
Hispanic	377	66.1	193	33.9	570
White	204	75.8	65	24.2	269
Asian/Pacific Islander	21	65.6	11	34.4	32
Other or unknown	7	63.6	4	36.4	11
Age Group (years)					
0-12	6	100.0	0	0.0	6
13-19	47	61.8	29	38.2	76
20-29	322	70.2	137	29.8	459
30-39	422	63.5	243	36.5	665
40-49	296	59.9	198	40.1	494
50-59	101	66.4	51	33.6	152
60+	27	69.2	12	30.8	39
Transmission Risk					
Men who have sex with men	429	74.1	150	25.9	579
Injection drug use history	90	52.9	80	47.1	170
Heterosexual	239	72.2	92	27.8	331
Perinatal	6	100.0	0	0.0	6
Unknown/under investigation	457	56.8	348	43.2	805
High Poverty Zip Code					
Non-poverty zip code	471	68.1	221	31.9	692
High poverty zip code	750	62.6	449	37.4	1,199
Diagnostic WB Provider					
Provider with co-located medical care	1,012	67.6	486	32.4	1,498
STD clinic	97	57.7	71	42.3	168
Tuberculosis clinic	4	57.1	3	42.9	7
City correctional system	39	49.4	40	50.6	79
Community test site	69	49.6	70	50.4	139
Country of Birth					
Not US	551	63.2	321	36.8	872
US	670	65.8	349	34.2	1,019

- The population analyzed mirrored the total 2003 HIV (non-AIDS) diagnoses in the HIV/AIDS Registry with respect to demographic characteristics and risk transmission.
- The majority (78%) of >1,500 patients presenting for care at any time during the 18-month period did so within the first three months of diagnosis.
- More IDU as opposed to persons with all other risks had delayed initiation of care (47% vs. 34%)\*.
- Persons diagnosed in Department of Health clinics, jails and community-based test sites without co-located primary medical care were significantly more likely than persons diagnosed at facilities offering both diagnostic and primary medical services to have delayed initiation of care\*.
- More Blacks (39%) than persons of any other race/ethnicity (31%) had delayed initiation of care\*, as did persons living in high-poverty zip codes (37%) when compared to persons not living in high-poverty zip codes (32%) at the time of diagnosis\*.

\* p<0.05

Univariate and Multivariate Analysis of Risk Factors for Delayed Initiation of Care  
Persons Diagnosed with HIV (non-AIDS) in 2003, New York City

	Total	% Timely	% Delayed	Univariate OR	Multivariate OR
Total	1,891	64.6	35.4	OR (95% CI)	OR (95% CI)
Diagnostic WB Provider					
Provider with co-located medical care	1,498	67.6	32.4		
City correctional system or community test site	218	49.5	50.5	2.02 (1.52 - 2.69)	2.27 (1.69 - 3.04)
STD or TB clinic	175	57.7	42.3	1.38 (1.00 - 1.89)	1.57 (1.14 - 2.17)
Transmission Risk					
Not IDU	1,721	65.7	34.3		
IDU	170	52.9	47.1	1.70 (1.24 - 2.34)	1.85 (1.34 - 2.56)
Race/ethnicity					
Not Black	882	69.0	31.0		
Black	1,009	60.7	39.3	1.45 (1.20 - 1.75)	1.52 (1.24 - 1.85)
Country of Birth					
Not US	872	63.2	36.8	1.12 (0.93 - 1.35)	1.28 (1.05 - 1.56)
US	1,019	65.8	34.2		
Poverty Zip					
Non-poverty zip code	692	68.1	31.9		
High-poverty zip code	1,199	62.6	37.4	1.28 (1.05 - 1.56)	1.24 (1.01 - 1.53)



## Conclusions

- Compared to persons diagnosed at sites with co-located medical care, those diagnosed at public clinics, community-based test sites, or the city correctional system were significantly more likely to delay initiation of care. History of injection drug use, Black race, non-US country of birth and residence in a high-poverty zip code also contributed to delayed initiation of care.
- Although sites with co-located medical care had the best success rates (68% in care within 3 months), they also diagnosed the greatest number of patients who delayed care. All sites that offer HIV testing should develop proactive strategies to ensure that newly diagnosed persons are linked to care.
- Sites without co-located medical care face additional challenges and must strengthen their referral and follow-up systems to facilitate linkage to care.
- Linkage to care is most successful in the first three months after diagnosis. Providers should take advantage of the immediate post-test period to facilitate the transition to care.