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Counselor-based versus integrated HIV screening in an urban Emergency Department

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Background

- Since 2006, the Spencer Cox Center for Health at Mount Sinai St. Luke's and Mount Sinai Roosevelt in New York City has offered Emergency Department (ED) patients free HIV rapid antibody testing.
- Starting in July 2010, the program transitioned from a counselor-based to an integrated model of oral rapid HIV antibody testing. Under this integrated model and in compliance with the CDC 2006 recommendations and 2010 New York State HIV Testing Law, all ED patients aged 13-64 years old were routinely offered rapid HIV testing at triage; and result notification, counseling, and testing was performed by teams of medical providers and nursing.
- **This study evaluated an integrated model of HIV screening program in the Emergency Department with comparisons made to counselor-based HIV screening.**

Objectives

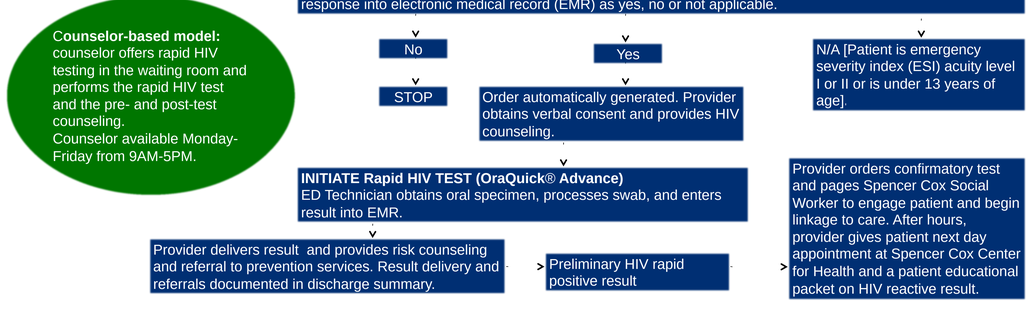
- To describe the demographic population profile of patients who underwent HIV rapid testing.
- To analyze any significant differences in the populations reached by HIV testing in the ED before and after the implementation of integrated HIV testing.
- To identify the prevalence of HIV Infection among patients reached by HIV testing in the ED before and after the implementation of integrated HIV testing and analyze any significant differences.

References: [1]Z. Hennessey, et al. "A quality framework to improve routine rapid HIV screening, diagnosis, and linkage to care at a high-volume, urban emergency department in New York City." *Lancet.* 2013; [2] HIV Epidemiology and Field Services Program. "HIV Surveillance Annual Report, 2012." NYC Department of Health and Mental Hygiene.

Methods

- Data was collected between 5/2006 and through 6/2013 on all adolescent and adult patients who underwent HIV rapid test (RT)
- After verbal consent, HIV testing (OraQuick® Advance Rapid HIV-1/2 Antibody test) was performed. Confirmatory labs were performed following preliminary positive results.
- All demographic characteristics of patients who underwent HIV testing between 5/2006 to 6/2010 (counselor-based) were compared to those patients testing between 7/2010 to 12/2013 (integrated testing) using Fisher Exact and Wilcoxon tests.
- Multivariate analysis were performed on patients who tested HIV positive compared to those who tested negative on the rapid oral test.

Figure 1. ED HIV Testing Algorithm (counselor-based and integrated testing models)



Results

Figure 2. Number of HIV rapid tests conducted in the ED by year (N=57,882)

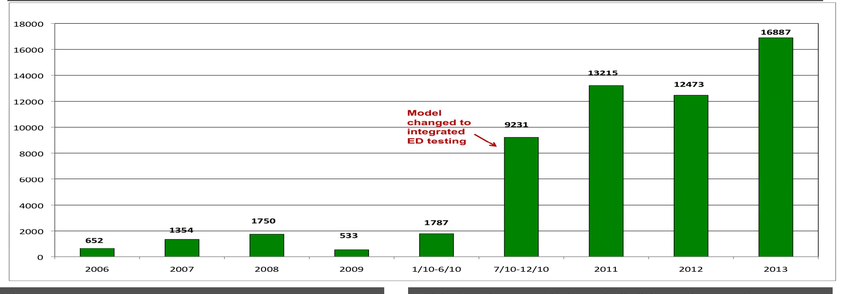


Table 1. Characteristics of eligible patients who underwent rapid HIV testing (N= 57,882)

	Counselor-based (N=6,076)	Integrated testing (N=51,806)	P-value
Age (years)	33.5 (13 – 85)	34.7 (13 - 99)	*<0.001*
Males	43.7% (N=2,657)	45.8% (N=23,686)	*0.002*
Insured	69.9% (N=4,246)	71.3% (N=36,927)	*0.025*
Race/Ethnicity (N=14,639)*			
White	6.9% (N=127)	7.7% (N=984)	0.240
Black	45.4% (N=837)	42.7% (N=5,459)	*0.040*
Hispanic	45.3% (N=835)	46.7% (N=5,981)	0.241
Other	2.4% (N=45)	2.9% (N=371)	0.294

- 57,882 HIV tests were conducted between 1/2006 and 12/2013. 90% (N=51,806) of testing occurred during the integrated testing period (7/2010 to 12/2013). Majority of patients undergoing HIV testing were female (54%; N=31,454) and insured (71%; N=41,173) with a median age of 30.9 years (range=13-99 years).
- 380 (0.7%) patients tested HIV positive. The majority (81.6%; N=310) of HIV positives occurred during the integrated testing period (data available 2011-2013: 43.8%, N=42 of 96 newly diagnosed infections with concurrent HIV/AIDS). In multivariate analysis, significant predictors of testing HIV positive were male gender (p<0.001), older age (p<0.001), and insured (p<0.001).

Summary and Conclusions

- Integrated HIV testing in the ED was feasible, sustainable, and allowed for oversight in performance standards (data presented elsewhere[1]).
- Integrated HIV testing also allowed for significant increases in patient access to HIV testing and identification of HIV infections.
- A significant proportion of newly diagnosed infections presented with HIV/AIDS (43.8% vs. 19% of NYC data[2]) and were uninsured (48.9%; N=64), highlighting the importance of having free and integrated HIV testing in the EDs of large urban hospital centers.

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