

Identifying Acute HIV Infections in the Emergency Room: Benefits of Fourth Generation HIV Testing

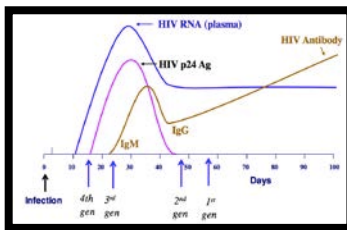
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Background

- ◆ In 2006, the CDC recommended screening for HIV infection in all healthcare facilities including emergency departments (ED).
- ◆ Rapid, point-of-care testing has been the mainstay of ED testing programs. This platform is labor intensive and insensitive to acute HIV infection.
- ◆ Newer, automated, 4th generation HIV testing platforms (e.g. Abbott Architect Analyzer HIV Ag/Ab) can result HIV tests in ≤ 1 hour.
- ◆ In addition, this testing platform is able to detect early HIV infection 10-21 days post exposure when patients are highly infectious and usually symptomatic



Study Objective

- ◆ Examine the impact of 4th generation testing on the number of screening tests performed, number of new diagnoses and the detection of acute HIV infection in an urban indigent emergency department.

Methods

- ◆ Evaluation of the 'R/O HIV in the LAC+USC ED' HIV Program
- ◆ The R/O HIV in the LAC+USC ED Screening Program offers non targeted testing to adults in the ED regardless of complaint
- ◆ LAC+USC is the largest Safety-Net Hospital in the Western United States (urban Los Angeles)
- ◆ Program converted from point-of-care model to 4th generation testing in July 2013
- ◆ Retrospective review of 15 months before and after conversion to 4th generation testing
- ◆ Outcomes of interest: **# tests performed** and **# of Acute HIV Infections identified**

Results

- ◆ HIV testing increased from **8,983 tests in the 15 months before to 22,593** in the 15 months after (250% increase)
- ◆ New diagnosis of HIV infection **increased from 36 to 115 (319% increase, 0.5% prevalence)**
- ◆ 14 cases of Acute HIV infection were diagnosed following conversion to 4th gen testing vs. 0 cases using older platforms
- ◆ Acute HIV: 93% Male, 79% Latino and 21% Black

Results

- ◆ Acute cases were 12.2% of all new diagnoses

Characteristics of Acute HIV Infections

Patient	Gender	Age	Race	Viral Load
1	M	26	Latino	4005643
2	M	22	Latino	>10,000,000
3	M	35	Latino	1498554
4	M	43	Latino	498000
5	M	24	Black	>10,000,000
6	F	30	Latino	204000
7	M	41	Latino	1939557
8	M	36	Latino	736448
9	M	37	Latino	377000
10	M	45	Black	>10,000,000
11	M	24	Black	Not obtained
12	M	41	Latino	Not obtained
13	M	37	Latino	1223220
14	M	46	Latino	3388814

Conclusions

- ◆ Conversion to 4th generation testing resulted in a marked increase in the 1) number of individuals tested, 2) number of new HIV diagnosed and 3) number of Acute HIV cases identified
- ◆ Acute HIV: concentrated in young men of color

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