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Abstract

Background:
The VA Medical Center in Washington, DC (VAMC-DC) is an urban facility that provides veterans in the DC area medical care, including emergency services, inpatient treatment and outpatient primary care. HIV testing at the VAMC-DC has been targeted to patients with identified risk factors. Since 2006, the CDC has promoted universal HIV testing to enhance the detection of undiagnosed HIV infection within the US. We evaluated rapid HIV testing as a point-of-care (HIV-POC) screening expansion for several outpatient areas at the VAMC-DC.

Methods:
HIV-POC testing was performed on patients using the OraQuick® Advance Rapid HIV Test on oral samples. All reactive HIV-POC results were confirmed using western blot assays.

Results:
During the period from 11/13/07 through 10/17/08, 1,058 outpatients were offered HIV-POC testing, and 610 tests were performed on 581 (55%) patients. There were 8 reactive screening tests: 4 confirmed by western blot, 1 previously known with re-established care and 3 false positives.

Conclusion:
Outpatient HIV-POC testing offers an effective approach to increase HIV testing rates and identified 4 new individuals, representing 0.7% of those tested.

Background

The VAMC-DC is a 158-acute bed tertiary care medical center providing emergency, hospital and ambulatory care to more than 44,000 veterans in the metropolitan area of the District of Columbia (DC).

The CDC has recommended HIV testing for patients in all US healthcare settings because an estimated 25% of HIV-infected persons are unaware of their infection and may thus transmit the infection unknowingly. Earlier HIV diagnosis and linkage to care has been shown to reduce morbidity and mortality.

From 2000-2006, the rate of HIV testing based on targeting for risk factors was 4.2% of patients receiving care at VAMC-DC and HIV incidence was 3.6% among those tested. Since DC has the highest prevalence of HIV/AIDS in the US, we evaluated a rapid HIV-POC testing program to assess expansion of screening to outpatients at the VAMC-DC.

Outpatient HIV Point-of-Care (HIV-POC) Testing at the Washington, DC VA Medical Center (VAMC-DC)

Methods

Information about HIV-POC testing was offered to outpatients in programs for substance abuse (SA), transitional housing (TH), Hepatitis C Education (HC), Women's Clinic (WC), Winterhaven Fair (WF) and Welcome Home Fair (WHF). Undecided patients were referred to Infectious Diseases Clinic (ID) for testing at another time. Screening was done using oral secretions on the OraQuick® Advance Rapid HIV Test. Pre-test counseling was provided with written informed consent as was required by federal law. HIV test results were usually provided within 30 minutes of testing with post-test counseling and condoms offered at that time. All reactive HIV-POC results required western blot confirmation. CD4 counts, HIV RNA and genotypic resistance testing were performed on patients with confirmed positive test results.

Results

HIV-POC SCREENING: During the period 11/13/07 - 10/17/08, our staff offered information and HIV-POC testing to 1,058 outpatients. A total of 610 tests were done on 581 patients (55%), as shown in Table 1. Among those tested, there were 447 men and 134 women; 27 patients had more than 1 test done. Those with reactive tests are described in Table 3. Condoms were accepted by 312 outpatients (51%) during post-HIV-POC test counseling sessions.

TARGETED HIV TESTING: During 11/13/07 - 10/17/08, 1,425 HIV tests were sent from outpatients in various clinics where testing was targeted to risk factors, as shown in Table 2. Among ambulatory patients, the majority (76%) were tested in the Primary Care Clinics (PCC). Among those tested, 16 (1.1%) had reactive results which were all confirmed by western blot. Nine tests sent from ID Clinic to confirm HIV diagnosed outside VAMC-DC were not included in these data.

Table 1. Outpatient HIV-POC Screening

LOCATION	OFFERED	TESTED	REACTIVE
SA	350	222 (63%)	3 (1.3%)
TH	146	65 (45%)	1 (1.5%)
HC	82	29 (35%)	
WC	210	98 (47%)	
WF	256	97 (38%)	3 (3.1%)
WHF	14	11 (79%)	
ID		88	1 (1.1%)

Table 2. Outpatient Targeted HIV Testing

LOCATION	TESTED	REACTIVE
PCC	1105	16 (1.4%)
SA	3	
HC	7	
WC	143	
Med Specialties	83	
Mental Health	64	
Neurology	17	
Surgery	3	

Table 3. Summary of Patients with Reactive Screening Tests

Pt Age	LOC	WB Result	CD4 cells/mm ³	HIV RNA copies/mL	RT/PI mutations	ID Clinic	HAART
60	WH	known	110	226,814	M41L, L210W, T215Y, L10V, M43I, Q58E, I62V, L63P, A71V, L76V, I84V, I93L	linked again	declined
54	WH	neg					
52	WH	neg					
54	ID	pos	80	193,859	I15V, M36I, I62V	yes	yes
57	SA	pos	271	4,445	K20R, L33V	yes	yes
58	SA	ind	1099	<40			
54	HH	pos	declined	declined	declined	declined	declined
61	SA	pos	110	15,373	I13V, K20R, L63P, A71T, V77I	yes	pending

Conclusions

- Through our program, outpatients in various settings had more than 13-fold higher acceptance rate for HIV-POC testing than our historical rate of targeted testing (55% vs 4.2%).
- HIV-POC screening yielded 0.7% incidence of new HIV diagnoses among those tested.
- Three of five HIV-infected patients had CD4<200 cells/mm³.
- The false positive rate for our HIV-POC testing was 0.5%.
- Among those tested, 51% outpatients accepted condoms during post-test counseling.

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