

Combined Rapid and HIV RNA Testing in a Public STD Clinic, San Francisco, 2004-2006

<i>Abstract Category:</i>	Strategies for Targeted Screening for Acute HIV-Infection
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BACKGROUND

Because of the relatively short incubation period of STDs and the relationship between STDs and risk for HIV infection, patients seeking STD care may be at very high risk for acute HIV infection. Patients with acute HIV infection (HIV antibody negative but detectable HIV ribonucleic acid (RNA)) are at substantial risk of further spreading HIV because of high viral load, unknown infection status and increased risk behavior. Recent advances in HIV testing allow for rapid point-of-care antibody testing and HIV RNA detection, ensuring timely identification and prevention counseling in patients with acute infection.

METHODS

Select patients at high risk of HIV infection were offered rapid HIV testing at the San Francisco municipal STD clinic (Oraquick Advance HIV-1/2 Antibody Test, Orasure Technologies Inc). Persons who were rapid antibody test negative were tested for HIV RNA (Versant 3.0, Bayer Laboratories) using a one-stage pooling protocol of 10 plasma specimens. Positive HIV RNA tests were confirmed by follow-up testing. We calculated the sensitivity and binomial exact 95% confidence intervals (CI) of the rapid HIV test for detection of HIV infection.

RESULTS

Through December 2006, there were 1092 visits where a rapid HIV antibody test occurred: 82 (7.5%) were HIV antibody positive. Among the 999 rapid antibody negative test visits where HIV RNA testing occurred, 11 (1.1%) were RNA positive and 91% (10/11) were confirmed (1 patient did not return for follow-up testing). In terms of detecting HIV infection, HIV rapid testing had a sensitivity of 89.1% (95% CI 82.7 - 95.5%). All (100%) of returning patients received their positive RNA result, were counseled and referred into care. HIV RNA screening increased HIV case detection by 12% (92/82).

CONCLUSIONS

The combination of rapid HIV antibody testing with more sensitive HIV RNA screening assured that HIV-infected patients learned their test results quickly, were not missed and helped identify an additional 12% of those with HIV infection. Furthermore, patients with acute infection were identified and counseled when highly infectious, thereby potentially averting further transmission. Wider use of combined rapid antibody testing and RNA screening, particularly in STD clinic settings, could contribute to the reduction of HIV incidence.