Abstract #30

Evaluation of a 3 Rapid Test Algorithm for the Diagnosis of HIV Infection at Point of Care Rapid Testing Facilities: Strategy 4 Data Needs

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Primary Author:	Robert Boromisa
Affiliation:	New York State Department of Health, Albany, NY
Co-Authors:	J. Schwendemann, M. Parker, T. Sullivan, M. San Antonio-Gaddy, A. Richardson-Moore

PROJECT

To determine the effectiveness of using 3 different HIV rapid tests (A1, A2, A3) in the diagnosis of HIV infection at Point of Care (POC) facilities.

ISSUES

From January 2006 through September 2007, 177 rapid test reactive specimens (A1+) were sent to the NYS Diagnostic HIV Laboratory for Western blot (WB) confirmation and 29.9% (53/177) of these specimens did not confirm (WB negative). This study evaluates the use of a 3 rapid test algorithm to improve the rate of HIV confirmation so that POC clients can be accurately referred for clinical evaluation and treatment.

RESULTS

Of the 177 A1+ specimens submitted, 139 were BioRad Multispot HIV-1/2 rapid test reactive (A2+) for HIV-1 (78.5%); 125 WB positive (70.6%), 11 WB indeterminate (6.2%), and 3 WB negative (1.7%). It was demonstrated that 8 of the 11 WB indeterminate specimens and 1 WB negative specimen were positive for HIV-1 RNA. The percentage of A1+/A2+ specimens that were infected with HIV-1 was 96.4% (134/139). In contrast, all 38 A1+/A2- specimens were WB negative; 19 of these specimens were tested by enzyme immunoassay (EIA) and 18 (94.7%) were found to be nonreactive. The remaining A1+/A2- specimens will be tested by EIA. All A1+/A2- specimens will be tested with a 3rd rapid test (A3).

LESSONS LEARNED

The data needs for Strategy 4 were as follows: 1) It was determined that 1.4% (2/139) of the A1+/A2+ specimens were HIV uninfected as compared to 29.9% of the original A1+ specimens; 2) Information on the number of persons referred for medical care will be presented; 3) No data for the number of specimens with false A1- results was available because acute infection screening was not performed; 4) There were no specimens with discordant rapid test results that had false negative results on the A2 test; 5) 21.9% (39/178) of A1+ specimens were false positive since these specimens were both A2 and WB negative. Discordant rapid test results that have false negative results on the A2 and A3 rapid tests will be discussed; and 6) Whether persons with such discordant rapid test results (A1+, A2-, A3-) can be considered uninfected will be discussed.