

## HIV-2 Testing for HIV Infection Study Cases at the NYC DOHMH Public Health Laboratory

<i>Abstract Category:</i>	Algorithms for HIV-2 Confirmation
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### BACKGROUND/ OBJECTIVE

In 1998, the New York City Department of Health and Mental Hygiene (NYC DOHMH) Public Health Laboratory (PHL) expanded a health care provider service to include the prospective identification of HIV-2 infections from NYC patients that presented an HIV infection with (1) incomplete HIV-1 serology tests or (2) were determined to be undetectable for HIV-1 by PCR. An active outreach program to the major public hospitals was also initiated to explain the program. The main objective of the initiative was to determine the level of HIV-2 infections in the NYC patient population.

### METHODS

As of October 2007, the PHL received 1,388 specimens as part of this study. These specimens exhibited discordant HIV-1/HIV-2 EIA and HIV-1 Western blot (WB) results, had repeatedly indeterminate (very weak/unusual HIV-1 WB banding patterns) or were from patients that exhibited HIV symptoms without detectable HIV-1 viral load. Methods for testing included: HIV 1/2 EIA (Genetic Systems HIV-1/HIV-2 or Genetic Systems HIV-1/HIV-2 PLUS O EIA), HIV-1 Western blot (Genetic Systems HIV-1 Western Blot), HIV-2 EIA (Genetic Systems HIV-2 EIA) and HIV-2 WB (California DOH Services); Multispot HIV1/HIV-2 Rapid test (Genetic Systems differentiation EIA); HIV-1 and HIV-2 DNA PCR (in-house) and HIV-1 RNA Viral Load (Amplacor HIV-1 Monitor Test, version 1.5 or Bayer (bDNA).

### RESULTS

Of the 1,388 patient specimens received from February 1998 through October 2007, 83 (5.9%) had HIV-2 antibodies or detectable HIV-2 DNA. Of these 83 HIV-2 positive specimens, 43 (51.8 %) were reactive by HIV-1/HIV-2 EIA and had detectable HIV-2 DNA, and 64 (77.1%) were reactive by HIV-2 HIV-1/2 EIA antibody screening. Additional data will be shown. Sixty five (74.7%) patients had self-identified their area of birth as Africa.

### CONCLUSIONS

Both the rapid HIV-1/HIV-2 differentiation EIA and HIV DNA PCR were employed as effective strategies for laboratory HIV-2 based testing at the NYC DOHM PHL.