Implementation of Rapid Syphilis Testing in Los Angeles County to Target High Risk Population

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Background
The Centers for Disease Control and Prevention ranks Los Angeles County as number two in primary and secondary syphilis rates and number one in cases compared to every other county in the United States (1). AIDS Healthcare Foundation (AHF), the largest non-profit HIV/AIDS healthcare provider in the United States, responded to the syphilis epidemic in LA County by implementing rapid syphilis testing on select mobile testing units (MTUs) (Figure 1) and at the Closet thrift shop (OTCs) (Figure 2).

MTUs and OTC testing counseled at-risk populations and offered the Syphilis Health Check (SyHC) brochure,_bg relaxed targeted test to clients seeking rapid HIV testing. The Syphilis Health Check uses finger stick blood to detect syphilis antibodies and produces results in 10 minutes.

The purpose of this evaluation is to determine whether the implementation of rapid syphilis testing in the AHF MTUs and OTCs led to increased testing of new syphilis cases among high risk populations.

Methods
Data from 6,981 rapid clients who sought rapid HIV testing on the MTUs at the OTCs between March 1, 2019 and May 31, 2019 were retrospectively analyzed using three sources of electronic health records: Client Health Access Management Portal (CHAMP), Centrally Practice Solution (CPS), and a Microsoft Excel spreadsheet of rapid syphilis testing updated by AHF Public Health Division staff members.

Demographic data collected includes age, gender, race, sexual orientation, and housing status. Testing for drug use, condom use, sex with a person who may have HIV, testing before and after the test, and will under the influence of alcohol or drugs.

Samples were classified as high risk if they responded yes to at least one of the five risk behaviors mentioned above.

Table 1 summarizes the demographic characteristics by test site type (MTUs versus OTCs). Of the 1,381 total clients who received rapid HIV tests, 524 clients (37.6%) also received rapid syphilis tests.

Results
Among the 524 clients who received rapid syphilis testing on the MTUs and at the OTCs, 421 (80.3%) were high risk (Table 2; Forty clients (7.5%) tested positive for syphilis, of which 30 (71.4%) were high risk (Figure 3).

Seventeen of the 40 clients (42.8%) who received a reactive rapid syphilis test result returned to an AHF Wellness Center for follow-up services (Figure 4) and seven of the 17 clients received treatment (Figure 5). Six of the seven clients who received treatment were high risk (Figure 6). A chi-squared test of association was performed to determine whether there was a statistically significant association between syphilis testing (positive or client risk level (low/medium). A statistically significant association was found between rapid syphilis testing and client risk level (p < 0.05).

Conclusion
Trained AHF Public Health Division staff supported implementation rapid syphilis testing on the MTUs and at the OTCs. However, it is not possible to determine whether there is a statistically significant association between syphilis treatment and client behavioral risk level because 23 of the clients who received a reactive rapid syphilis test result did not seek follow-up services at an AHF Wellness Center. As AHF Public Health Division staff continues to develop rapid syphilis testing implementation, it is recommended that clients who report positive rapid syphilis tests seek follow-up services and treatment.

Table 1: Client Demographics by Test Site

Table 2: Client Risk Level by Test Site

Figure 1: AHF MTU
Figure 2: AHF OTC
Figure 3: Risk Level for Reactive Rapid Syphilis Cases
Figure 4: Follow-Up for Reactive Rapid Syphilis Cases
Figure 5: Treatment Outcome for Reactive Rapid Syphilis Cases
Figure 6: Risk Level for Confirmatory Treatment Cases

Presented at the 2019 AHF Diagnostics Conference Atlanta, GA | Session E
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