

ACUTE HIV INFECTION (AHI) DETECTION: RAPID 4TH GENERATION TEST OR RAPID MOLECULAR POINT-OF-CARE HIV TEST?



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BACKGROUND

AHI is defined by the presence of p24 Ag and/or HIV-RNA in the absence of HIV Ab^[1]. Standard 3rd generation tests do not detect AHI. High HIV incidence (2.8%)^[2] and prevalence (17.1%)^[3] estimates in Portuguese men who have sex with men (MSM) and regular HIV testing (<7 months between visits)^[2], peer counselor training for AHI syndrome recognition, rapid linkage to care (< 72 hours) and access to anonymous partner notification^[4] at CheckpointLX (community-based sexual health centre for MSM) increase the possibility of finding AHI cases^[5]. This study aims to compare two screening algorithms for AHI detection at CheckpointLX.

METHODS

Between November 2016 to November 2017 (enrolment \geq 9.5 months), adult MSM were tested with a combined rapid Ag/Ab test (algorithm 1, AlereTMHIV Combo^[6]) and all adult MSM with AHI syndrome OR reactive Ag/Ab test OR whose sexual partner was diagnosed with HIV at CheckpointLX in the prior 6 weeks were tested with rapid molecular HIV-RNA test (algorithm 2, AlereTMq HIV-1/2 Detect^[7]). All cases were assessed for CD4 cells count (AlereTMPima^[8]) and linked to care (< 48 hours).

RESULTS

Algorithm 1- 0% AHI detected [0 in 2890 tests, 88 reactive: 1 for Ag[confirmed negative]; 1 for Ab/Ag[confirmed positive]; 86 for Ab[4 confirmed negative]; 5 for Ag[all confirmed negative] were not considered due to be part of faulty lots, according to manufacturer notice].

Algorithm 2- 0.87% [1 in 115 tests - 27 non-reactive rapid Ag/Ab tests[1 confirmed positive], 1 for Ab/Ag[confirmed positive], 1 for Ag[confirmed negative], 86 for Ab[4 confirmed negative, 9 refusals to onsite confirmation]].

12% of people confirmed positive were linked to care earlier due to CD4 count <250 cells/mm³.

6.33% of people were confirmed negative.

CONCLUSIONS

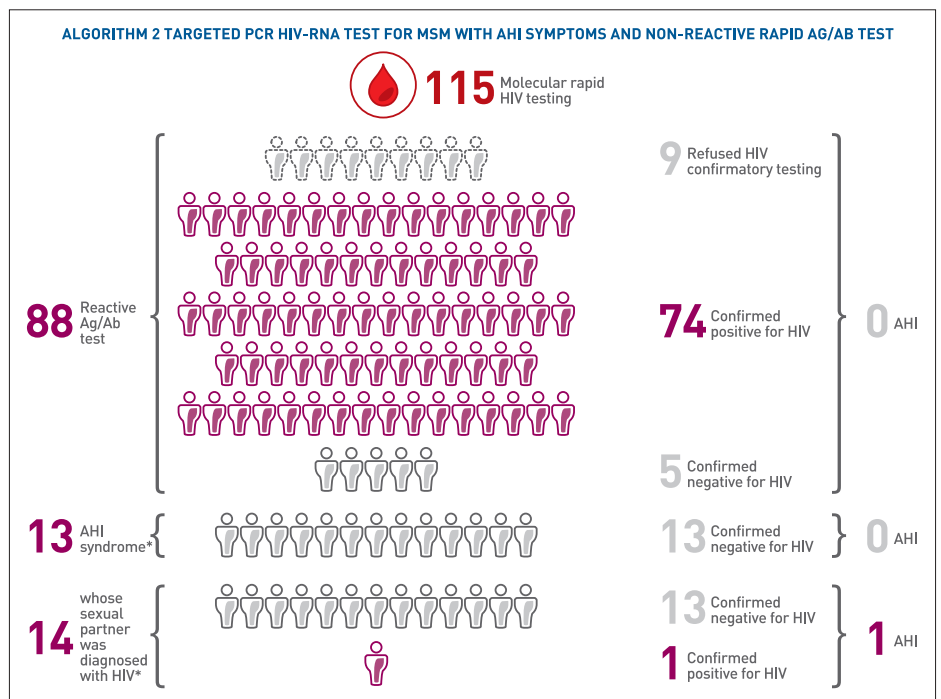
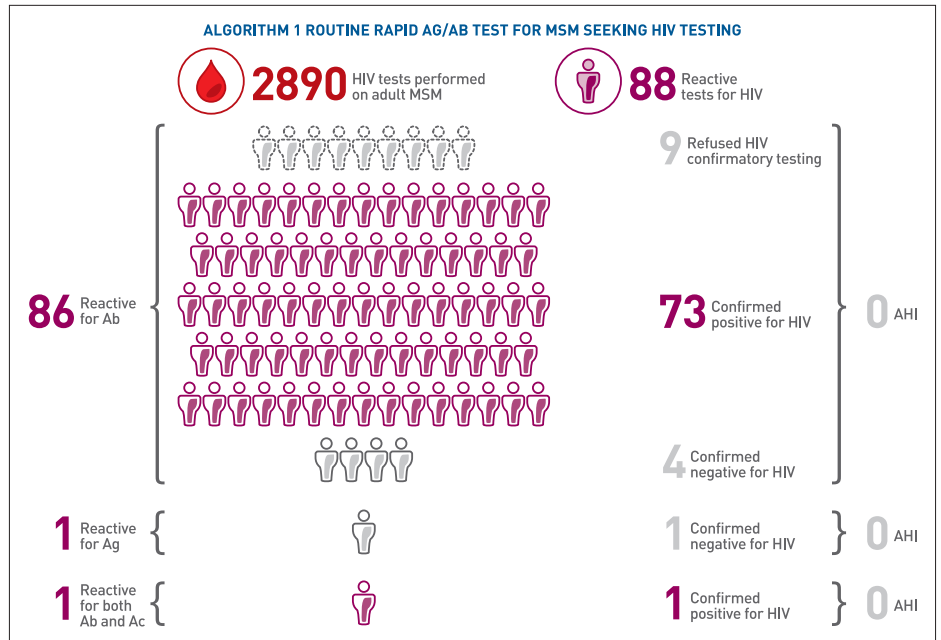
4th generation tests did not add value in AHI detection. Targeted molecular HIV-RNA allowed AHI detection and spared clients from unnecessary medical appointments and anxiety when reactive tests were confirmed negative immediately. Onsite confirmation reduced the lag time between a reactive test and diagnosis from 6 weeks to 1 hour. Onsite CD4 count enabled priority referrals when immunosuppression was found. HIV testing centers screening algorithms can benefit from onsite HIV-RNA and CD4 count POC technologies.

REFERENCES AND LEGENDS

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ACKNOWLEDGEMENTS

CheckpointLX MSM acute HIV infection detection program is supported by grants of Direção-Geral Saúde (2015-2017) and Alere Inc. (2016-2017).



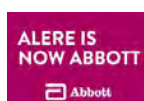
Promoters



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Funding entity



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