

**Practicability evaluation of finger-stick whole blood HIV self-test as HIV screening tool adapted to the general public in Democratic Republic of Congo**

***Évaluation de la praticabilité de sang total au Test d'auto-test VIH au doigt, Outil de dépistage du VIH adapté au grand public, en République Démocratique du Congo***

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**Summary**

**Background.** Reaching universal HIV-status awareness is crucial to ensure all HIV-infected patients access antiretroviral treatment and achieve virological suppression. Opportunities for HIV testing could be enhanced by offering HIV self-testing (HIVST) in populations that fear stigma and discrimination when accessing conventional HIV counselling and testing in health care facilities. Field experience with HIVST was never reported in French-speaking African countries.

**Methods.** The Exacto® Test HIV (Biosynex, Strasbourg, France) fulfilled the following criteria: i) Capillary blood-based test detecting early HIV infection in a period as short as 4 to 8 weeks after exposure; ii) Sterile safety lancet; iii) Simplified blood sampling system; iv) Simplified buffer delivery system; v) Specimen presence control by blood deposit assessment and migration control band; vi) Results in 10 minutes; vii) Simplified and easy-to-read leaflet in French, Lingala and Swahili. The practicability of HIVST was assessed in 322 adults living in Kisangani and Bunia, Democratic Republic of Congo, according to December 2015 WHO recommendations.

**Results.** Design. Exacto® self-test showed 100.0% (95% CI; 98.8–100.0) sensitivity and 98.8% (95% CI; 96.9–99.6) specificity. Practicability in lay users regarding health care workers. 98.3% correctly performed HIVST ( $p>0.999$ ); however, 21.2% asked for oral assistance. Most of participants (95.3%) found that the performing of the self-test was easy, and 4.7% found it difficult. Overall, the results were correctly interpreted in 90.2%, the reading/interpretation errors concerned the positive (6.5%), negative (11.2%) or invalid (16.0%) self-tests. The Cohen's coefficient was 0.84. Forty nine percent used the notice in French, 17.1% in Lingala and 33.9% in Swahili. The notice was correctly understood in 78.5%.

**Conclusions.** Our field experience with Exacto® self-test demonstrates satisfactory success rate of performance and interpretation, and its potential for use by the general public in the context of Central Africa. The main obstacle for HIVST was clearly the educational level, with execution and interpretation difficulties in poorly educated people. Notice design with pictures and in vernacular languages appeared consequently essential.

**Keywords:** evaluation, finger-stick, self test, HIV screening, performance

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