Poster 111
Poster Viewing Day 2
Thursday, Jul 28, 2022
12:00 PM - 1:15 PM

Performance evaluation between home-based caregiver-assisted oral HIV screening of children and facility-based confirmatory testing using the national algorithm in Uganda

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Background

Uganda has an estimated 26,727 children living with HIV (CLHIV) not on treatment. Children depend on caregivers for testing who face logistical and societal barriers. Caregiver-assisted oral HIV self-testing (HIVST) offers convenient and timely opportunity to expand pediatric testing options.

Aim

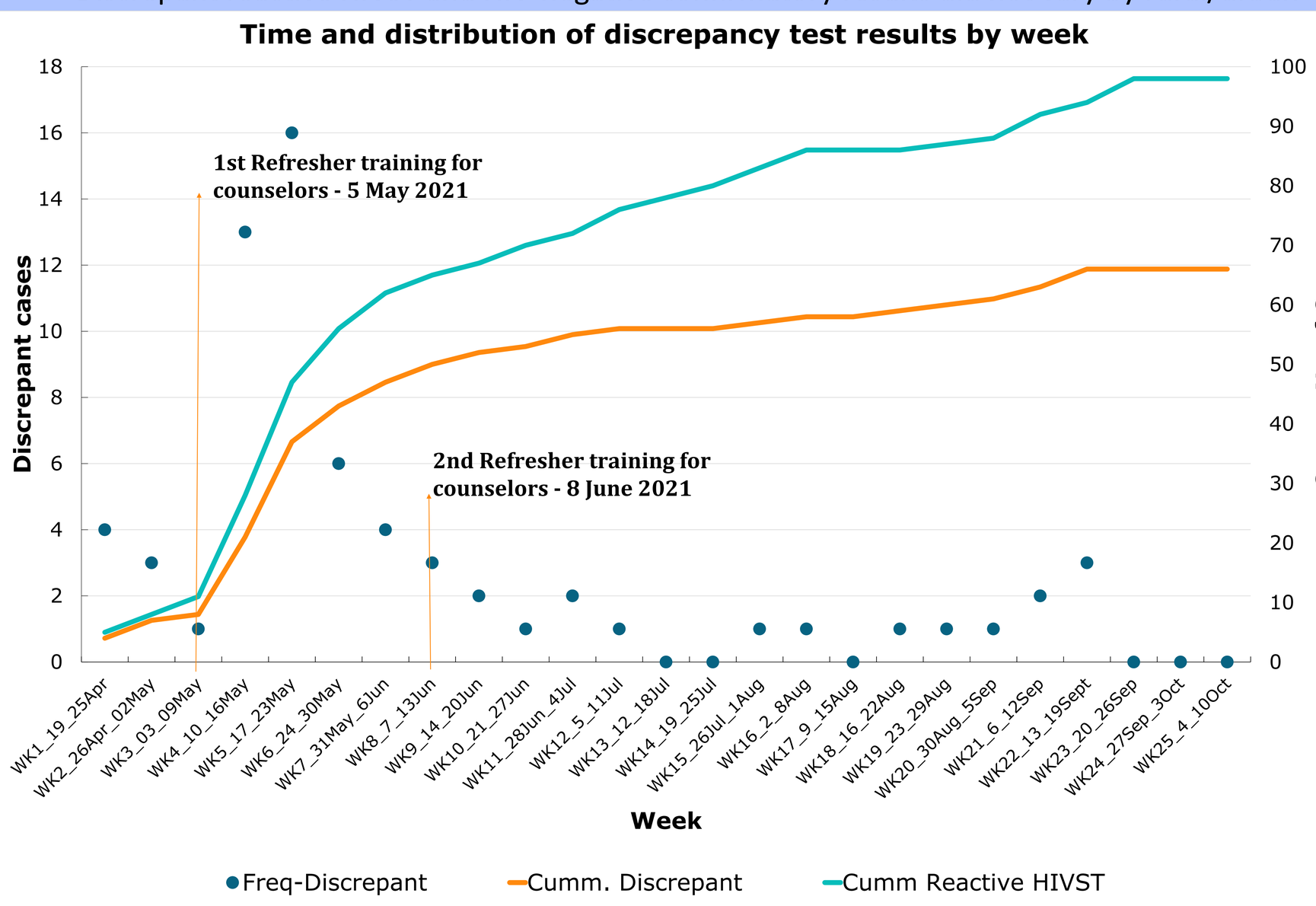
To identify factors associated with discrepant results between reactive at-home caregiver-assisted oral HIVST and subsequent facility-based HIV-positive confirmatory testing.

Methods

- Investigation focused on caregiver-assisted HIVST for children 18 months-14 years.
- OraQuick Advance© Rapid HIV-1/2 Antibody screening used.
- Counselors received pre-study and refresher trainings to correctly use HIVST screening and report results.
- Children with reactive HIVST results received blood-based confirmatory testing based on the national testing algorithm.
- Firth's logistic regression used to explore factors associated with the discrepant results.
- Factors assessed included timing of counselor trainings/refreshers and background characteristics of HIVST reactive cases.

Results

- 2,318 index parents/caregivers for 4,865 children recruited.
- 4,766 screened with caregiver-assisted HIVST.
- 98 (2.1%) had reactive results and 4 (0.1%) children had invalid results.
- All 98 children (100.0%) received confirmatory testing:
  - 32 (32.7%%) confirmed HIV-positive
  - 66 (67.3%) confirmed HIV-negative
  - (HIV prevalence of **0.67%**)
- Assuming all nonreactive HIVST results (n=4,664) were true negatives:
  - HIVST specificity, **98.6%**
  - Positive predictive value, **32.7%**
- Discrepant reactive HIVST and HIV-negative confirmatory results were associated with a period between full site activation and the second refresher training [OR=2.75, 95% CI: 2.75 (1.10-6.87)].
- Discrepant reactive HIVST and HIV-negative confirmatory results did not vary by rural/urban



Conclusion

Caregiver-assisted HIVST is an effective pediatric screening HIV tool. The lower positive predictive value and number of false-positive results were not unexpected in this low prevalence population.

Recommendation

Intensive counselor training on how to instruct caregivers to correctly administer HIVST and read results are critical to the programmatic expansion of reliable caregiver-assisted pediatric oral HIVST.

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