

HIV RAPIDS AND WESTERN BLOT

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Outline of presentation

- Background of HIV testing in Zimbabwe
- Challenges faced
- Resolutions
- Discussion

Background of HIV testing in Zimbabwe

The national HIV policy requires parallel testing for screening. In cases where the two rapid tests are discordant a third different rapid test is performed as a tie-breaker.

Parallel testing algorithms used in Zimbabwe

1. Determine
Virocheck

Unigold

2. Determine

Capillus/Oraquick
Capillus/Oraquick

3. Determine
Oraquick

Capillus

4. Unigold

Oraquick

Capillus/ Hema-Strip

5. Oraquick
Virocheck

Capillus

6. Oraquick

Determine
Determine

Capillus/

7. Determine
Hema-strip

Hema-strip

8. Unigold

Oraquick

Oraquick

At the UZ-UCSF lab, rapid HIV testing is done for the following protocols:

- HPTN - 035, 039, 046(mothers only), 052
- ACTG - A5175, A5208
- SHAZI, CBVCT, ARROW and P1060(babies above 18months)

Rapid testing for most of these protocols is performed at the site labs. In cases where the two rapids are discordant, Western blot is done as a confirmatory test.

Challenges of HIV testing

1. Setting algorithms for foreign funded projects

The national HIV policy requires parallel testing so this has budgetary implications on foreign protocols since their algorithms require serial testing.

2. Cross reactivity in rapid testing

a) A participant had discordant rapid results on 4 visits and negative western blots.

Results for the participant

Date	Determine	Oraquick	Western blot
16-Feb-06	Positive	Negative	Negative
18-May-06	Positive	Negative	Negative
20-Sep-06	Positive	Negative	Negative
04-Dec-06	Positive	Negative	Negative

- **Resolution** - Participant was given a negative result and is still being followed up in the cohort.

b) Another participant had discordant rapid results on 3 consecutive visits and indeterminate western blots on all of the visits.

Results for the participant

Date	Determine	Oraquick	Western blot
25-Jan-07	Positive	Negative	Indeterminate (band present p31)
02-Feb-07	Positive	Negative	Indeterminate (band present p31)
27-Feb-07	Positive	Negative	Indeterminate (band present p31)

- **Resolution** - viral load was performed and HIV-1 RNA was not detected using the standard method. The viral load was performed after consulting the Hopkins Network lab. Participant was given a final HIV verdict of negative.

3. Incorrect results being given to participant

A participant was given a negative result instead of positive due to a transcription error in the lab.

- **Resolution:**

- a) syphilis sample for that participant which was drawn on the same day as sample for rapids was tested for HIV
- b) participant was called back to the clinic for a 2nd sample to confirm the HIV status

- **Corrective action:**

rapid HIV testing of all the participants seen at the clinic on that day was repeated.

- Preventative action:
 - a) Importance of recording and reviewing of all rapid HIV results was stressed to the site staff.
 - b) Discarding all test devices as soon as they are reviewed to prevent the possibility of reading the wrong device for another participant.
 - c) Retraining of site lab staff and clinicians.

- d) All site labs which perform rapid HIV testing send all their weekly samples to the central lab where 10% of the samples are retested
- e) The clinician who reviewed the result was advised to make sure all test devices are properly labelled before reviewing any results

Discussion

Thank you