Supplementary

Figure 1: Summary of study procedures

Figure 2. Participant Flow

Table 4. Agreement in testing results read by two conductors and over two time-points in 3 study sites

Table 5. Acceptability of dual RDTs among pregnant women in 3 study sites by baseline characteristics in Lusaka

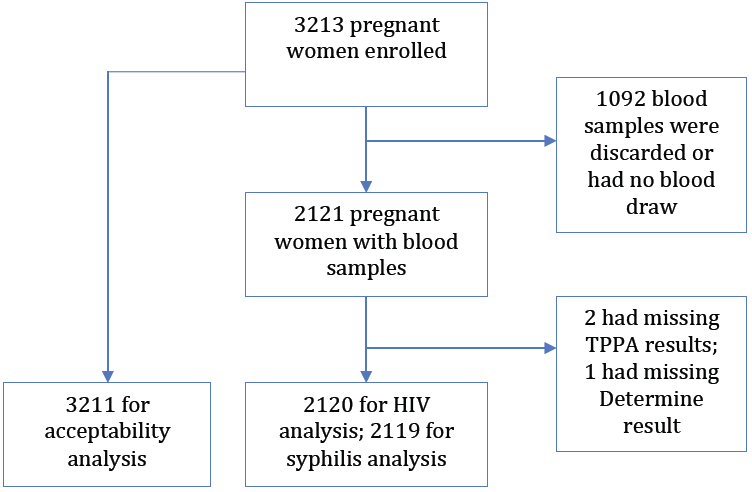
Table 6. Operational feasibility of dual HIV-Syphilis rapid diagnostic test (RDT) by Test type

SDC 6 Dual HIV/Syphilis Testing Study : Patient Questionnaire

## SDC 7 Operational Characteristics of Dual RDTs

SDC1: Figure 1. Summary of study procedures 

Routine ANC testing includes, finger stick whole blood for HIV and syphilis testing according to national algorithms: Determine (Alere Medical Company Limited, Japan) confirmation with Uni-gold (Trinity Biotech, USA) and RPR syphilis tests depending on availability



SDC 2: Figure 2: Participant Flow

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| SDC 3: Table 4. Agreement in testing results read by two conductors and over two time-points in 3 study sites | | | | | | |
| RDT by manufacturer | HIV component in RDT*a* | | | Syphilis component in RDT*a* | | |
| No. | Agreement | Kappa | No. | Agreement | Kappa |
| % | % |
|  | | | | | | |
| Chembio | 2109 | 99.6 | 0.99 | 2109 | 99.6 | 0.97 |
| SD Bioline | 2091 | 99 | 0.96 | 2090 | 99 | 0.94 |
|  | | | | | | |
| *a* RDT = rapid diagnostic test. | | | | | | |
| *b* Concordance was assessed using agreement of testing results read by clinic nurse 1 and 2 independently. | | | | | | |
| . | | | | | | |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| SDC 4: Table 5: Acceptability of dual RDTs among pregnant women in 3 urban health centres by baseline characteristics in Lusaka | | | | | | | | |
| Characteristics | Number (%) of test preference: | | | | Number (%) willing to wait for results | % of those willing to wait for: | | |
| N | Dual | Single | Don’t know/ don’t care | 30mins | 1 hr | 2hrs |
| Age (Years) |  |  |  |  |  |  |  |  |
| 18-19 | 455 | 453 (99.6) | 2 (0.4) | 0 | 455 (100) | 32.8 | 62.6 | 4.6 |
| 20-24 | 1145 | 1140 (99.6) | 3 (0.3) | 2 (0.2) | 1145 (100) | 28.8 | 65 | 6.2 |
| 25-29 | 790 | 788 (99.7) | 2 (0.3) | 0 | 790 (100) | 29.9 | 61.7 | 8.4 |
| 30-34 | 527 | 526 (99.8) | 0 | 1 (0.2) | 524 (99.6) | 29.6 | 64.7 | 5.7 |
| 35-45 | 289 | 289 (100) | 0 | 0 | 289 (100) | 26 | 70.6 | 3.5 |
| Gestational age (Weeks) | | |  |  |  |  |  |  |
| <20 | 906 | 902 (99.6) | 3 (0.3) | 1 (0.1) | 905 (99.9) | 29.3 | 65.6 | 5.1 |
| 20+ | 2291 | 2285 (99.7) | 4 (0.2) | 2 (0.1) | 2290 (99.9) | 29.6 | 63.8 | 6.6 |
| Travel time (mins) | |  |  |  |  |  |  |  |
| <30mins | 1581 | 1578 (99.8) | 3 (0.2) | 0 | 1578 (99.8) | 32.1 | 61.5 | 6.4 |
| 30mins+ | 1615 | 1607 (99.5) | 5 (0.3) | 3 (0.2) | 1615 (100) | 27.1 | 66.9 | 6 |
| Total | 3211 | 3201(99.7) | 7 (0.2) | 3 (0.1) | 3209 (99.9) | 29.5 | 64.3 | 6.2 |

|  |  |  |  |
| --- | --- | --- | --- |
| SDC 5: Table 6. Operational feasibility of dual HIV-Syphilis rapid diagnostic test (RDT) by manufacturer | | | |
| Operational characteristics | Chembio | SD Bioline | Variance ratio test, P-value |
| n=318 | n=316 |
| Mean Score (SD) | Mean Score (SD) |
| Clarity of kit instruction (MOS =4) | 3.1(0.67) | 3.2(0.69) | 0.63 |
| Ease of use (MOS =4) | 3.1(0.69) | 3.1(0.63) | 0.13 |
| Ease of control of reading window time (MOS =3) | 2.7(0.44) | 2.8(0.42) | 0.38 |
| Ease of interpretation of results (MOS =4) | 2.9(0.46) | 2.9(0.46) | 0.95 |
| Rapidity of test results (MOS =3) | 2.6(0.52) | 2.5(0.58) | **0.07** |
| Hands-on time (MOS =3) | 2.5(0.52) | 2.5(0.52) | 0.88 |
| Training time required (MOS =4) | 3.2(0.93) | 3.2(0.96) | 0.66 |
| Total (MOS =25) | 20.0(3.24) | 20.1(3.16) | 0.69 |
| *MOS=Maximum Obtainable Score* | | | |

## SDC 6

## Dual HIV/Syphilis Testing Study

## Patient Questionnaire

1. **Name of clinic:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. **Study number \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
2. **Date (day/month/year):** \_\_\_\_\_\_\_/\_\_\_\_\_\_/\_\_\_\_\_\_\_\_\_\_\_\_
3. **Age or Date of birth (day/month/year):** \_\_\_\_\_\_/\_\_\_\_\_\_/\_\_\_\_\_\_\_\_ ( \_\_\_\_\_ Years)
4. **Duration of gestation:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ weeks
5. **How long did it take for you to get to the clinic from home?** \_\_\_\_\_\_\_\_\_\_ hours

***(Please make an “X” on the number of the chosen answer)***

1. **If we had a rapid test kit that could test for HIV and syphilis at the same time (dual test) and two single tests to separately test HIV and syphilis, which one would you prefer?**

**□** Dual (Jump to Question 8) **□** Single **□** Don’t know/don’t care

* 1. **If you prefer single test, why?**

**□** Don’t want be tested for HIV **□** Don’t want to be tested for syphilis

**□** Other (please describe):\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. **If a rapid test is available at this clinic, would you be willing to wait for the results:**

**□** Yes **□** No

* 1. **If yes, how long would you be willing to wait?**

**□** 30 min. **□** 1 hour **□** 2 hours

**SDC 7**

## Operational Characteristics of Dual RDTs

Name of test: **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Manufacturer: **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Survey date (day/month/year):**\_\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_\_\_\_\_\_**

Name of staff:**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

|  |  |  |
| --- | --- | --- |
|  | **Choice** | **Score** |
| 1. **Clarity of kit instructions** |  |  |
| * Difficult to follow |  | 0 |
| * Fairly clear |  | 1 |
| * Very clear |  | 2 |
| * Excellent |  | 3 |
| 1. **Ease of use** |  |  |
| * Complicated |  | 0 |
| * Fairly easy |  | 1 |
| * Very easy |  | 2 |
| * Excellent |  | 3 |
| 1. **Ease of control of reading window time** |  |  |
| * Difficult |  | 0 |
| * Fairly easy |  | 1 |
| * Very easy |  | 2 |
| 1. **Ease of interpretation of results** |  |  |
| * Difficult |  | 0 |
| * Fairly easy |  | 1 |
| * Very easy |  | 2 |
| * Unambiguous |  | 3 |
| 1. **Rapidity of test results** |  |  |
| * >30 minutes |  | 0 |
| * 20-30 minutes |  | 1 |
| * <20 minutes |  | 2 |
| 1. **Hands-on time** |  |  |
| * >10 minutes |  | 0 |
| * 5-10 minutes |  | 1 |
| * <5 minutes |  | 2 |
| 1. **Training time required** |  |  |
| * >2 hour |  | 0 |
| * 1-2 hours |  | 1 |
| * 30-59 minutes |  | 2 |
| * <30 minutes |  | 3 |