Appendix 1: Health Care classification in Uganda

1. Health Center (HC) II is the lowest level of service delivery. It is located at parish level. It forms the first contact with the formal health sector for the community. It provides Primary Health Care (PHC) and outpatient clinical services to about 5,000 people. It has no inpatient and laboratory services and is headed by a nurse.

2. Health Center (HC) III is located in the sub-Counties, provides PHC, laboratory, clinical outpatient as well as maternity services. Its catchment population is 20,000 people. It is a referral facility for the community and HC II.

3. Health Center (HC) IV is located at the county level or sub-district level and covers a population of 100,000 people. It provides PHC, clinical, maternity, laboratory, blood transfusion and emergency surgery services. It is a referral facility for the community, HC II and III.

Appendix 2: Method for computing confidence

Let $X$ and $Y$ be independent binomial variates based on the sample sizes $m_1$ and $n_1$ and parameters $p_1$ and $p_2$, respectively. Let the \( \theta = p_1 / p_2 \). We computed the prevalence ratio confidence intervals using the Katz et al (1978) method as follows

Letting $T = (X/m)/(Y/n)$, then the random variable $\ln(T)$ is approximately normally distributed with approximate mean $\ln(\theta)$ and estimated variance

\[
\hat{\sigma}^2 = ((1/x) - (1/m)) + ((1/y) - (1/n)).
\]

the approximate two sided $1 - \alpha/2$ confidence interval for $\theta$ is given by

\[
\{ t * \exp(-Z_{1-\alpha/2}) * \hat{\sigma}, t * \exp(Z_{1-\alpha/2}) * \hat{\sigma} \},
\]
where $Z_{1-\alpha/2}$ is the $1 - \alpha/2$ percentile of the standard normal distribution, and $t$ is the observed value of $T$. 
## Appendix 3: Prevalence of ever testing for HIV by testing venue

| Characteristic                          | Overall | HIV test taken in |         |         |
|-----------------------------------------|---------|-------------------|---------|---------|
|                                         | N       | Health Facility   | Community |         |
|                                         |         | n | Weighted percentage | n | Weighted percentage |
| Total                                   | 11,685  | 8,978 | 77.1 | 2,707 | 22.9 |
| Gender                                  |         |         |         |         |
| Male                                    | 4,038   | 2,582 | 64.2 | 1,456 | 35.8 |
| Female                                  | 7,647   | 6,396 | 84.0 | 1,251 | 16.0 |
| Age                                     |         |         |         |         |
| 15-19                                   | 1,498   | 953   | 65.1 | 545   | 34.1 |
| 20-29                                   | 4,789   | 3,894 | 81.2 | 895   | 18.8 |
| 30-39                                   | 3,422   | 2,716 | 79.6 | 706   | 20.5 |
| 40-49                                   | 1,976   | 1,415 | 71.7 | 561   | 28.3 |
| Education Level                         |         |         |         |         |
| No Education                            | 1,216   | 1,007 | 82.3 | 209   | 17.7 |
| Primary                                 | 6,406   | 5,003 | 78.3 | 1,403 | 21.7 |
| Secondary+                              | 4,063   | 2,968 | 73.7 | 1,095 | 26.3 |
| Marital status                          |         |         |         |         |
| Never married                           | 2,159   | 1,301 | 61.4 | 858   | 14.5 |
| Married/Cohabiting                      | 8,169   | 6,609 | 80.8 | 1,560 | 19.2 |
| Previously married                      | 1,357   | 1,068 | 79.8 | 289   | 20.2 |
| Number of sexual partners in last 12 months |         |         |         |         |
| 0                                       | 1,957   | 1,252 | 65.4 | 705   | 34.6 |
| 1                                       | 8,649   | 6,980 | 80.6 | 1,669 | 19.4 |
| 2+                                      | 1,079   | 746   | 69.9 | 333   | 30.0 |
| Currently working                       |         |         |         |         |
| No                                      | 2,894   | 2,219 | 77.5 | 675   | 22.5 |
| Yes                                     | 8,791   | 6,759 | 77.0 | 2,032 | 23.0 |
| Distance to nearest HF                  |         |         |         |         |
| <2                                      | 2,441   | 1,920 | 78.9 | 521   | 21.1 |
| 2-5                                     | 4,823   | 3,696 | 77.0 | 1,127 | 23.0 |
| 5+                                      | 4,009   | 3,040 | 76.0 | 969   | 24.0 |
| Don’t Know                              | 412     | 322   | 77.0 | 90    | 23.0 |
| Area of residence                       |         |         |         |         |
| Rural                                   | 8,870   | 6,845 | 77.2 | 2,025 | 22.8 |
| Urban                                   | 2,815   | 2,133 | 76.7 | 682   | 23.4 |
| Region                                  |         |         |         |         |
| Central 1                               | 1,151   | 889   | 77.2 | 262   | 22.8 |
| Central 2                               | 1,177   | 861   | 72.4 | 316   | 27.6 |
| Kampala                                 | 1,464   | 1,068 | 72.2 | 396   | 27.8 |
| East Central                            | 1,013   | 722   | 72.5 | 291   | 27.5 |
| Mid-Eastern                             | 901     | 732   | 81.0 | 169   | 19.0 |
| North East                              | 1,134   | 875   | 75.4 | 259   | 24.6 |
| West Nile                               | 1,220   | 896   | 72.8 | 324   | 27.2 |
| Mid Northern                            | 1,394   | 1,107 | 79.4 | 287   | 20.6 |
| South Western                           | 1,024   | 853   | 83.6 | 171   | 16.4 |
| Mid-Western                             | 1,207   | 975   | 80.5 | 232   | 19.5 |
**Note: Coverage proportions are weighted using population survey weights**

**Appendix 4: Factors associated with HIV positive among those tested in the 12 months preceding the survey**

| Characteristic                        | cOR  | (95% CI) | aOR  | (95% CI) | Overall Test in Health facility | Tested in Community |
|---------------------------------------|------|----------|------|----------|---------------------------------|--------------------|
| **Gender (Reference group: Male)**    |      |          |      |          |                                 |                    |
| Female                                | 1.05 | (0.85, 1.29) | 1.16 | (0.92, 1.47) | 1.00 (0.77, 1.29)*              | 1.76 (1.00, 3.10)* |
| **Age (Reference group: 20-29)**     |      |          |      |          |                                 |                    |
| 15-19                                 | 0.67 | (0.45, 0.99)* | 0.59 | (0.40, 0.88)* | 0.68 (0.45, 1.03)               | 0.34 (0.12, 0.96)* |
| 30-39                                 | 1.78 | (1.43, 2.22)* | 1.56 | (1.25, 1.94)* | 1.66 (1.31, 2.10)*              | 1.03 (0.59, 1.80)  |
| 40-49                                 | 2.45 | (1.88, 3.19)* | 1.96 | (1.51, 2.55)* | 2.09 (1.58, 2.77)*              | 1.49 (0.82, 2.71)  |
| **Education Level** (Reference Group: Primary) |      |          |      |          |                                 |                    |
| No Education                          | 1.03 | (0.76, 1.40) | 0.82 | (0.61, 1.11) | 0.88 (0.64, 1.20)               | 0.60 (0.28, 1.37)  |
| Secondary                             | 0.59 | (0.48, 0.75)* | 0.66 | (0.52, 0.83)* | 0.61 (0.47, 0.78)*              | 0.93 (0.64, 1.61)  |
| **Marital status** (Reference Group: Married/Living together) |      |          |      |          |                                 |                    |
| Never married                         | 0.60 | (0.43, 0.85)* | 0.74 | (0.50, 1.11) | 0.85 (0.55, 1.31)               | 0.46 (0.19, 1.15)  |
| Previously married                    | 3.26 | (2.53, 4.19)* | 2.53 | (1.94, 3.28)* | 2.76 (2.08, 3.66)*              | 1.64 (0.88, 3.05)  |
| **Number of sexual partners in 12 months preceding survey** (Reference Group: 1) |      |          |      |          |                                 |                    |
| sig 10%                               | 0    | 1.89 (1.46, 2.46)* | 1.93 | (1.00, 1.75) | 1.39 (1.02, 1.90)*              | 1.28 (0.63, 2.60)  |
|                                      | 2+   | 1.31 (0.94, 1.82) | 1.36 | (0.99, 1.88) | 1.15 (0.79, 1.67)               | 1.98 (1.05, 3.75)** |
| **Currently working** (Reference Group: Not employed) |      |          |      |          |                                 |                    |
| Employed                              | 1.21 | (0.96, 1.52) | 1.01 | (0.81, 1.25) | 1.01 (0.79, 1.29)               | 0.94 (0.54, 1.65)  |
| **Distance to nearest HF** (Reference Group: <2Km) |      |          |      |          |                                 |                    |
| 2-5                                   | 0.72 | (0.55, 0.93)* |      |          |                                 |                    |
| 5+                                    | 1.07 | (0.82, 1.39) |      |          |                                 |                    |
| Don’t Know                            | 0.89 | (0.51, 1.56) |      |          |                                 |                    |
| **Area of residence** (Reference Group: Urban) |      |          |      |          |                                 |                    |
| Rural                                 | 0.80 | (0.63, 1.02) | 0.61 | (0.44, 0.85)* | 0.58 (0.41, 0.82)*              | 0.90 (0.39, 2.06)  |
| **Region (Reference Group: Central 1)** |      |          |      |          |                                 |                    |
| Central 2                             | 0.69 | (0.47, 1.03)** | 0.68 | (0.46, 1.00)** | 0.68 (0.45, 1.04)               | 0.66 (0.25, 1.71)  |
| Kampala                               | 0.66 | (0.43, 1.01)** | 0.54 | (0.33, 0.88)* | 0.51 (0.30, 0.87)*              | 0.75 (0.24, 2.38)  |
| East Central                          | 0.58 | (0.35, 0.97)* | 0.54 | (0.34, 0.86)* | 0.58 (0.36, 0.97)*              | 0.41 (0.15, 1.13)  |
| Mid-Eastern                           | 0.36 | (0.20, 0.64)* | 0.46 | (0.27, 0.78)* | 0.38 (0.21, 0.68)*              | 0.76 (0.30, 1.94)  |
| North East                            | 0.54 | (0.34, 0.85)* | 0.61 | (0.40, 0.94)* | 0.54 (0.34, 0.86)*              | 1.02 (0.44, 2.37)  |
| West Nile                             | 0.38 | (0.21, 0.68)* | 0.38 | (0.22, 0.65)* | 0.34 (0.19, 0.62)*              | 0.51 (0.19, 1.38)  |
| Mid Northern                          | 0.78 | (0.51, 1.19) | 0.74 | (0.48, 1.13) | 0.78 (0.50, 1.22)               | 0.36 (0.13, 1.01)  |
| South western                         | 0.86 | (0.56, 1.32) | 0.94 | (0.61, 1.45) | 0.87 (0.55, 1.38)               | 1.27 (0.49, 3.30)  |
| Mid-western                           | 0.72 | (0.46, 1.15) | 0.78 | (0.49, 1.22) | 0.75 (0.46, 1.22)               | 0.83 (0.31, 2.26)  |