|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Population | **All (regardless of SDC status)** | | | **Not in a Known Serodiscordant Couple** | | | **In a Known Serodiscordant Couple[[1]](#footnote-1)** | | | |
| **Scenario** | *Testing Frequency* | *Testing Uptake* | *PMTCT* | *CD4 ART eligibility* | *ART uptake (if tested & eligible)* | *% Virally Suppressed (among ppl on ART)* | *ART CD4 eligibility* | *ART uptake (if tested & eligible)* | *% Virally Suppressed*  *(if on ART)* | *% Reduction in unprotected sex* |
| **Baseline** | N/A | N/A | Option A, current | 350 | 40% | UG: 88%  SA: 85% | 350 | 40% | UG: 88%  SA: 85% | N/A |
| **HB-HCT Only[[2]](#footnote-2)**  **(Baseline 2)** | 3 years | 80% | Option A, current | 350 | 58.4%[[3]](#footnote-3) | UG: 88%  SA: 85% | 350 | 58.4%[[4]](#footnote-4) | UG: 88%  SA: 85% | 63% |
| **HB-HCT with immediate ART for SDC**  **(Main Analysis)** | 3 years | 80% | Option A, current | 350 | 58.4% | UG: 88%  SA: 85% | Any CD4 | 90% | UG: 88%  SA: 85% | 63% |

Limitations:

* We did not model increased rates of relationship dissolution in SDCs.
* We assumed the probability of each partner in a relationship getting tested for HIV was independent of the other partner getting tested.

We assume disclosure between partners occurs 100% of the time that both partners test.

1: HB-HCT Only (Baseline 2)

2: HB-HCT plus immediate ART for SDC

1. Serodiscordant couples will be identified from the perspective of the HIV-infected person who tests during an HB-HCT campaign: if their longest-running (primary) partnership is with an HIV-uninfected person, they will be considered in a “stable” serodiscordant couple. A person is in a “Known Serodiscordant Couple” if both members of the couple test during the HB-HCT round. We assume disclosure between partners occurs 100% of the time if both partners test.

   We assume that once a participant starts ART due to membership in an SDC, they do not stop ART if that relationship ends. Therefore, subsequent relationships do not matter. If this is not possible we will consider HIV-infected participants with any HIV uninfected partners to be in SDCs but will reduce uptake to some degree. [↑](#footnote-ref-1)
2. The HB-HCT campaigns will occur “on top of” the baseline ART initiation processes, not “instead of” – so people will continue to initiate ART in between testing campaigns.

   We choose to evaluate the SDC intervention in the context of the HB-HCT campaigns because without such widespread testing, only a very small proportion of serodiscordant couples are identified and thus are initiated on ART. The best estimates are that 5% of couples know their status and are mutually disclosed (Kenya AIS, 2007) or that about 16% would be mutually tested and disclosed if testing behavior were independent within the couple (based on national survey data about known status in men and women and disclosure rates). The only way to identify enough SDCs to have an impact will be through a model such as HB-HCT, which will also identify a lot of HIV infected individuals who are not in serodiscordant couples. [↑](#footnote-ref-2)
3. Product of % receiving CD4 (80.1%) and % of eligible accessing ART (73.1%) from Suthar et al, PLoS Med 2013. IMPORTANT: The denominator here is eligible persons, not the entire population. [↑](#footnote-ref-3)
4. In other words, in the HB-HCT only scenario, known SDCs get the same ART access and uptake as other participants. They don’t have earlier access to ART, but they do have a reduction in unprotected sex acts due to finding out they are SDC. [↑](#footnote-ref-4)