**Table S1:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Parameter** | **Description** | **T&T** | | **Universal Access** |
| π | Rate of joining the sexually active population | 582,000 yr--1 | | |
|  | Probability of a sexually active, HIV-negative individual surviving 50 years or more | 70% | | |
|  | Mean duration of primary infection | 2 months | | |
|  | Mean duration of chronic infection | 7.3 years | | |
|  | Mean duration of symptomatic infection | 3.5 years | | |
|  | Probability of interrupting treatment per year | 2% | | |
|  | Per capita treatment rate during primary infection | 1.0 yr-1 | | 0 yr-1 |
|  | Per capita treatment rate during chronic infection  (>350 cells/μL) | 1.0 yr-1 | | 0 yr-1 |
|  | Per capita treatment rate during symptomatic infection (<350 cells/μL) | 1.0 yr-1 | | |
|  | Mean duration of treatment in stage A1 | 2 months | | |
|  | Mean life-years gained through early treatment versus treatment at 350 cells/μL | 6 years | | |
|  | Probability of gaining more than 20 years of additional life, if treatment is initiated at 350 cells/μL | 62% | | |
|  | Mean duration of primary infection if infected with resistant strain | 2 months | | |
|  | Mean duration of chronic infection if infected with resistant strain |  | |  |
|  | Probability of gaining more than 20 years of additional life, if treatment is initiated at 350 cells/μL and individual is infected with resistant strain |  | | |
|  | Transmission rate: primary infection | 0.51 yr-1 | | |
|  | Transmission rate: chronic infection | 0.11 yr-1 | | |
|  | Transmission rate: symptomatic infection | 0.15 yr-1 | | |
|  | Reduction in infectivity due to treatment | 85%-96% | | |
|  | Transmission rate: treatment stage A1 |  | | |
|  | Transmission rate: treatment stage A2 |  | | |
|  | Transmission rate: treatment stage A3 |  | | |
|  | Rate of acquiring resistance in the treated population | 3% per year | | |
|  | Reduction in transmissibility of resistant strains | 50% | | |
|  | Transmission rate for resistant strains: stage R1 |  |  | |
|  | Transmission rate for resistant strains: stage R2 |  |  | |
|  | Transmission rate for resistant strains: stage R3 |  | | |