Table S1 Supplement: baseline value, range, and distribution of input parameters for multivariate sensitivity analysis

| Parameter | Value (Range) | Distribution | Source |
| --- | --- | --- | --- |
| HIV prevalence in California |  |  |  |
| HET | 1.0% (0.75–1.25%) | Normal | [[1](#_ENREF_1)] |
| IDU | 5.9% (4.0-10.2%) | Normal | [[2](#_ENREF_2)] |
| MSM | 19.1% (12.8–25.35%) | Normal | [[3](#_ENREF_3)] |
| Proportion of diagnosed HIV-infected persons who are linked to care | 77% (60-85%) | Normal | [[4](#_ENREF_4)] |
| Proportion of HIV-infected persons linked to care who are retained in care | 66% (50-80%) | Normal | [[4](#_ENREF_4)] |
| Proportion of HIV-infected persons, retained in care, who have started ART | 88% (70-90%) | Normal | [[4](#_ENREF_4)] |
| Proportion of HIV-infected persons who started ART who are adherent to ART (i.e., achieve viral load suppression) | 77% (60-85%) | Normal | [[4](#_ENREF_4)] |
| HIV transmission probability per unprotected act |  |  |  |
| Vaginal receptive | 0.08% (0.06–0.11%) | Normal | [[5](#_ENREF_5)] |
| Vaginal insertive | 0.04% (0.01–0.14%) | Normal | [[5](#_ENREF_5)] |
| Anal receptive | 1.40% (0.2–2.5%) | Normal | [[6](#_ENREF_6),[7](#_ENREF_7)] |
| Anal insertive | 0.70% (0-1.3%) | Normal | [[6](#_ENREF_6),[7](#_ENREF_7)] |
| Contaminated needle sharing | 0.30 (0.24%-0.65%) | Normal | [[8](#_ENREF_8)] |
| Annual number of sexual partners |  |  |  |
| HET | 1.21 (1-20) | Lognormal | [[9](#_ENREF_9)] |
| IDU | 3 (1-20) | Lognormal | [[10](#_ENREF_10)] |
| MSM | 3.5 (1-20) | Lognormal | [[11](#_ENREF_11)] |
| Annual number of sex acts (all partners) |  |  | [[12](#_ENREF_12)] |
| HET | 70 (26-365) | Lognormal | [[13-15](#_ENREF_13)] |
| IDU | 70 (26-365) | Lognormal | [[13-15](#_ENREF_13)] |
| MSM | 70 (26-365) | Lognormal | [[13-15](#_ENREF_13)] |
| Annual number of intravenous injections (all partners) | 200 (100-300) | Lognormal | [[16](#_ENREF_16),[17](#_ENREF_17)] |
| Proportion of protected sex acts for undiagnosed HIV-infected individuals and uninfected individuals who do not participate in risk reduction |  |  |  |
| HET | 20% (10-50%) | Normal | [[18](#_ENREF_18)] |
| IDU | 20% (10-50%) | Normal | [[18](#_ENREF_18)] |
| MSM | 55% (40-80%) | Normal | [[19](#_ENREF_19)] |
| Proportion of needle sharing acts among all injections for IDU who do not receive any prevention interventions | 15% (5-25%) | Normal | [[20](#_ENREF_20),[21](#_ENREF_21)] |
| Proportion of new diagnoses among positives notified of test results | 60% (40-80%) | Normal | [[20](#_ENREF_20),[22](#_ENREF_22)] |
| Reduction in unprotected sex acts for aware HIV-infected individuals compared with unaware | 53% (45-60%) | Normal | [[23](#_ENREF_23)] |
| Intervention effect size of HIV education and risk reduction for positive clients | 27% (0-40%) | Normal | [[24-28](#_ENREF_24)] |
| Intervention effect size of HIV education and risk reduction for negative clients | 12% (0-20%) | Normal | [[29-31](#_ENREF_29)] |
| Condom efficacy for per-act transmission | 80% (65–95%) | Normal | [[32](#_ENREF_32)] |
| Reduction in per-act transmissibility for HIV-infected individuals who achieve viral load suppression | 96% (50-100%) | Normal | [[33-37](#_ENREF_33)] |
| Reduction in needle sharing infectivity for infected IDU who achieve viral load suppression | 50% (0-90%) | Normal | [[38](#_ENREF_38)] |
| HIV lifetime treatment cost (2009 $) | 367,134 (184,000-550,000) | Normal | [[39](#_ENREF_39)] |

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