Supplementary Table 1: Parameter values used in the stochastic individual-based simulations for the EMC (Erasmus MC) and ICL (Imperial College London) models of hookworm transmission.

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| Parameter | EMC | ICL |
| Human demography | Demographic data quantified for sub-Saharan Africa 2000 United Nations Population Division (1) | Demographic data taken from 2003 Kenya Demographic and Health Surveys (2) |
| Aggregation of parasites in host kw | 0.35 (3) | 0.35 (3) |
| Variation in exposure and contribution to the environmental reservoir by age | Relative exposure and contribution to the reservoir both increase linearly from 0 to 1 between ages 0–10 and is stable thereafter with no difference between males and females (4, 5) | Relative exposure and contribution to the reservoir are assumed to be equal in all age groups based on fitting the model to prevalence and infection intensity data from the TUMIKIA and DeWorm3 studies (6) |
| Average worm lifespan | 3 years (7-9) | 2 years (10) |
| Variation in worm lifespan | Weibull distribution with shape 2, i.e. the mortality rate is zero at age zero and then increases linearly with worm age (4) | Exponential distribution, i.e. the mortality rate is constant and independent of worm age |
| Pre-patent period | 7 weeks (5, 7, 8, 11) | No pre-patent period used |
| Age-dependent reproductive capacity of the worm in the human host | Constant over age (assumption) | Constant over age (assumption) |
| Female worm fecundity | Density-dependent on total number of female worms in host, assuming hyperbolic saturation (4)  On average 8.3 eggs per female worm per 41.7 mg sample of faeces (200 epg per female worm, as previously reported based on association between number of expulsed adult female worms and egg counts based on Kato-Katz (12)). The average maximum total host output is assumed to be 62.5 eggs per 41.7 mg faeces (1500 epg, as previously assumed (4)) | Density-dependent on total number of female worms in host, assuming exponential saturation. Exponential model of saturation with parameter γ = 0.02 (13)  On average 3 eggs per female worm per 41.7 mg sample of faeces (72 epg per female worm, as previously reported based on association between number of expulsed adult female worms and egg counts based on Kato-Katz (12)) |
| Survival of infective material in the central reservoir | Exponential survival (assumption)  Average lifespan of two weeks, implemented as a monthly survival probability of exp(-26/12)=11.5% (95%-CI: 0.05–7.38 weeks under assumption of exponential survival), based on the notion that average survival time is in the order of weeks (5, 11, 14) | Exponential survival (assumption)  Average lifespan of 30 days (10) |
| Proportion of adult worms killed by single dose of albendazole (400 mg) | 0.95 (15) | 0.95 (15) |
| Variability in measured host load of infective material (eggs per examined sample of faeces) kegg | Kato-Katz: negative binomial distribution with aggregation parameter k=0.35, estimated separately from repeated individual-level egg count data from Uganda (16) | Kato-Katz: negative binomial distribution with aggregation parameter k=0.35, estimated from unpublished triple egg count data from Tamil Nadu, India |
| Cut-offs for no, light, moderate, and heavy infection | 1, 2000, and 4000 epg (17) | 1, 2000, and 4000 epg (17) |

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