Model checks

1. Setting growth rate (epsilon) to 0 -> N doesn’t change over time
2. Setting zetas to 0, no one on PrEP
3. Setting transmission rate to 0 -> no infected ever
4. Setting sex acts to 0 -> no infected ever
5. Setting condom use + condom efficacy to 1 -> no infected ever
6. Setting prep use + prep eff to 1 -> no infected ever
7. Set factor for transmission rate (R) to 0 -> no infected ever
8. Set psis to 0 -> S1a and S1b accumulate faster
9. Set gamma01 and gamma11 to 0 -> no I02
10. Set gamma 02 to 0 -> no I03
11. Same as above up to I05
12. Set tau01, tau11 and tau2 to 0 -> no I22
13. Set gamma22, tau3 to 0 -> no I23… all the way to I25
14. Set rho2 to 0-> no I32
15. Set rho3, gamma 32 to 0 -> no I33… all the way to I35
16. Set phi2 to 0 -> no I42
17. Set phi3, gamma42 to 0 -> no I43… all the way to I45
18. Set beta for m->f

Fitting to data