Things to test out one at a time/in combination:

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|  | **France** | **Thailand** |
| **Likelihood** |  |  |
| Downweight |  | Downweighting by 1/8 (with trate times removed) didn’t help |
| Remove different likelihoods | Removed incidence and prevalence – fixes it; only totals helps | Removing everything except incidence, prevalence, population, and total mortality didn’t help (means these aren’t the problem)  Removing only incidence and prevalence FIXES it – it definitely has to do with transmission (not population or cascade) |
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| **Prior** |  |  |
| Remove trate times | Didn’t help alone | Didn’t help alone |
| Widen/tighten priors | Didn’t help alone |  |
|  |  |  |
| **Roll back parameter sections** |  |  |
| Transmission multipliers |  | Trying this with all likelihoods back but downweighted (1/8); trate times still removed – definitely doesn’t help |
| Testing | Helped, but doesn’t fully explain it (had to use totals for inc/prev) |  |
| Engagement | Didn’t help |  |
| Suppression | Didn’t help |  |
| Disengagement |  |  |
| Viral rebound |  |  |
| Pairing proportions | THIS FIXED IT ALONE (still 1/8 likelihood weight and no trate times though); rolled back to median starting values and all likelihoods included | THIS FIXED IT ALONE (still 1/8 likelihood weight and no trate times though) |
| Maternal-fetal risk |  |  |
| HIV mortality |  |  |
|  |  |  |
| **Starting values** |  |  |
|  | Tried using last params after running with Kenya testing model, total inc/prev, no awareness and no testing params but this didn’t work  Still using these starting values |  |