

**To:** [5.1.2e] [5.1.2e @rivm.nl]  
**Cc:** [5.1.2e] [5.1.2e @rivm.nl]  
**From:** [5.1.2e]  
**Sent:** Tue 3/9/2021 11:42:10 AM  
**Subject:** RE: updated model write-up  
**Received:** Tue 3/9/2021 11:42:10 AM  
[age\\_struct\\_model\\_write-up\\_v2.docx](#)

Hi [5.1.2e]

Thanks, looks very good.

Here are some suggestions and comments. See if you find it useful.

I noticed that the equation for the force of infection contains a division by population size. In this equation it is good to refer explicitly which age groups are involved, since you have an age group that causes the infection and another age group that is exposed. The question then is: should there be a division by population size. If so, is it total population size, or population size of the infecting age group or population size of the exposed age group. The right answer is determined by how you define beta and the matrix C. My best guess is that such a division is not necessary. Perhaps [5.1.2e] or [5.1.2e] can look into this, as they are using the same matrices C.

Best

[5.1.2e]

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**From:** [5.1.2e] <[5.1.2e @rivm.nl]>  
**Sent:** maandag 8 maart 2021 17:03  
**To:** [5.1.2e] <[5.1.2e @rivm.nl]>  
**Cc:** [5.1.2e] <[5.1.2e @rivm.nl]>  
**Subject:** updated model write-up

Hi [5.1.2e]

Attached is the updated model write-up with your suggestions included. I'd appreciate any feedback, particularly if you spot any errors!

Don - I've been working on a descriptive write-up of the model I've been using to generate the vaccine-related results. This includes the model equations, parameter values, assumptions, etc. If you have time, I'd appreciate a critical read through to spot any errors or odd parameter values. Also, as someone who isn't so intimately familiar with this model, if there is something lacking in the explanation that would make the description of the model clearer, please let me know.

Thanks!

[5.1.2e]