

General Comments

Summary of Section: You start with discussing your data; it has problems and you fixed it. Then you fit your model, it returns a point-estimate, you fit your second model and get another point estimate.

These sections get information across, but it's very terse. You make points but not elaborate on them (see in the notes). I get the point estimates for your parameters but I don't get any discussion. As a statistician, I don't particularly care that $R_0=1.0314$ without knowing if that's good, bad, etc. Also I'd like some discussion of uncertainty in these parameters, but I know that's tricky (although even if you can't give CIs, maybe talk about why you can't).

I think you need to reorder the paragraphs. If I'm reading your paper, starting with 4.1 will make me lose interest quickly. It's a quirk of the data and so needs addressing, but not in a position of importance. I'd rather start with 4.2 and 4.3 and then discuss 4.1 as a side note.

Specific Comments

- The first two sentences in 4.1 seem like scaffolding. They might have useful information, but the paragraph's importance only becomes clear in the third sentence starting "As mentioned earlier"
- Second paragraph of 4.1: "way higher" and "we just assume" is too informal
- You should be consistent with week and Epidemic week
- Figure 2 is too small to easily read. Also I have no idea what the colors are supposed to mean. Also, maybe refer to them by name rather than first and second
- Table 1: This should come after we've discussed the model fit. It's a pain to get \LaTeX to place things correctly, try this <http://www.tex.ac.uk/FAQ-figurehere.html>
- The sentence in the second paragraph of 4.1 just points to the figure. Maybe incorporate that into another sentence.
- The first paragraph of 4.2 doesn't flow well. It's a list of everything you've done, but there aren't connections or transitions between them. Maybe break it up to paragraphs and discuss why you make these

choices; why Nelder-Mead, why are squared error important? Why do we need different starting values?

- You talk about the drawback of the compartment model being that it's only exponential. Maybe talk more about this. Obviously this is a bad long-term model, but is it still useful anyways? Explain why this drawback shouldn't invalidate the entire analysis
- Consistency between CHIKV and Chikungunya.
- First paragraph of 4.3: the discussion of the multicountry SIR model was a long time ago; maybe move that closer to here instead of writing "given in (2)" necessitating flipping back
- Last paragraph of 4.3: You write "It is also noticeable that the peak is not capture very well by the model", this should probably be expanded upon. Why doesn't it capture the peak well? Why do we care about capturing the peak? You said it doesn't capture it well, can we quantify this?