The logic of the analyses

The VTH claims that an emerging disease should evolve to intermediate virulence to maximize the maximum pathogen fitness.

According to Acevedo 4 conditions are required;

* a positive non-linear relation between *pathogen replication and virulence*
* a non-linear increasing relationship between *pathogen replication and transmission*,
* a relationship between *virulence and transmission*,
* a relationship between *recovery and virulence*,
* A combination of these relationship leads to the evolution of an intermediate virulence
* Not mentioned by Acevedo, but implicit is that maximum pathogen fitness is reached for intermediate virulence.

The analyses I did are show test for all 4 condition. But I replace recovery by duration of infectious period. CAN YOU CALCULATE A VALUE FOR RECOVERY RATE – DO WE NEED TO

I then related each variable to fitness; and the data show the highest fitness for an intermediate virulence. Which is probably best explained by variation in duration of infectious period and does not require non-linear relationship in all other relationships. Note that CA09 has maximal fitness, although it has intermediate values for replication, virulence and transmission.

