Twitter Thread by M Gabriela M Gomes

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TWIMC: I've been Mathematician and Mother for ~30 years (now also Grandmother) and this is what matters. I spent the last 10 years studying individual variation on characteristics that are under selection but that have no heritability repercussions in the time scale under study.

In these studies I have "used" (please make a note of this word) primarily host-pathogen systems but my curiosity for completely different systems was particularly vivid last year and I was happily moving away from infectious diseases when the pandemic started.

Early in the Covid pandemic I started being approached by reporters who wanted to understand what was happening and what to expect over times to come. To respond to them I started studying the data and interpreting it in light of my models.

We were in March-April and kept hearing herd immunity thresholds around 60-80%. So as a matter of honesty I had to explain to my reporters that under the models I was using (which accounted for individual variation as that's what I do) HITs were much lower (10-20% in Europe).

In matter of days my life turned 180 degrees! All sorts of craziness from people challenging those numbers to going all the way to challenge me as a person and a suite of models that have nothing to oppose. When in fact neither me nor the models really care about what HITs are.

But I had to respond to the new challenges. I hoped that estimating those damn HITs would put things to rest and let me go back to my new research. To speed things and try to get this over with asap I contacted potential collaborators and we made a plan.

We released our results at the end of April and I was really hoping to return to my other research soon after. But we were challenged to do more which we could do as more data became available. This confirmed those low HITs that for some obscure reason so many seem to hate.

Things went a bit quiet over the northern summer, only to light-up again when the second waves started in Europe. I absolutely have to make clear that I have seen nothing in these second waves in Europe that disproves those low HITs. Not that I mind but that's what analyses say.

I also don't think that HIT is a useful concept to be discussing so much in isolation (as said above what made me even talk about it in the first place was to make reporters appreciate how different my model was from others that were in use back in March-April).

Hypothetically: 1) estimating HIT=20% in Europe does not contradict HIT=30% in Brazil; 2) estimating HIT=20% in summer does not contact HIT=30% in winter; 3) estimating HIT=30% does not preclude HIT=50% if a much more sensitive Ab test is used to calibrate the model.

Can we be constructive please. Many of us just want out of this mess and get on with more interesting research.