# How do pre-existing immunity and host factors interact to impact influenza vaccine response?

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# The relationship between fold increase and pre-vaccination immunity may be modified by vaccine dose and prior vaccination status.

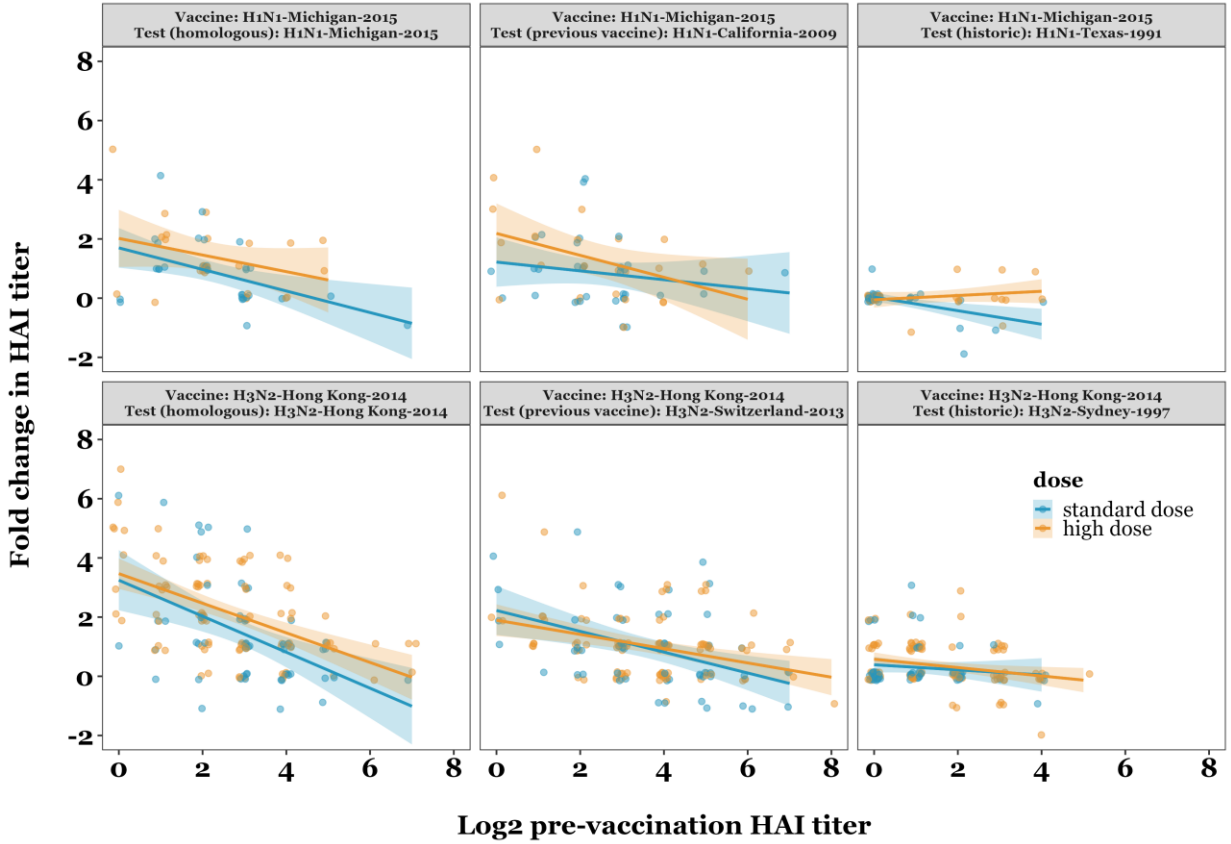


**Fig 1.** Mechanistic modeling predicts parallel slopes for different doses. But, when we stratify by dose, we rarely match the model predictions. More often see the regression lines cross. Only subjects aged 65 or older are shown.

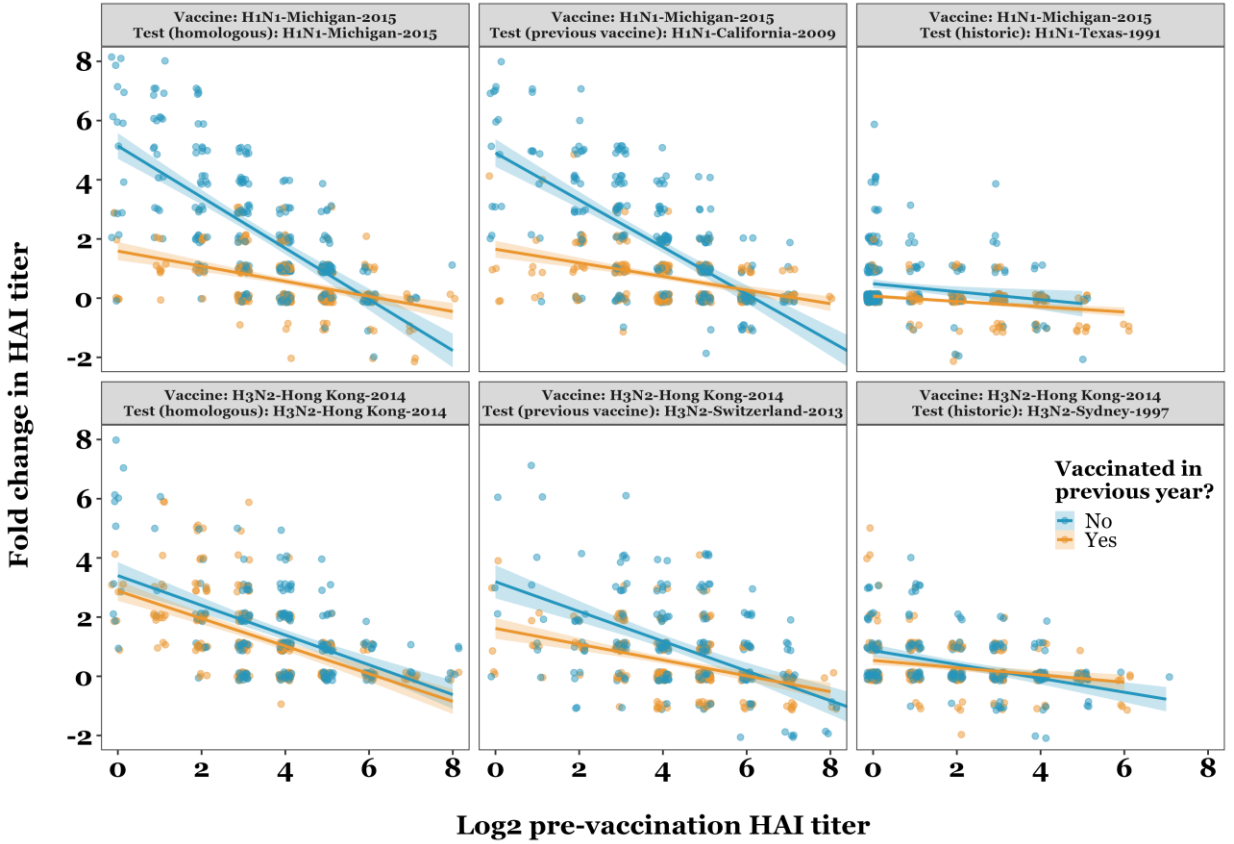


**Fig 2.** The model did not predict results based on prior vaccination, but we observed that prior vaccination did not explain all of the variation in the relationship between titer increase and pre-existing immunity. Patients were excluded when there was no information on prior vaccination.

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# Age also appears to be an important covariate, but the effect is likely different across influenza subtypes.

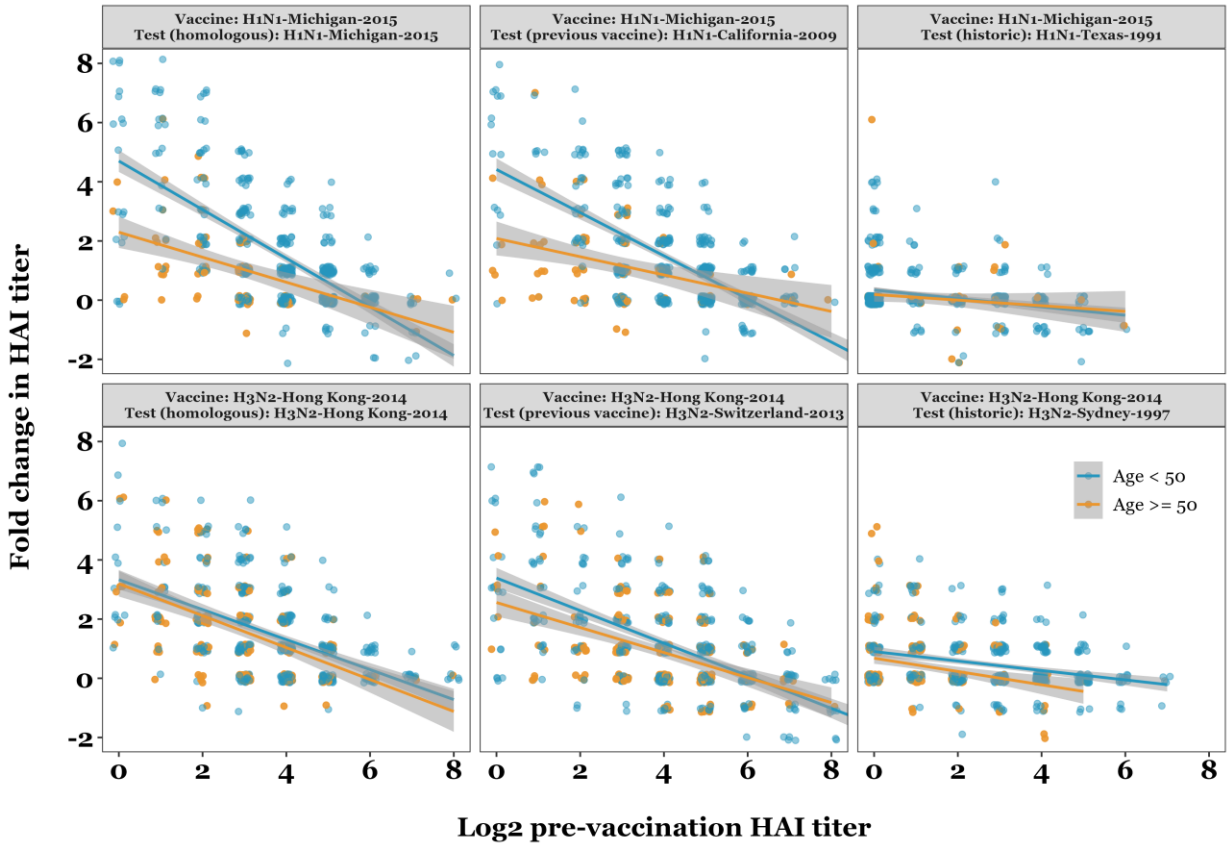


**Fig 3.** Age appears to be differentially distributed for influenza A vaccine response—this distribution appears to be different for the two subtypes, as well as within subtype. Only patients who received the standard dose vaccine are shown.

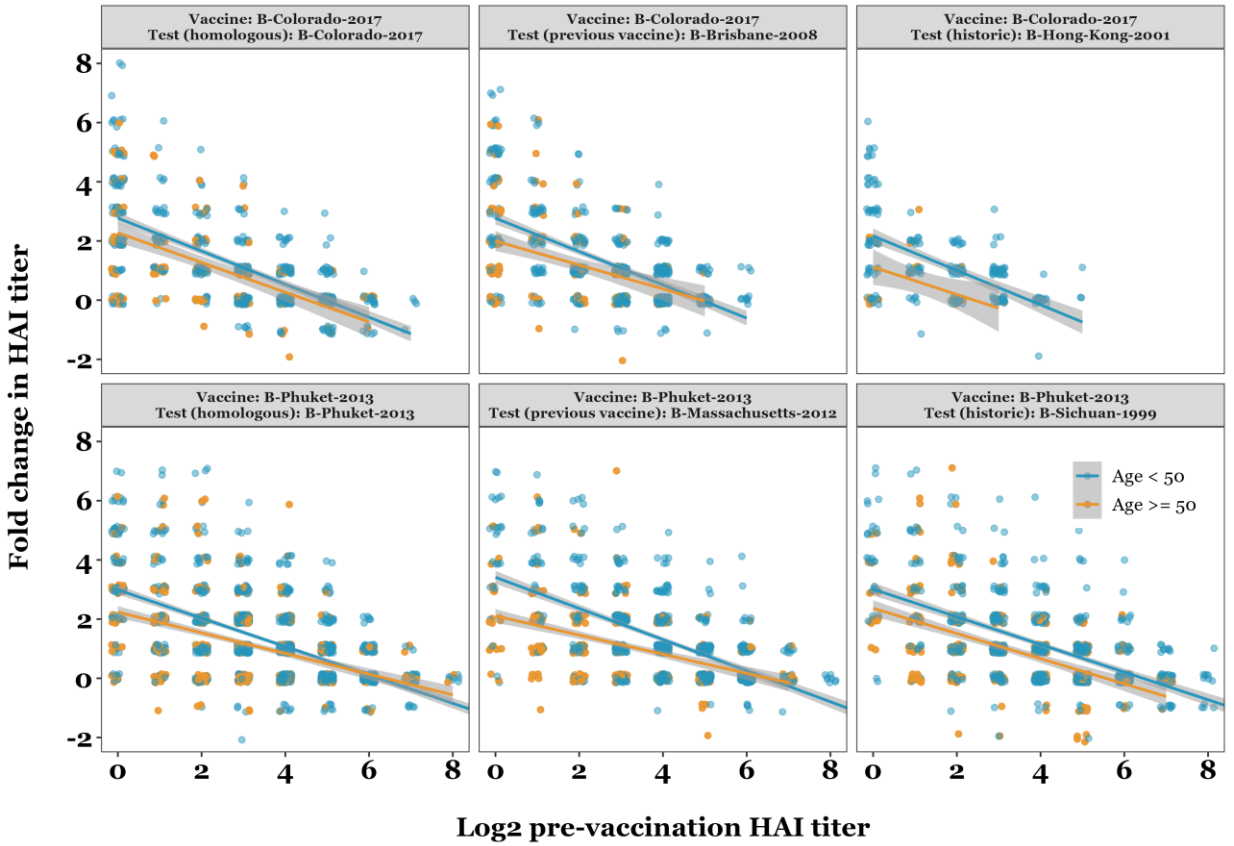


**Fig 4.** There appear to be similar qualitative trends when examining response to influenza B strains. However, there is not a lot of apparent difference between the two lineages. Only patients who received the standard dose vaccine are shown.

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