$$p(\text{infected} \mid \text{vaccinated}) < p(\text{infected} \mid \text{not vaccinated})$$

$$p(\text{infected} \mid \text{vaccinated}) < \mathbf{p(vaccinated \mid infected)}$$

✔ **mathematically** correct

p(infected | vaccinated) **<** p(infected | not vaccinated)

p(infected | vaccinated) **<** p(vaccinated | infected)