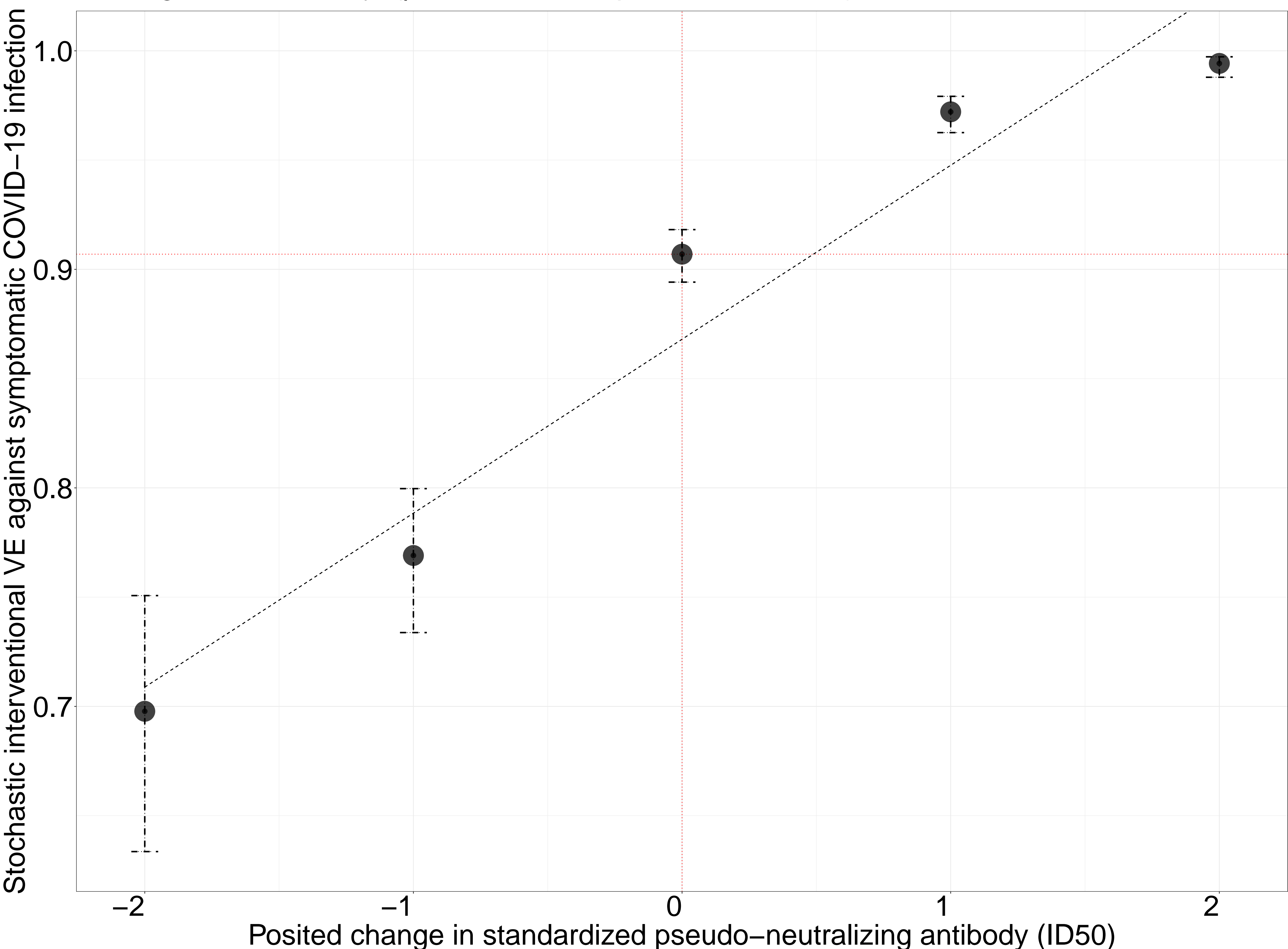


# Estimated vaccine efficacy v. symptomatic COVID-19 infection at Day 57

working MSM summary: ( $\hat{\beta}_{\text{TMLE}} = 0.0796$ , p-value = 0.3895)



Stochastic interventional vaccine efficacy v. COVID-19 infection across standardized shifts in pseudo-neutralizing antibody (ID50) levels, summarized by projection of causal dose-response curve on a linear working model.