Review of: "Measuring the efficacy of a vaccine during an epidemic"

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Potential competing interests: No potential competing interests to declare.

The topic prensented is of interested and possibly the claim is really true. However the argument made doesn't follow rigorous mathematicall argumentation and leaves room for doubt. The main points see below.

The first epsilon introduced on top of page two is not the same as the one later on that same page, not necessarily. That is rather confusing. It also is not made clear why eta is a proxy for epsilon. The description for Fig 1 is miisleading, as it says it is coming from equation 1 when it is really coming from equation 4. Also i doubt equation 4 altogether. Here we assume that s_P and s_V are 1 at the beginning, meaning that not the overall population is one. Therefore we need to make sure everything is adjusted accordingly. Do we assume that i is constant which would make sense for me. Then why do we need some i bar. If i is not constant equatioin 3 doesn't solve (2). The derivation under SIR model is not detailed enough to follow.