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 manuscript titled "Measuring the efficacy of a vaccine during an epidemic" has done an excellent job of revealing the strong underestimation of effectiveness measured during large cohorts' phase III clinical trials near the epidemic peak, even in the absence of confounding factors. The authors have also demonstrated that this underestimation increases with the fraction of infectious individuals present in the population during the experiment and with the severity of the epidemic, measured by its basic reproduction number. These findings have significant practical implications for guiding actual vaccination plans and evaluating their effectiveness.

The authors provide detailed research methods that enable readers to fully comprehend the design and implementation process of this study. Additionally, the authors use rigorous statistical methods to support their conclusions and present their data clearly. Furthermore, the authors make constructive suggestions for future work, which is crucial for further studying vaccine efficacy and improving its effectiveness.