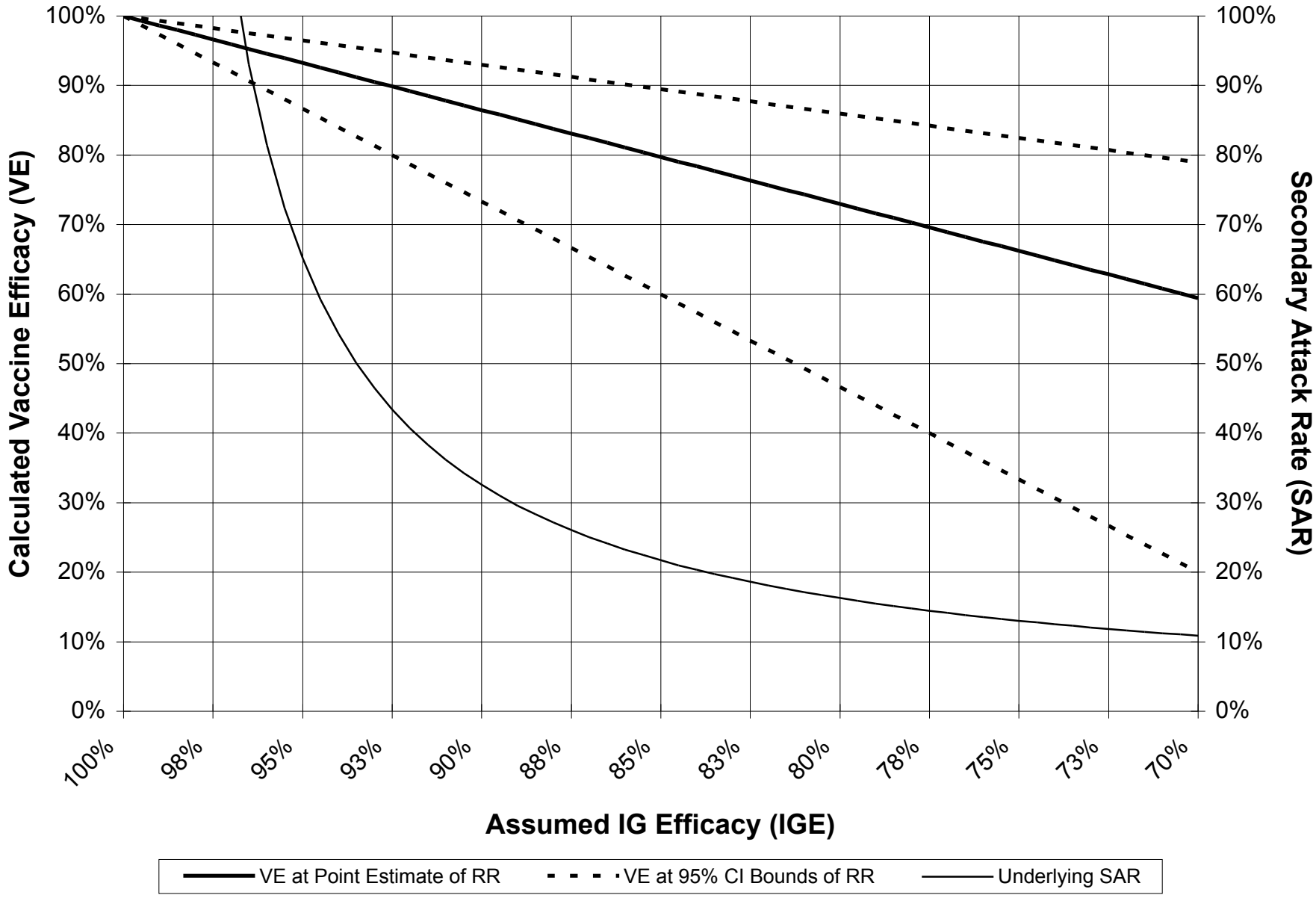
Supplementary Appendix

This appendix has been provided by the authors to give readers additional information about their work.

Supplement to: Victor JC, Monto AS, Surdina TY, et al. Hepatitis A vaccine versus immune globulin for postexposure prophylaxis. N Engl J Med 2007;357:1685-94. DOI: 10.1056/NEJMoa070546.


Calculated Vaccine Efficacy (VE)
Secondary Attack Rate (SAR)
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
100%
98%
95%
93%
90%
88%
85%
83%
80%
78%
75%
73%
70%
Assumed IG Efficacy (IGE)
VE at Point Estimate of RR
VE at 95% CI Bounds of RR
Underlying SAR

Supplementary Appendix Figure. Inferred absolute efficacy of hepatitis A vaccine for postexposure prophylaxis for any assumed efficacy of IG.

Curves were calculated for assumed values of IG efficacy based on the observed point estimate (or two-sided 95 percent confidence bounds) of the relative risk of the occurrence of the primary study endpoint among hepatitis A vaccine versus IG recipients included in the per-protocol analysis, using the following formulas:

$$VE_{\text{point estimate}} = 1-[RR_{\text{point estimate}} \times (1-IGE_{\text{assumed}})]$$

$$VE_{\text{95\% CI lower bound}} = 1-[RR_{\text{95\% CI upper bound}} \times (1-IGE_{\text{assumed}})]$$

$$VE_{\text{95\% CI upper bound}} = 1-[RR_{\text{95\% CI lower bound}} \times (1-IGE_{\text{assumed}})],$$

where VE = inferred vaccine efficacy, RR = observed relative risk, IGE = assumed IG efficacy and CI = confidence interval. The above formulas assume that the underlying secondary attack rates (SAR) in each group were equal. Formulas were derived by solving standard formulas for efficacy [VE=1-RR (or IGE=1-RR), where RR=attack rate in vaccine (or IG) group/SAR] for the SAR, setting formulas equal to each other and simplifying.

The curve for the underlying SAR was calculated by inserting an assumed IG efficacy value and the observed attack rate in the IG group (3.3%) into the standard formula for calculating efficacy (IGE=1- attack rate in the IG group/SAR) and solving for the SAR.