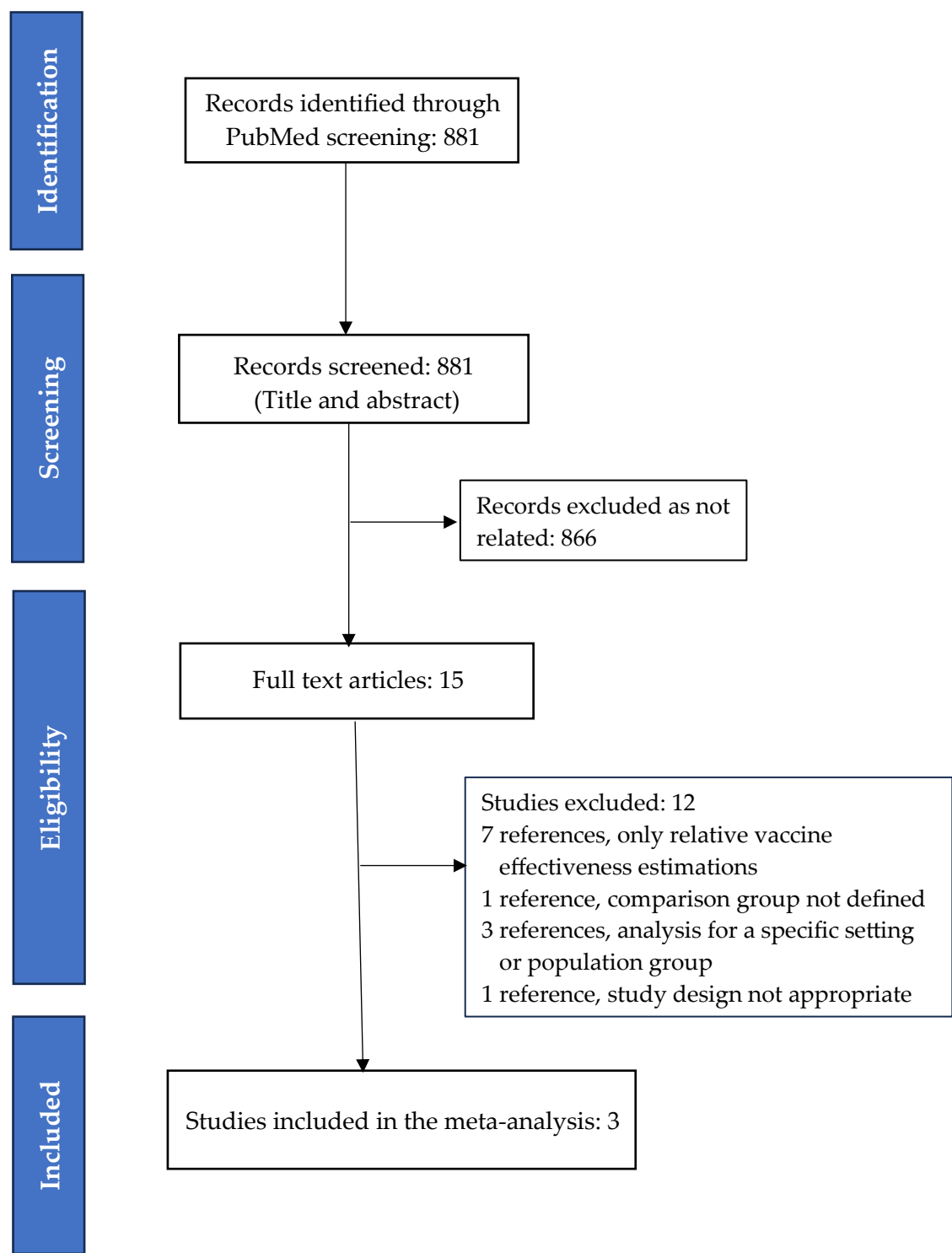
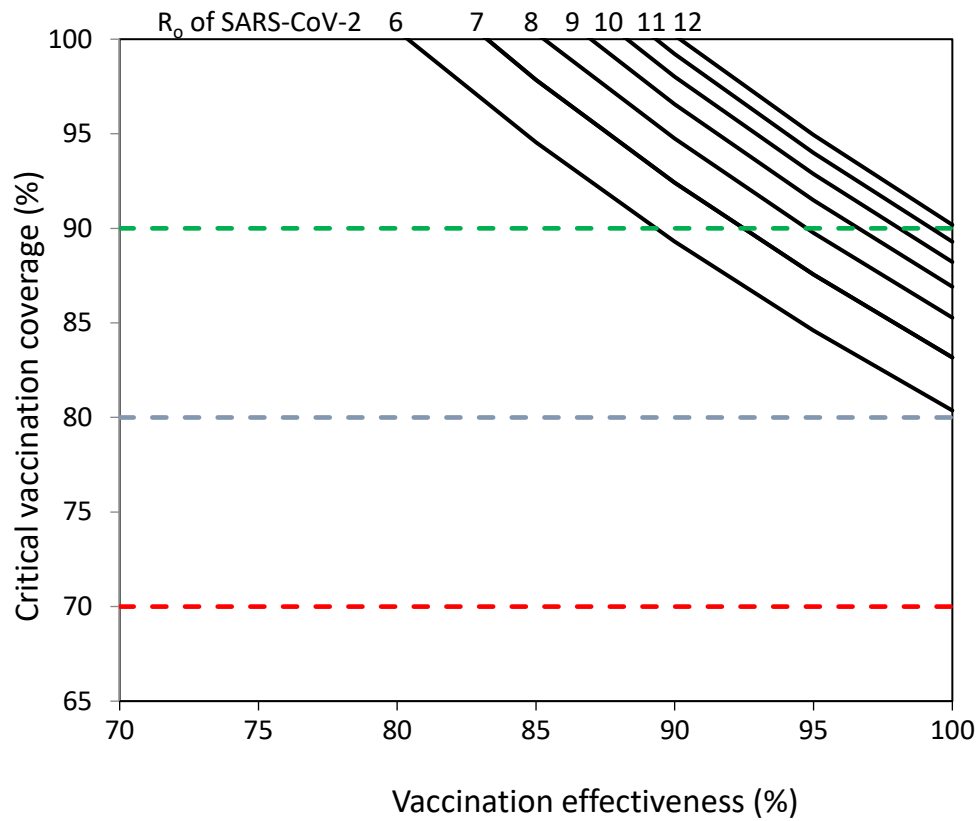


Supplementary material

Supplementary Figure S1. Prisma flow diagram



Supplement Figure S2. Vaccination coverage (%) required to establish herd immunity against SARS-CoV-2 with reproductive numbers (R_0) from 6 to 12 by effectiveness (%) for adapted vaccines using face masks to reduce viral transmissibility by 15.1%. Objectives of vaccination coverage of 70%, 80% and 90% indicated by dashed red, blue and green lines, respectively



Supplement Figure S3. Vaccination coverage (%) required to establish herd immunity against SARS-CoV-2 with reproductive numbers (R_0) from 6 to 12 by effectiveness (%) for adapted vaccines using face masks, social distancing and travel restrictions to reduce viral transmissibility by 54.3%. Objectives of vaccination coverage of 70%, 80% and 90% indicated by dashed red, blue and green lines, respectively

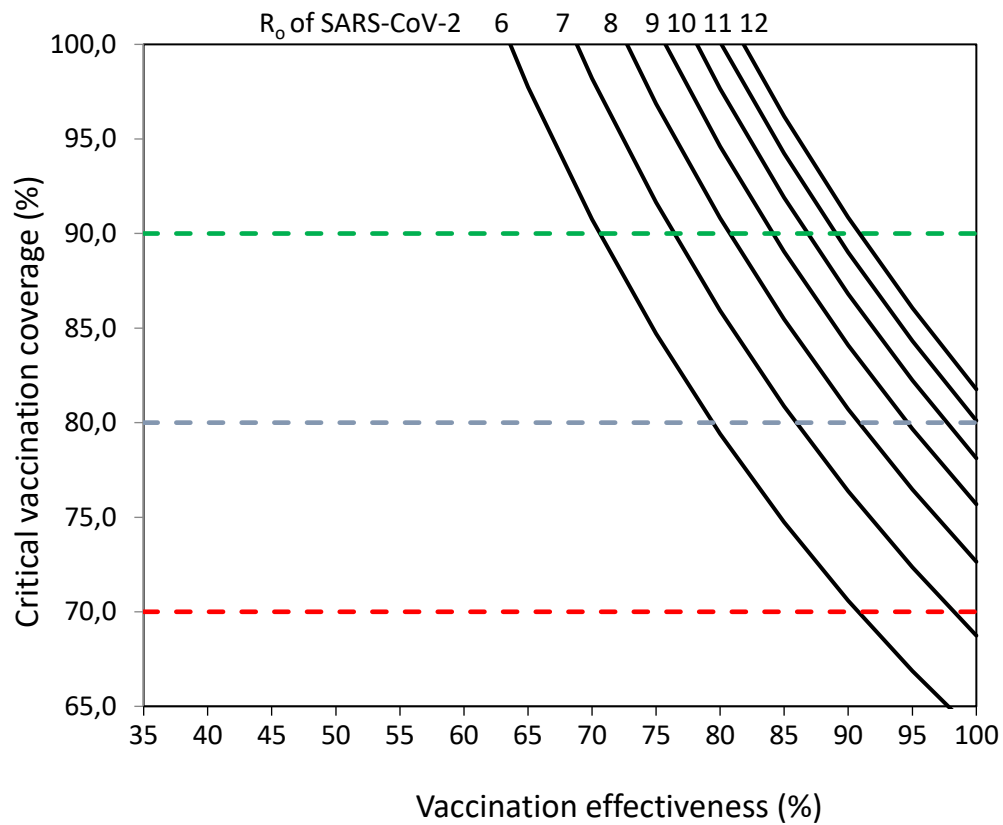
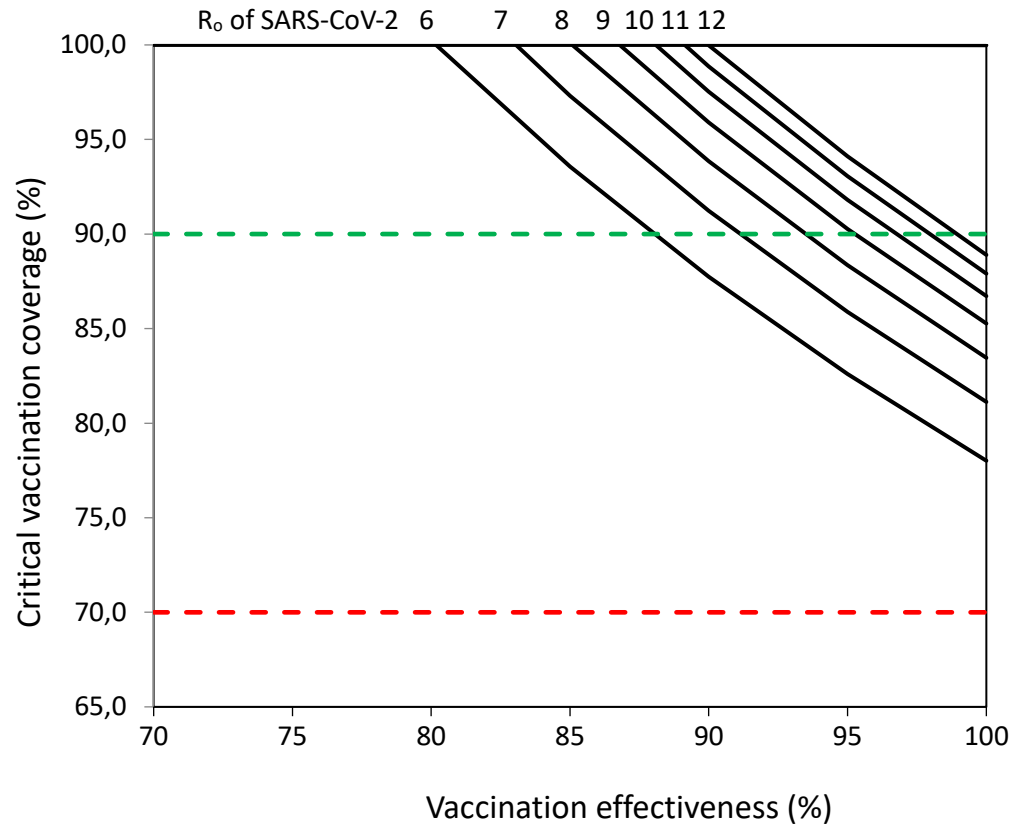


Figure 1 is a line graph titled "R₀ of SARS-CoV-2" showing the relationship between vaccination effectiveness and critical vaccination coverage for different R₀ values. The x-axis is "Vaccination effectiveness (%)" ranging from 70 to 100. The y-axis is "Critical vaccination coverage (%)" ranging from 65.0 to 100.0. A horizontal dashed green line is at 90.0% and a horizontal dashed red line is at 70.0%. Seven curves are plotted for R₀ values of 6, 7, 8, 9, 10, 11, and 12. The curves show that as R₀ increases, the required critical vaccination coverage also increases for any given effectiveness level.

Vaccination effectiveness (%)	R ₀ 6	R ₀ 7	R ₀ 8	R ₀ 9	R ₀ 10	R ₀ 11	R ₀ 12
70	100.0	100.0	100.0	100.0	100.0	100.0	100.0
75	100.0	100.0	100.0	100.0	100.0	100.0	100.0
80	100.0	100.0	100.0	100.0	100.0	100.0	100.0
85	100.0	100.0	98.0	99.0	100.0	100.0	100.0
90	98.0	99.0	96.0	97.0	98.0	99.0	100.0
95	94.0	96.0	92.0	94.0	96.0	97.0	98.0
100	88.0	91.0	85.0	88.0	91.0	94.0	97.0



Supplement Figure S5. Vaccination coverage (%) required to establish herd immunity against SARS-CoV-2 with reproductive numbers (R_0) from 6 to 12 by effectiveness (%) for adapted vaccines using face masks, social distancing and travel restrictions to reduce viral transmissibility by 54.3%. With 10% prevalence of protected individuals in the population. Objectives of vaccination coverage of 70%, 80% and 90% indicated by dashed red, blue and green lines, respectively

