Supplementary figure legends

Figure S1. A PRISMA flow diagram of the search methods on the Delta variant

Figure S2. Influential analysis of the proportion of asymptomatic infection in COVID-19 Omicron patients

Figure S3. Funnel plot based on the proportion of asymptomatic infection in COVID-19 Omicron patients for evaluation of publication bias

Figure S4. Begg's test based on the proportion of asymptomatic infection in COVID-19 Omicron patients for evaluation of publication bias

Figure S5. Influential analysis of the proportion of non-severe disease in COVID-19 Omicron patients

Figure S6. Subgroup analysis of the proportion of non-severe disease by whether estimated with hospitalization

Figure S7. Funnel plot based on the proportion of non-severe disease in COVID-19 Omicron patients for evaluation of publication bias

Figure S8. Begg's test based on the proportion of non-severe disease in COVID-19 Omicron patients for evaluation of publication bias

Figure S9. Forest plot of the proportion of asymptomatic infection in COVID-19 Delta patients

Figure S10. Forest plot of the proportion of non-severe disease in COVID-19 Delta patients

Figure S11. Influential analysis of the proportion of asymptomatic infection in COVID-19 Delta patients

Figure S12. Influential analysis of the proportion of non-severe disease in COVID-19 Delta patients

Figure S13. Funnel plot based on the proportion of asymptomatic infection in COVID-19 Delta patients for evaluation of publication bias

Figure S14. Funnel plot based on the proportion of non-severe disease in COVID-19 Delta patients for evaluation of publication bias

Figure S15. Clinical severity of COVID-19 was decreased during the Omicron wave compared to the Delta wave, especially among individuals with boostered vaccination. (A) Patients infected with SARS-CoV-2 Delta variant (B) Patients infected with SARS-CoV-2 Omicron variant (C) Patients infected with Omicron with boostered vaccination. Data of Non-severe COVID-19 (Symptomatic infection) and Severe and critical COVID-19 are merely calculated according to the results of meta-analysis on proportion of asymptomatic infection and non-severe COVID-19 instead of real statistic results.

Figure S1

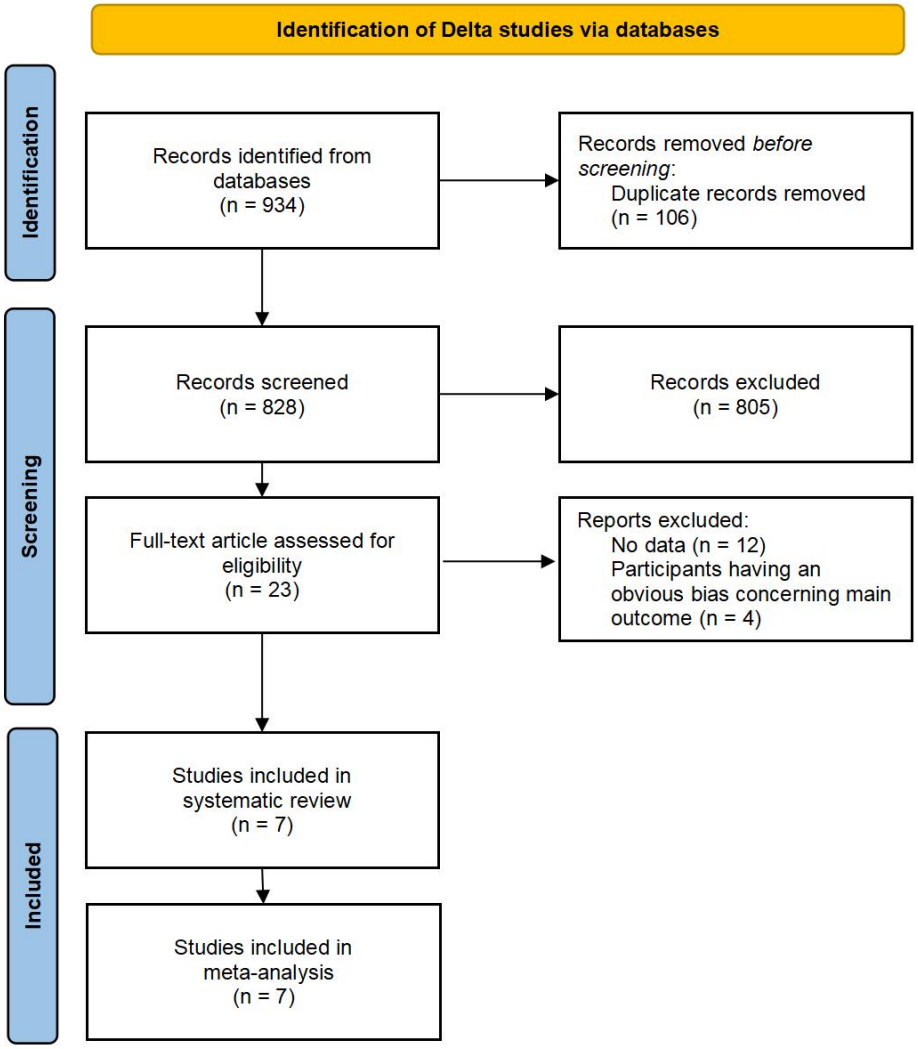

Identification of Delta studies via databases
Identification
Records identified from databases (n = 934)
Records removed *before screening*: Duplicate records removed (n = 106)
Screening
Records screened (n = 828)
Records excluded (n = 805)
Full-text article assessed for eligibility (n = 23)
Reports excluded: No data (n = 12) Participants having an obvious bias concerning main outcome (n = 4)
Included
Studies included in systematic review (n = 7)
Studies included in meta-analysis (n = 7)

Figure S2

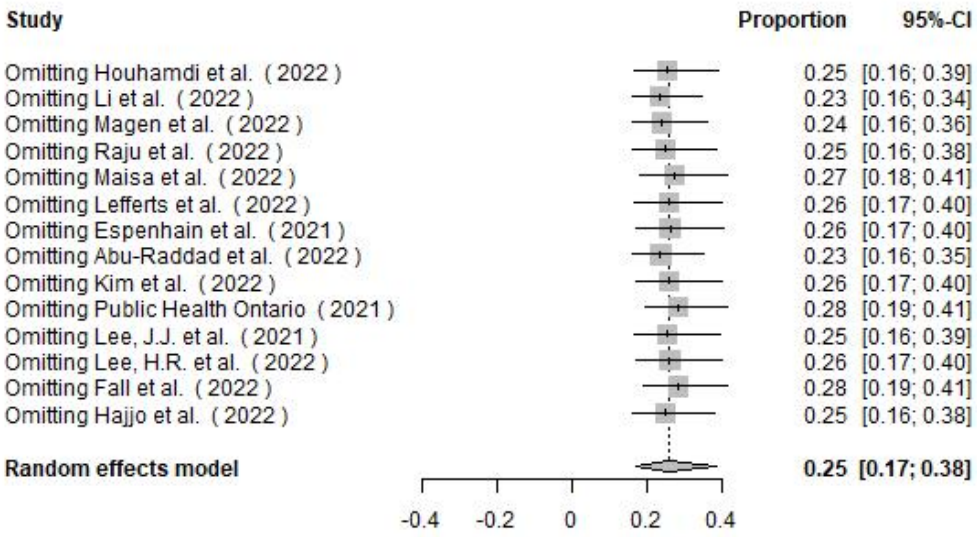

Study
Proportion
95%-CI
Omitting Houhamdi et al. (2022) 0.25 [0.16; 0.39]
Omitting Li et al. (2022) 0.23 [0.16; 0.34]
Omitting Magen et al. (2022) 0.24 [0.16; 0.36]
Omitting Raju et al. (2022) 0.25 [0.16; 0.38]
Omitting Maisa et al. (2022) 0.27 [0.18; 0.41]
Omitting Lefferts et al. (2022) 0.26 [0.17; 0.40]
Omitting Espenhain et al. (2021) 0.26 [0.17; 0.40]
Omitting Abu-Raddad et al. (2022) 0.23 [0.16; 0.35]
Omitting Kim et al. (2022) 0.26 [0.17; 0.40]
Omitting Public Health Ontario (2021) 0.28 [0.19; 0.41]
Omitting Lee, J.J. et al. (2021) 0.25 [0.16; 0.39]
Omitting Lee, H.R. et al. (2022) 0.26 [0.17; 0.40]
Omitting Fall et al. (2022) 0.28 [0.19; 0.41]
Omitting Hajjo et al. (2022) 0.25 [0.16; 0.38]
Random effects model 0.25 [0.17; 0.38]
-0.4
-0.2
0
0.2
0.4

Figure S3

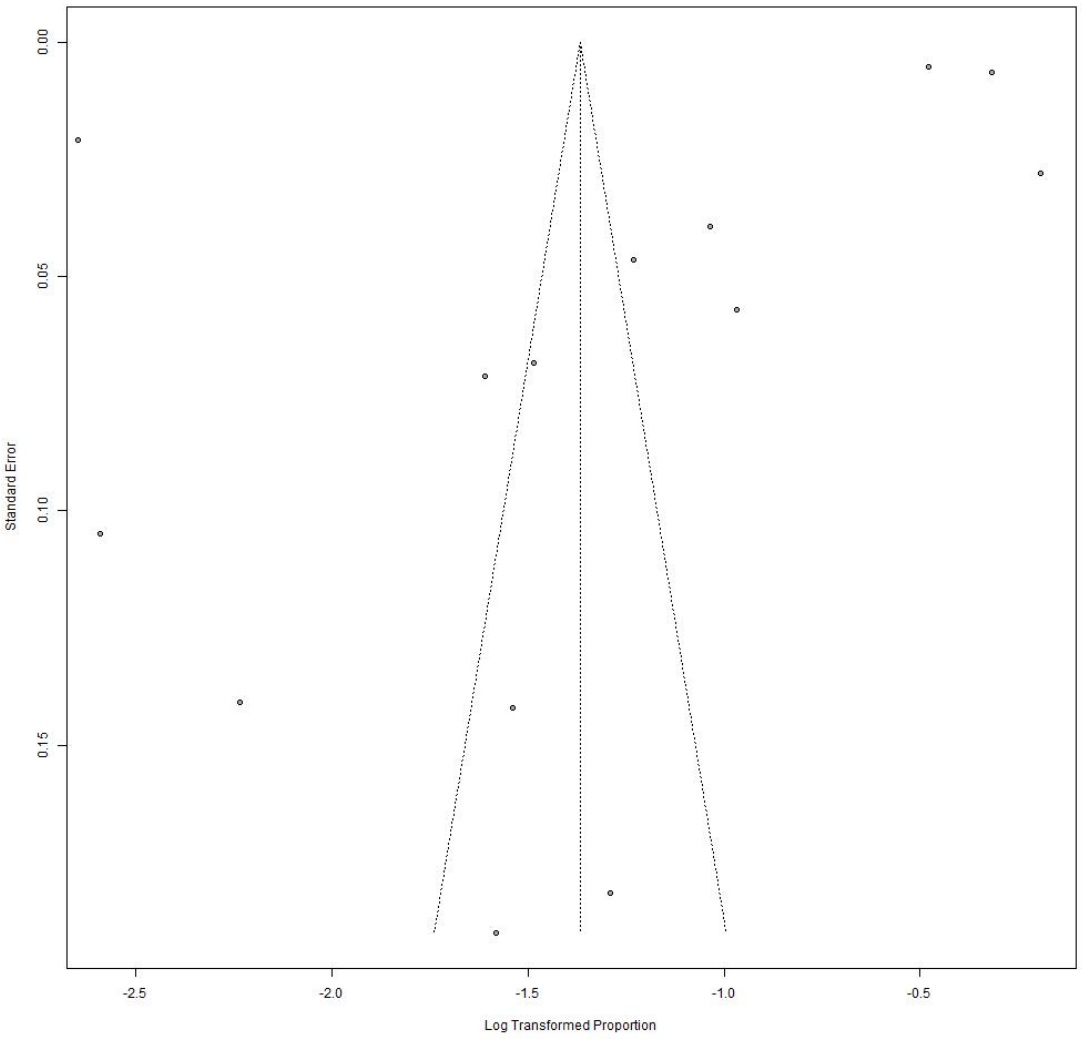

Standard Error
0.00
0.05
0.10
0.15
-2.5
-2.0
-1.5
-1.0
-0.5
Log Transformed Proportion

Figure S4

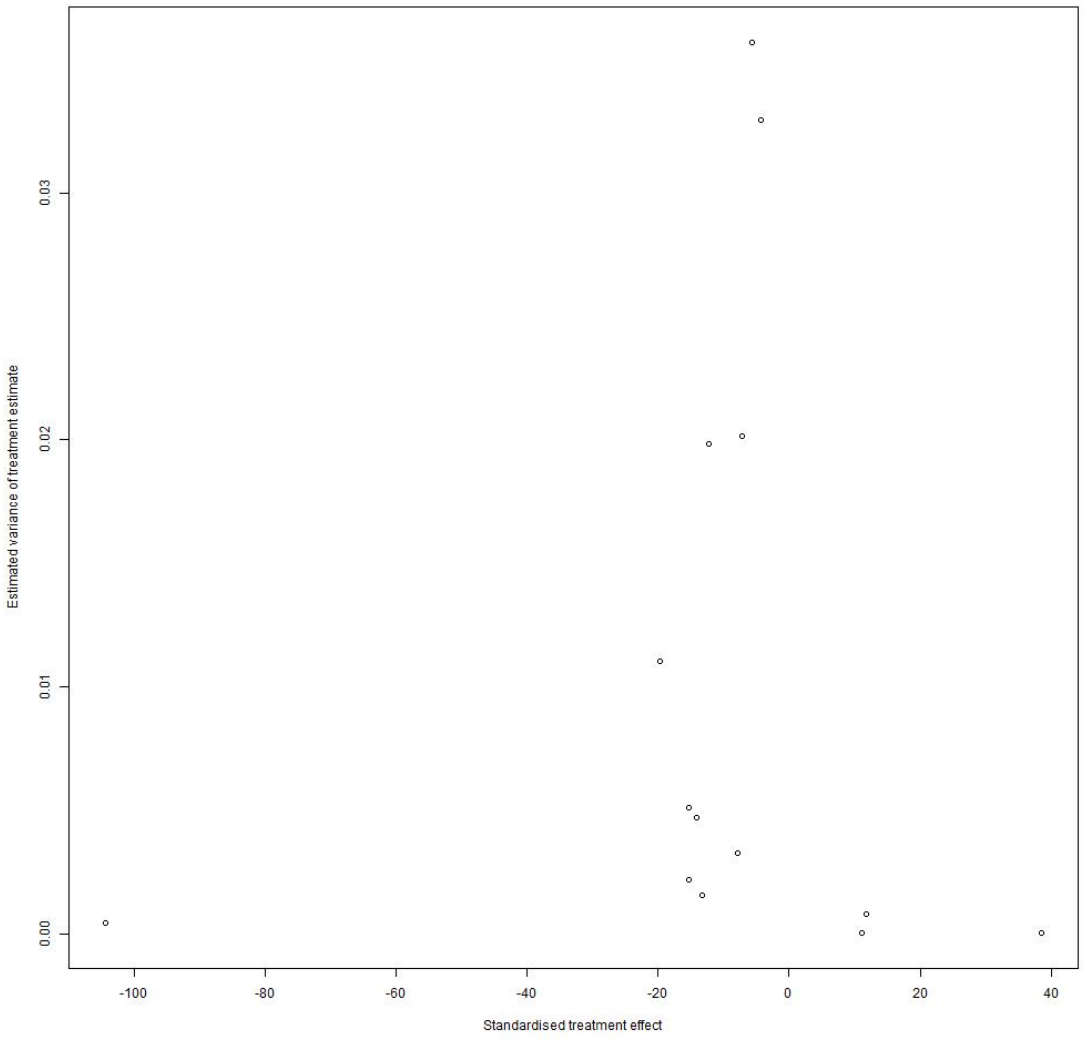

Estimated variance of treatment estimate
0.00
0.01
0.02
0.03
-100
-80
-60
-40
-20
0
20
40
Standardised treatment effect

Figure S5

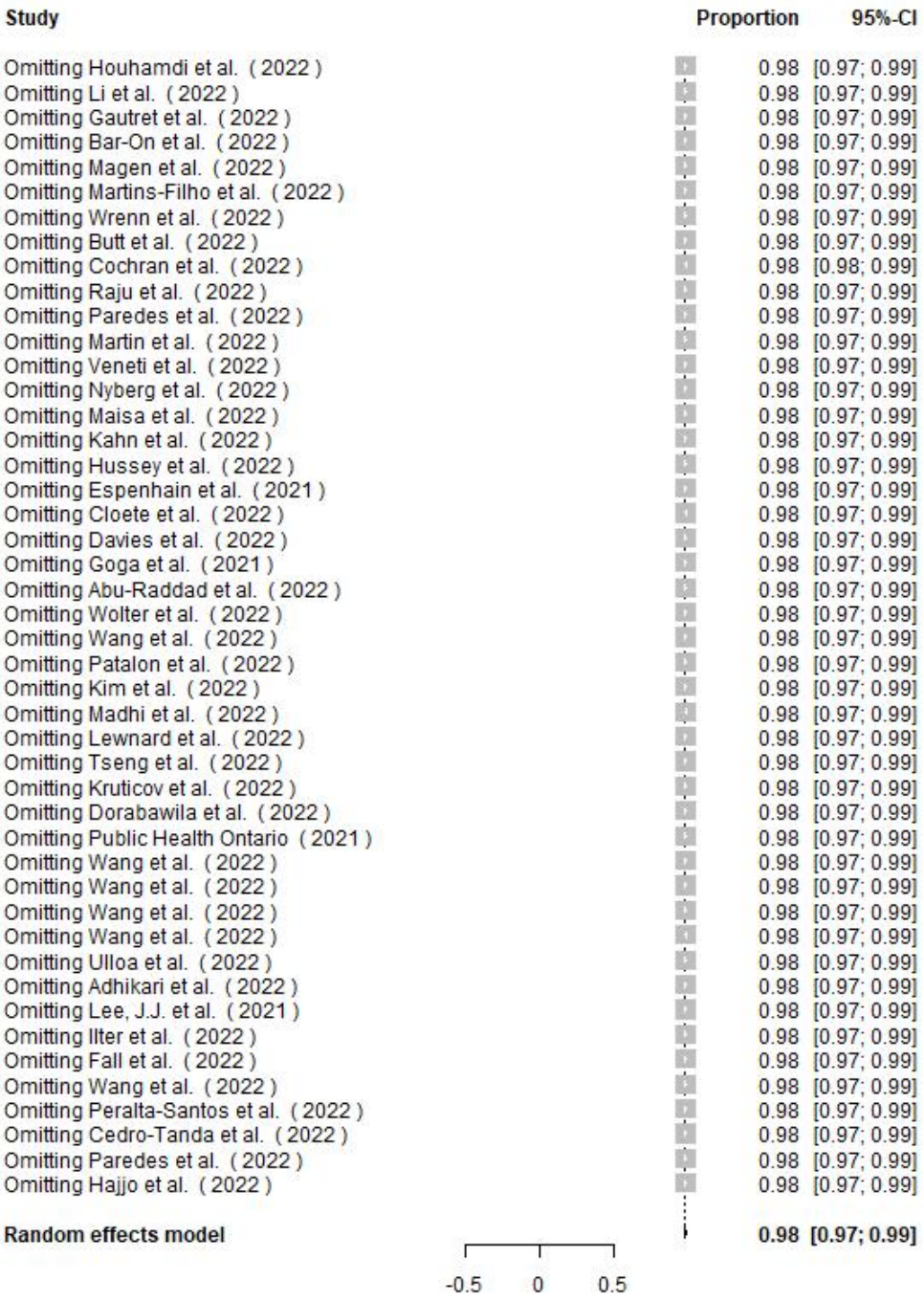

Study
Proportion
95%-CI
Omitting Houhamdi et al. (2022) 0.98 [0.97; 0.99]
Omitting Li et al. (2022) 0.98 [0.97; 0.99]
Omitting Gautret et al. (2022) 0.98 [0.97; 0.99]
Omitting Bar-On et al. (2022) 0.98 [0.97; 0.99]
Omitting Magen et al. (2022) 0.98 [0.97; 0.99]
Omitting Martins-Filho et al. (2022) 0.98 [0.97; 0.99]
Omitting Wrenn et al. (2022) 0.98 [0.97; 0.99]
Omitting Butt et al. (2022) 0.98 [0.97; 0.99]
Omitting Cochran et al. (2022) 0.98 [0.98; 0.99]
Omitting Raju et al. (2022) 0.98 [0.97; 0.99]
Omitting Paredes et al. (2022) 0.98 [0.97; 0.99]
Omitting Martin et al. (2022) 0.98 [0.97; 0.99]
Omitting Veneti et al. (2022) 0.98 [0.97; 0.99]
Omitting Nyberg et al. (2022) 0.98 [0.97; 0.99]
Omitting Maisa et al. (2022) 0.98 [0.97; 0.99]
Omitting Kahn et al. (2022) 0.98 [0.97; 0.99]
Omitting Hussey et al. (2022) 0.98 [0.97; 0.99]
Omitting Espenhain et al. (2021) 0.98 [0.97; 0.99]
Omitting Cloete et al. (2022) 0.98 [0.97; 0.99]
Omitting Davies et al. (2022) 0.98 [0.97; 0.99]
Omitting Goga et al. (2021) 0.98 [0.97; 0.99]
Omitting Abu-Raddad et al. (2022) 0.98 [0.97; 0.99]
Omitting Wolter et al. (2022) 0.98 [0.97; 0.99]
Omitting Wang et al. (2022) 0.98 [0.97; 0.99]
Omitting Patalon et al. (2022) 0.98 [0.97; 0.99]
Omitting Kim et al. (2022) 0.98 [0.97; 0.99]
Omitting Madhi et al. (2022) 0.98 [0.97; 0.99]
Omitting Lewnard et al. (2022) 0.98 [0.97; 0.99]
Omitting Tseng et al. (2022) 0.98 [0.97; 0.99]
Omitting Kruticov et al. (2022) 0.98 [0.97; 0.99]
Omitting Dorabawila et al. (2022) 0.98 [0.97; 0.99]
Omitting Public Health Ontario (2021) 0.98 [0.97; 0.99]
Omitting Wang et al. (2022) 0.98 [0.97; 0.99]
Omitting Wang et al. (2022) 0.98 [0.97; 0.99]
Omitting Wang et al. (2022) 0.98 [0.97; 0.99]
Omitting Wang et al. (2022) 0.98 [0.97; 0.99]
Omitting Ulloa et al. (2022) 0.98 [0.97; 0.99]
Omitting Adhikari et al. (2022) 0.98 [0.97; 0.99]
Omitting Lee, J.J. et al. (2021) 0.98 [0.97; 0.99]
Omitting Ilter et al. (2022) 0.98 [0.97; 0.99]
Omitting Fall et al. (2022) 0.98 [0.97; 0.99]
Omitting Wang et al. (2022) 0.98 [0.97; 0.99]
Omitting Peralta-Santos et al. (2022) 0.98 [0.97; 0.99]
Omitting Cedro-Tanda et al. (2022) 0.98 [0.97; 0.99]
Omitting Paredes et al. (2022) 0.98 [0.97; 0.99]
Omitting Hajjo et al. (2022) 0.98 [0.97; 0.99]
Random effects model 0.98 [0.97; 0.99]
-0.5
0
0.5

Figure S6

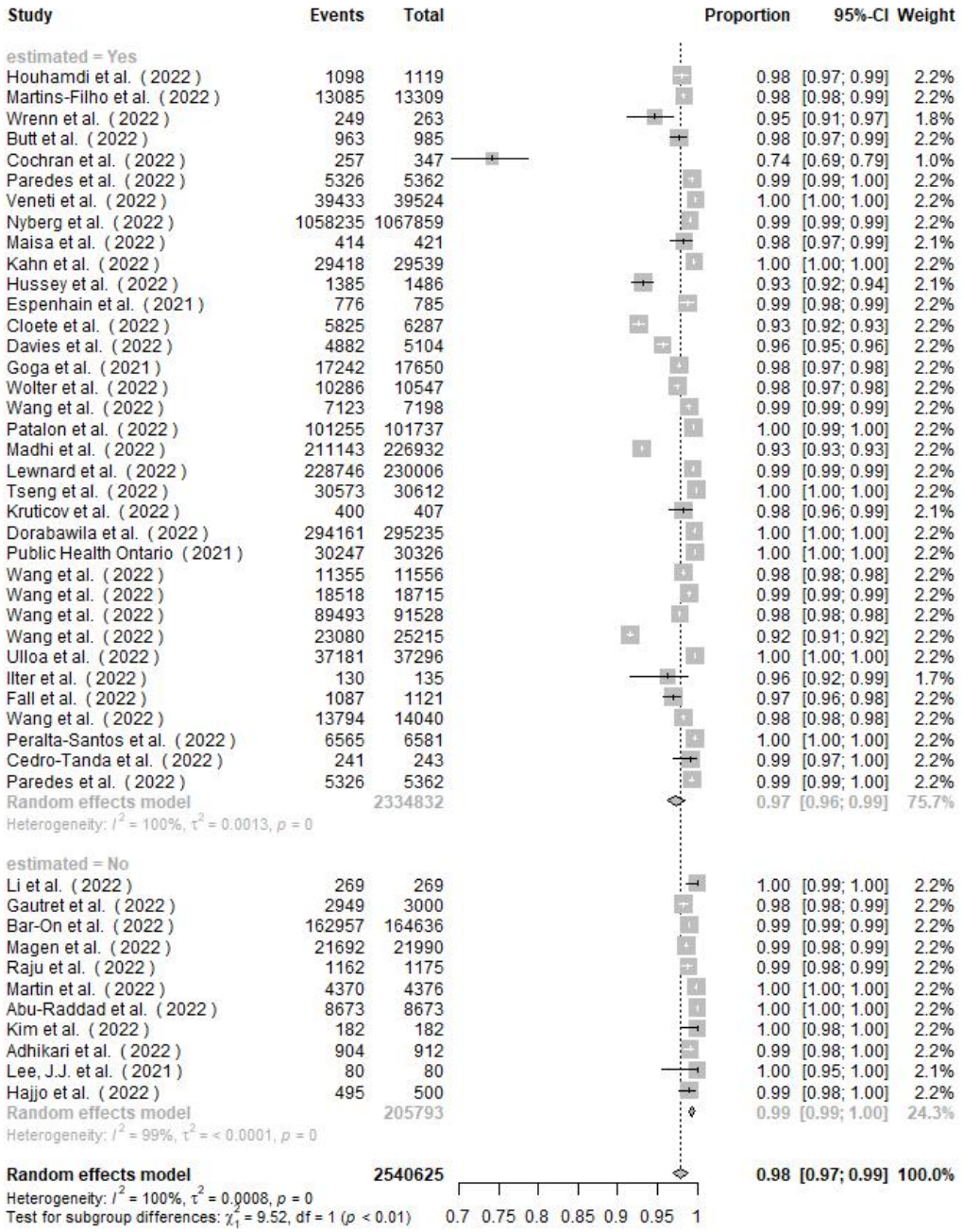

Study
Events
Total
Proportion
95%-CI
Weight
estimated = Yes
Houhamdi et al. (2022) 1098 1119 0.98 [0.97; 0.99] 2.2%
Martins-Filho et al. (2022) 13085 13309 0.98 [0.98; 0.99] 2.2%
Wrenn et al. (2022) 249 263 0.95 [0.91; 0.97] 1.8%
Butt et al. (2022) 963 985 0.98 [0.97; 0.99] 2.2%
Cochran et al. (2022) 257 347 0.74 [0.69; 0.79] 1.0%
Paredes et al. (2022) 5326 5362 0.99 [0.99; 1.00] 2.2%
Veneti et al. (2022) 39433 39524 1.00 [1.00; 1.00] 2.2%
Nyberg et al. (2022) 1058235 1067859 0.99 [0.99; 0.99] 2.2%
Maisa et al. (2022) 414 421 0.98 [0.97; 0.99] 2.1%
Kahn et al. (2022) 29418 29539 1.00 [1.00; 1.00] 2.2%
Hussey et al. (2022) 1385 1486 0.93 [0.92; 0.94] 2.1%
Espenhain et al. (2021) 776 785 0.99 [0.98; 0.99] 2.2%
Cloete et al. (2022) 5825 6287 0.93 [0.92; 0.93] 2.2%
Davies et al. (2022) 4882 5104 0.96 [0.95; 0.96] 2.2%
Goga et al. (2021) 17242 17650 0.98 [0.97; 0.98] 2.2%
Wolter et al. (2022) 10286 10547 0.98 [0.97; 0.98] 2.2%
Wang et al. (2022) 7123 7198 0.99 [0.99; 0.99] 2.2%
Patalon et al. (2022) 101255 101737 1.00 [0.99; 1.00] 2.2%
Madhi et al. (2022) 211143 226932 0.93 [0.93; 0.93] 2.2%
Lewnard et al. (2022) 228746 230006 0.99 [0.99; 0.99] 2.2%
Tseng et al. (2022) 30573 30612 1.00 [1.00; 1.00] 2.2%
Kruticov et al. (2022) 400 407 0.98 [0.96; 0.99] 2.1%
Dorabawila et al. (2022) 294161 295235 1.00 [1.00; 1.00] 2.2%
Public Health Ontario (2021) 30247 30326 1.00 [1.00; 1.00] 2.2%
Wang et al. (2022) 11355 11556 0.98 [0.98; 0.98] 2.2%
Wang et al. (2022) 18518 18715 0.99 [0.99; 0.99] 2.2%
Wang et al. (2022) 89493 91528 0.98 [0.98; 0.98] 2.2%
Wang et al. (2022) 23080 25215 0.92 [0.91; 0.92] 2.2%
Ulloa et al. (2022) 37181 37296 1.00 [1.00; 1.00] 2.2%
Ilter et al. (2022) 130 135 0.96 [0.92; 0.99] 1.7%
Fall et al. (2022) 1087 1121 0.97 [0.96; 0.98] 2.2%
Wang et al. (2022) 13794 14040 0.98 [0.98; 0.98] 2.2%
Peralta-Santos et al. (2022) 6565 6581 1.00 [1.00; 1.00] 2.2%
Cedro-Tanda et al. (2022) 241 243 0.99 [0.97; 1.00] 2.2%
Paredes et al. (2022) 5326 5362 0.99 [0.99; 1.00] 2.2%
Random effects model 2334832 0.97 [0.96; 0.99] 75.7%
Heterogeneity: I^2 = 100%, τ^2 = 0.0013, p = 0
estimated = No
Li et al. (2022) 269 269 1.00 [0.99; 1.00] 2.2%
Gautret et al. (2022) 2949 3000 0.98 [0.98; 0.99] 2.2%
Bar-On et al. (2022) 162957 164636 0.99 [0.99; 0.99] 2.2%
Magen et al. (2022) 21692 21990 0.99 [0.98; 0.99] 2.2%
Raju et al. (2022) 1162 1175 0.99 [0.98; 0.99] 2.2%
Martin et al. (2022) 4370 4376 1.00 [1.00; 1.00] 2.2%
Abu-Raddad et al. (2022) 8673 8673 1.00 [1.00; 1.00] 2.2%
Kim et al. (2022) 182 182 1.00 [0.98; 1.00] 2.2%
Adhikari et al. (2022) 904 912 0.99 [0.98; 1.00] 2.2%
Lee, J.J. et al. (2021) 80 80 1.00 [0.95; 1.00] 2.1%
Hajjo et al. (2022) 495 500 0.99 [0.98; 1.00] 2.2%
Random effects model 205793 0.99 [0.99; 1.00] 24.3%
Heterogeneity: I^2 = 99%, τ^2 = < 0.0001, p = 0
Random effects model 2540625 0.98 [0.97; 0.99] 100.0%
Heterogeneity: I^2 = 100%, τ^2 = 0.0008, p = 0
Test for subgroup differences: χ^2_1 = 9.52, df = 1 (p < 0.01)
0.7 0.75 0.8 0.85 0.9 0.95 1

Figure S7

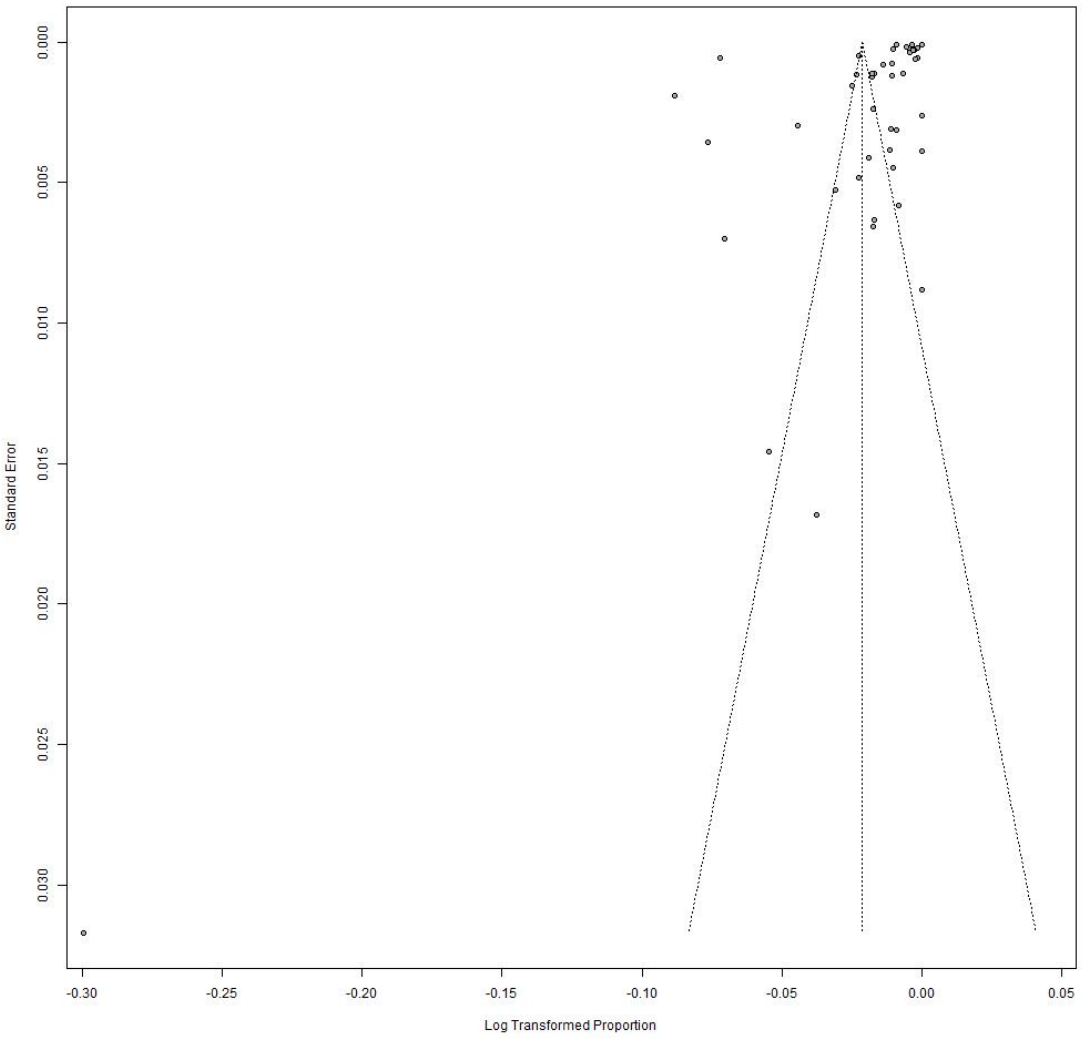

Standard Error
0.000
0.005
0.010
0.015
0.020
0.025
0.030
-0.30
-0.25
-0.20
-0.15
-0.10
-0.05
0.00
0.05
Log Transformed Proportion

Figure S8

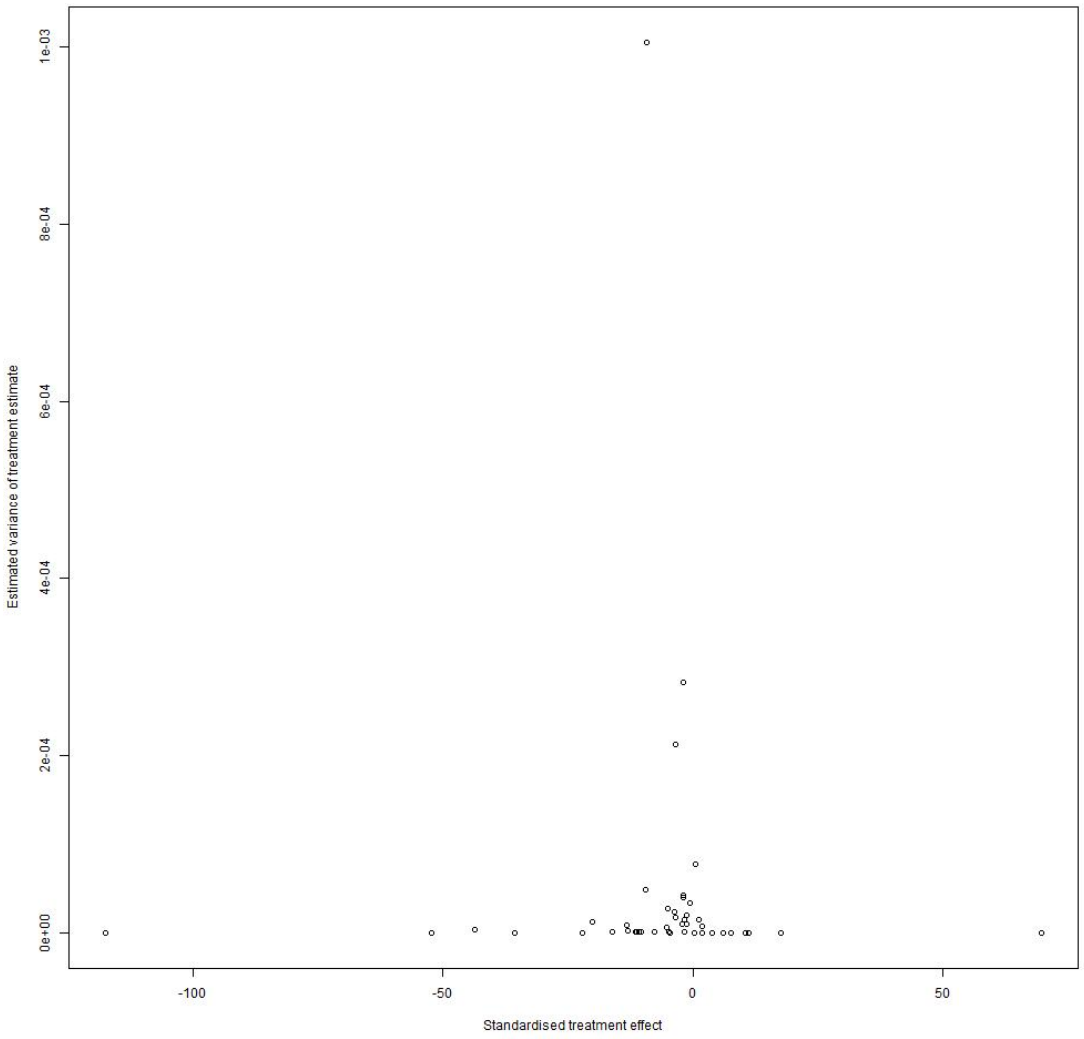

Estimated variance of treatment estimate
0e+00
2e-04
4e-04
6e-04
8e-04
1e-03
-100
-50
0
50
Standardised treatment effect

Figure S9

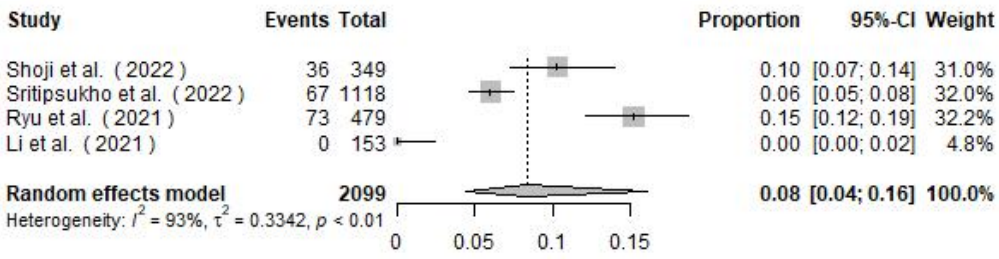

Study
Events
Total
Proportion
95%-CI
Weight
Shoji et al. (2022)
36
349
0.10
[0.07; 0.14]
31.0%
Sritipsukho et al. (2022)
67
1118
0.06
[0.05; 0.08]
32.0%
Ryu et al. (2021)
73
479
0.15
[0.12; 0.19]
32.2%
Li et al. (2021)
0
153
0.00
[0.00; 0.02]
4.8%
Random effects model
2099
0.08
[0.04; 0.16]
100.0%
Heterogeneity: I^2 = 93%, τ^2 = 0.3342, p < 0.01
0
0.05
0.1
0.15

Figure S10

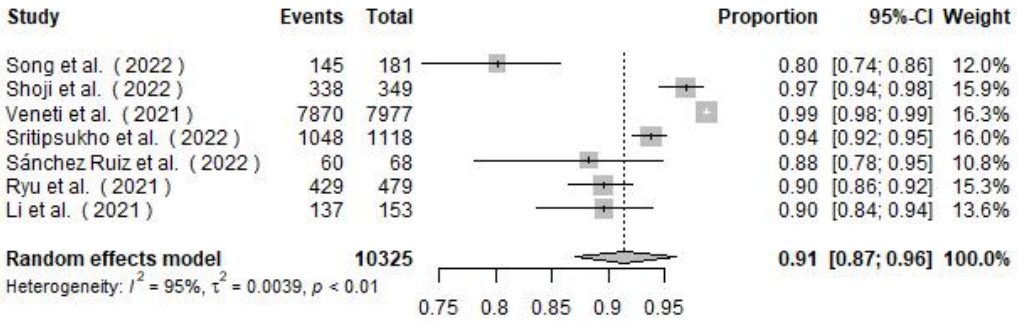

Study
Events
Total
Proportion
95%-CI
Weight
Song et al. (2022) 145 181 0.80 [0.74; 0.86] 12.0%
Shoji et al. (2022) 338 349 0.97 [0.94; 0.98] 15.9%
Veneti et al. (2021) 7870 7977 0.99 [0.98; 0.99] 16.3%
Sritipsukho et al. (2022) 1048 1118 0.94 [0.92; 0.95] 16.0%
Sánchez Ruiz et al. (2022) 60 68 0.88 [0.78; 0.95] 10.8%
Ryu et al. (2021) 429 479 0.90 [0.86; 0.92] 15.3%
Li et al. (2021) 137 153 0.90 [0.84; 0.94] 13.6%
Random effects model 10325 0.91 [0.87; 0.96] 100.0%
Heterogeneity: I^2 = 95%, τ^2 = 0.0039, p < 0.01
0.75
0.8
0.85
0.9
0.95

Figure S11

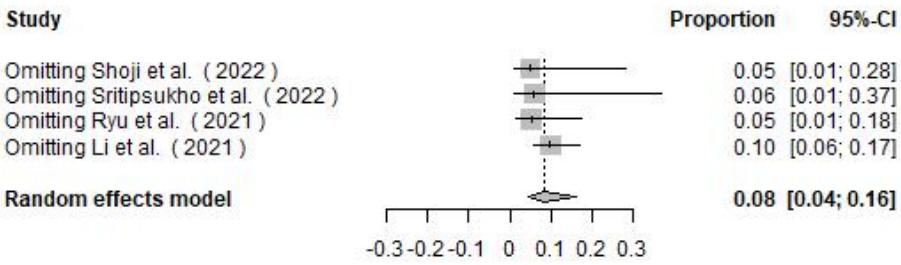

Study
Proportion
95%-CI
Omitting Shoji et al. (2022)
0.05 [0.01; 0.28]
Omitting Sritipsukho et al. (2022)
0.06 [0.01; 0.37]
Omitting Ryu et al. (2021)
0.05 [0.01; 0.18]
Omitting Li et al. (2021)
0.10 [0.06; 0.17]
Random effects model
0.08 [0.04; 0.16]
-0.3 -0.2 -0.1 0 0.1 0.2 0.3

Figure S12

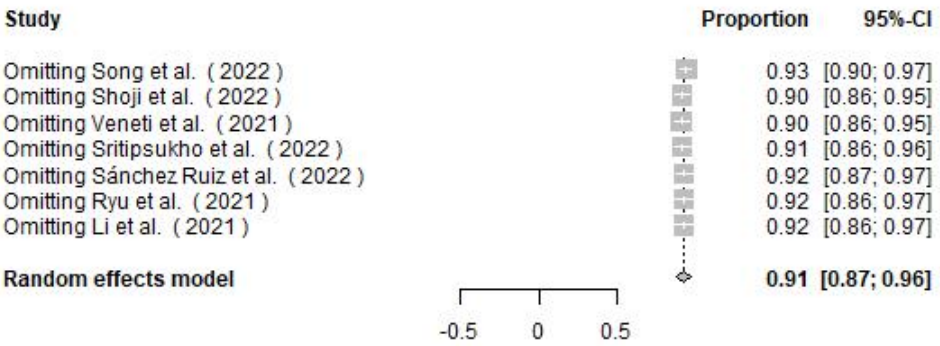

Study
Proportion
95%-CI
Omitting Song et al. (2022) 0.93 [0.90; 0.97]
Omitting Shoji et al. (2022) 0.90 [0.86; 0.95]
Omitting Veneti et al. (2021) 0.90 [0.86; 0.95]
Omitting Sritipsukho et al. (2022) 0.91 [0.86; 0.96]
Omitting Sánchez Ruiz et al. (2022) 0.92 [0.87; 0.97]
Omitting Ryu et al. (2021) 0.92 [0.86; 0.97]
Omitting Li et al. (2021) 0.92 [0.86; 0.97]
Random effects model 0.91 [0.87; 0.96]
-0.5
0
0.5

Figure S13

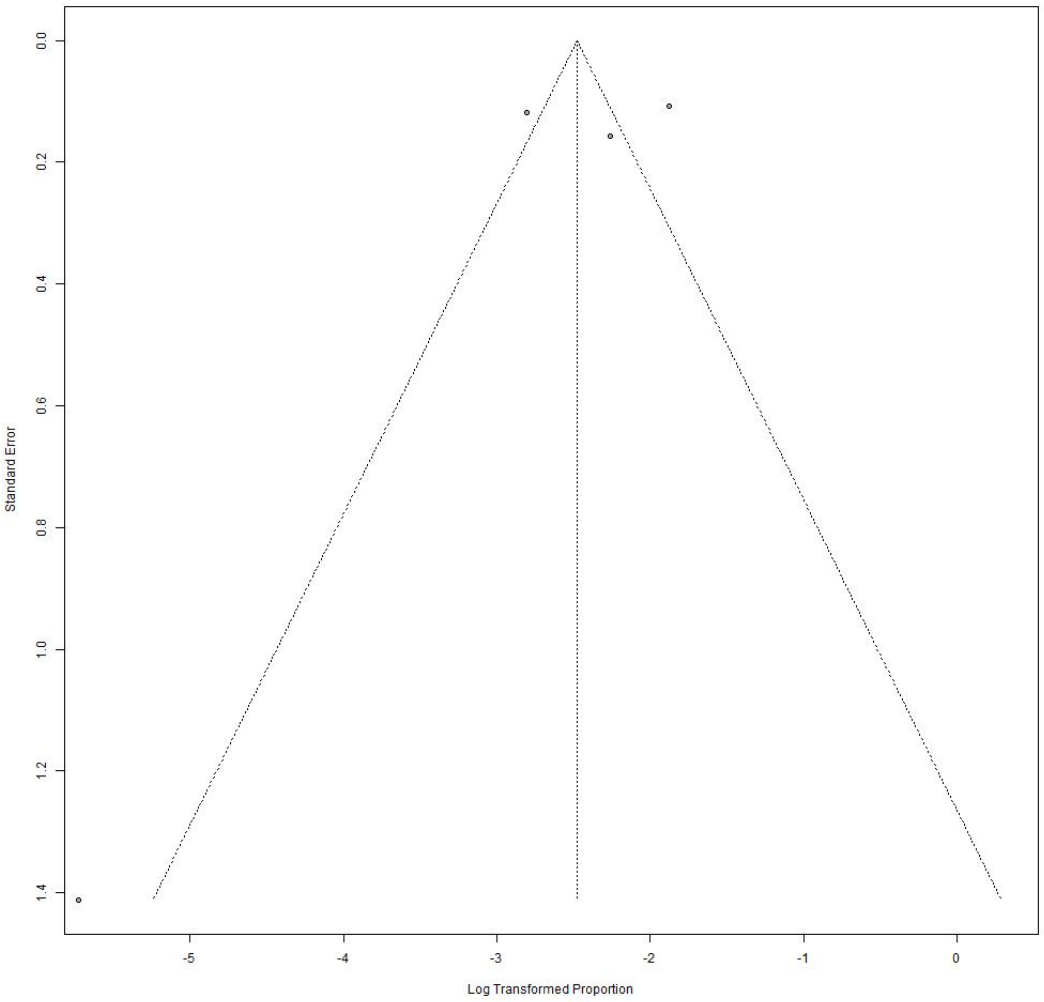

Standard Error
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
-5
-4
-3
-2
-1
0
Log Transformed Proportion

Figure S14

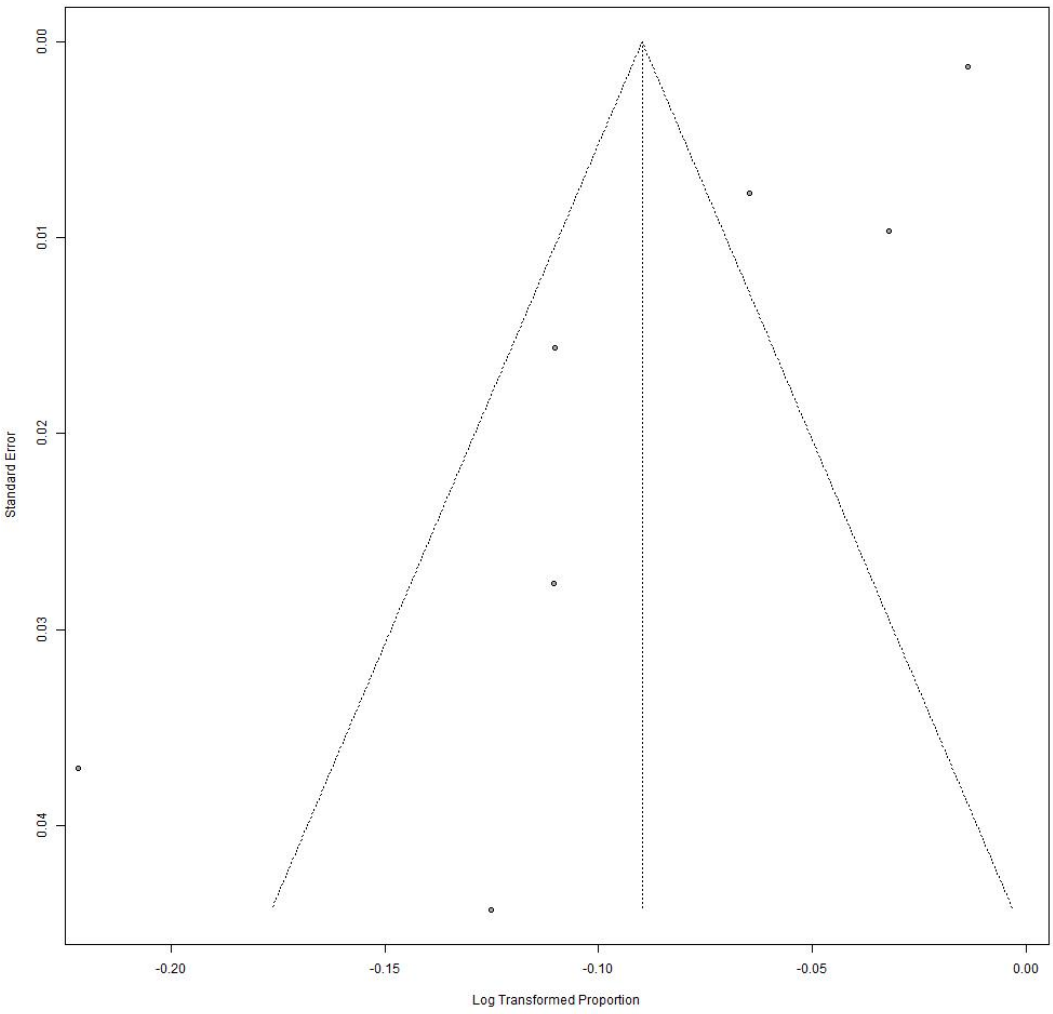
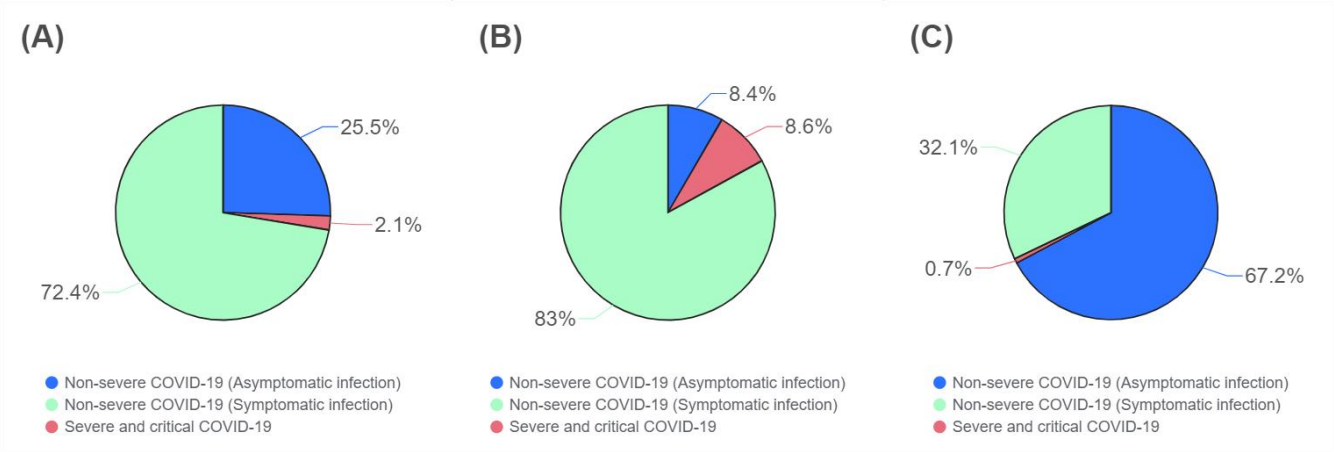

Standard Error
0.00
0.01
0.02
0.03
0.04
-0.20
-0.15
-0.10
-0.05
0.00
Log Transformed Proportion

Figure S15


(A)
25.5%
2.1%
72.4%
Non-severe COVID-19 (Asymptomatic infection)
Non-severe COVID-19 (Symptomatic infection)
Severe and critical COVID-19
(B)
8.4%
8.6%
83%
Non-severe COVID-19 (Asymptomatic infection)
Non-severe COVID-19 (Symptomatic infection)
Severe and critical COVID-19
(C)
32.1%
0.7%
67.2%
Non-severe COVID-19 (Asymptomatic infection)
Non-severe COVID-19 (Symptomatic infection)
Severe and critical COVID-19