

Table S1. Associations between vaccination rate and the counties' characteristics in the regression analyses, including the age group of 18-64 years.

|                | (M1)<br>Model 1              | (M2)<br>Model 1<br>+ Age_1864 | (M3.1)<br>Model 1<br>+ Age_1864<br>+ Race (White) | (M3.2)<br>Model 1<br>+ Age_1864<br>+ Race (Black) | (M3.3)<br>Model 1<br>+ Age_1864<br>+ Race (Asian) | (M3.4)<br>Model 1<br>+ Age_1864<br>+ Race (Indian) | (M3.5)<br>Model 1<br>+ Age_1864<br>+ Race (Hispanic) |
|----------------|------------------------------|-------------------------------|---|---|---|--|--|
| R-squared      | 0.382                        | 0.399                         | 0.401   | 0.482   | 0.400   | 0.427  | 0.414  |
| State (NM*)    |                              |                               |   |   |   |  |  |
| AZ             | 2.210<br>(0.206)             | 1.828<br>(0.290)              | 1.922<br>(0.267)                                  | 1.454<br>(0.366)                                  | 1.877<br>(0.278)                                  | 1.096<br>(0.518)                                   | 2.818<br>(0.117)                                     |
| CO             | <b>-6.287</b><br>(<0.001)    | <b>-5.677</b><br>(<0.001)     | <b>-5.841</b><br>(<0.001)                         | <b>-5.670</b><br>(<0.001)                         | <b>-5.636</b><br>(<0.001)                         | <b>-4.869</b><br>(<0.001)                          | <b>-5.063</b><br>(<0.001)                            |
| OK             | <b>4.657</b><br>(<0.001)     | <b>5.026</b><br>(<0.001)      | <b>5.468</b><br>(<0.001)                          | <b>6.343</b><br>(<0.001)                          | <b>4.939</b><br>(<0.001)                          | <b>4.085</b><br>(0.002)                            | <b>6.087</b><br>(<0.001)                             |
| TX             | <b>3.453</b><br>(0.004)      | <b>3.813</b><br>(0.001)       | <b>3.895</b><br>(0.001)                           | <b>6.816</b><br>(<0.001)                          | <b>3.694</b><br>(0.002)                           | <b>4.754</b><br>(<0.001)                           | <b>4.315</b><br>(<0.001)                             |
| Unemployment   | 0.285<br>(0.251)             | 0.086<br>(0.731)              | 0.146<br>(0.570)                                  | 0.369<br>(0.119)                                  | 0.092<br>(0.714)                                  | -0.096<br>(0.700)                                  | 0.121<br>(0.631)                                     |
| Democrat       | <b>0.242</b><br>(<0.001)     | <b>0.254</b><br>(<0.001)      | <b>0.257</b><br>(<0.001)                          | <b>0.263</b><br>(<0.001)                          | <b>0.249</b><br>(<0.001)                          | <b>0.244</b><br>(<0.001)                           | <b>0.237</b><br>(<0.001)                             |
| Farm Worker    | 0.077<br>(0.220)             | 0.015<br>(0.819)              | 0.015<br>(0.815)                                  | 0.010<br>(0.866)                                  | 0.010<br>(0.877)                                  | 0.014<br>(0.821)                                   | -0.006<br>(0.929)                                    |
| Rural_pct      | 0.004<br>(0.711)             | -0.003<br>(0.813)             | -0.002<br>(0.845)                                 | -0.004<br>(0.687)                                 | 0.00004<br>(0.997)                                | -0.009<br>(0.408)                                  | 0.004<br>(0.711)                                     |
| HS graduate    | -0.012<br>(0.765)            | -0.014<br>(0.729)             | -0.006<br>(0.891)                                 | 0.057<br>(0.138)                                  | -0.021<br>(0.615)                                 | -0.012<br>(0.752)                                  | 0.059<br>(0.287)                                     |
| Income         | <b>8.077e-05</b><br>(<0.001) | <b>7.919e-05</b><br>(<0.001)  | <b>7.592e-05</b><br>(0.001)                       | <b>5.479e-05</b><br>(0.010)                       | <b>7.7e-05</b><br>(0.001)                         | <b>8.698e-05</b><br>(<0.001)                       | <b>8.041e-05</b><br>(<0.001)                         |
| Age_1864       |                              |                               | <b>-0.265</b><br>(0.001)                          | <b>-0.244</b><br>(0.002)                          | -0.064<br>(0.204)                                 | <b>-0.273</b><br>(<0.001)                          | <b>-0.291</b><br>(<0.001)                            |
| Race/ethnicity |                              |                               | 0.034<br>(0.278)                                  | <b>-0.426</b><br>(<0.001)                         | 0.143<br>(0.428)                                  | <b>0.179</b><br>(0.428)                            | 0.041<br>(0.054)                                     |

\* refers to a reference category. All significant estimates are expressed in bold and p-values in parentheses.

Table S2. Associations between vaccination rate and the counties' characteristics in the regression analyses, including the median-age group.

|                | (M1)<br>Model 1              | (M2)<br>Model 1<br>+ Age_median | (M3.1)<br>Model 1<br>+ Age_median<br>+ Race (White) | (M3.2)<br>Model 1<br>+ Age_median<br>+ Race (Black) | (M3.3)<br>Model 1<br>+ Age_median<br>+ Race (Asian) | (M3.4)<br>Model 1<br>+ Age_median<br>+ Race (Indian) | (M3.5)<br>Model 1<br>+ Age_median<br>+ Race (Hispanic) |
|----------------|------------------------------|---------------------------------|---|---|---|--|--|
| R-squared      | 0.382                        | 0.402                           | 0.403   | 0.489   | 0.402   | 0.435  | 0.413  |
| State (NM*)    |                              |                                 |   |   |   |  |  |
| AZ             | 2.210<br>(0.206)             | 2.332<br>(0.176)                | 2.388<br>(0.166)                                    | 1.675<br>(0.294)                                    | 2.378<br>(0.168)                                    | 1.594<br>(0.343)                                     | 3.798<br>(0.033)                                       |
| CO             | <b>-6.287</b><br>(<0.001)    | <b>-6.045</b><br>(<0.001)       | <b>-6.178</b><br>(<0.001)                           | <b>-5.725</b><br>(<0.001)                           | <b>-6.026</b><br>(<0.001)                           | <b>-5.171</b><br>(<0.001)                            | <b>-5.052</b><br>(<0.001)                              |
| OK             | <b>4.657</b><br>(<0.001)     | <b>5.490</b><br>(<0.001)        | <b>5.908</b><br>(<0.001)                            | <b>6.764</b><br>(<0.001)                            | <b>5.427</b><br>(<0.001)                            | <b>4.593</b><br>(<0.001)                             | <b>7.206</b><br>(<0.001)                               |
| TX             | <b>3.453</b><br>(0.004)      | <b>3.842</b><br>(0.001)         | <b>3.927</b><br>(0.001)                             | <b>6.932</b><br>(<0.001)                            | <b>3.751</b><br>(0.002)                             | <b>4.920</b><br>(<0.001)                             | <b>4.668</b><br>(<0.001)                               |
| Unemployment   | 0.285<br>(0.251)             | 0.162<br>(0.513)                | 0.214<br>(0.394)                                    | 0.355<br>(0.122)                                    | 0.169<br>(0.495)                                    | -0.044<br>(0.857)                                    | 0.183<br>(0.454)                                       |
| Democrat       | <b>0.242</b><br>(<0.001)     | <b>0.240</b><br>(<0.001)        | <b>0.245</b><br>(<0.001)                            | <b>0.258</b><br>(<0.001)                            | <b>0.236</b><br>(<0.001)                            | <b>0.228</b><br>(<0.001)                             | <b>0.216</b><br>(<0.001)                               |
| Farm Worker    | 0.077<br>(0.220)             | 0.052<br>(0.405)                | 0.049<br>(0.432)                                    | 0.016<br>(0.789)                                    | 0.050<br>(0.428)                                    | 0.053<br>(0.385)                                     | 0.013<br>(0.832)                                       |
| Rural_pct      | 0.004<br>(0.711)             | -0.017<br>(0.174)               | -0.016<br>(0.212)                                   | -0.016<br>(0.166)                                   | -0.015<br>(0.245)                                   | <b>-0.028</b><br>(0.024)                             | -0.009<br>(0.456)                                      |
| HS graduate    | -0.012<br>(0.765)            | -0.075<br>(0.087)               | -0.062<br>(0.167)                                   | 0.015<br>(0.712)                                    | -0.080<br>(0.072)                                   | -0.086<br>(0.043)                                    | 0.026<br>(0.636)                                       |
| Income         | <b>8.077e-05</b><br>(<0.001) | <b>8.225e-05</b><br>(<0.001)    | <b>7.874e-05</b><br>(0.001)                         | <b>5.649e-05</b><br>(0.007)                         | <b>8.069e-05</b><br>(<0.001)                        | <b>9.130e-05</b><br>(<0.001)                         | <b>8.414e-05</b><br>(<0.001)                           |
| Age_median     |                              |                                 | <b>0.222</b><br>(<0.001)                            | <b>0.207</b><br>(0.001)                             | <b>0.149</b><br>(0.007)                             | <b>0.224</b><br>(<0.001)                             | <b>0.269</b><br>(<0.001)                               |
| Race/ethnicity |                              |                                 | 0.034<br>(0.272)                                    | -0.424<br>(<0.001)                                  | 0.105<br>(0.555)                                    | <b>0.196</b><br>(<0.001)                             | <b>0.062</b><br>(0.004)                                |

\* refers to a reference category. All significant estimates are expressed in bold and p-values in parentheses.