SUPPLEMENTARY MATERIAL 5: Post-Covid Conditions in Adults: a Systematic Review and Meta-analysis of controlled studies

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Analyses: Incident medical diagnosis stratified by number of core confounders

Analysis 1.1. Incidence of Diabetes

<table>
<thead>
<tr>
<th>Study</th>
<th>exp(ES) with 95% CI</th>
<th>Weight (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rezel-Potts 2022</td>
<td>1.07 [0.99, 1.16]</td>
<td>8.22</td>
</tr>
<tr>
<td>Wander 2022</td>
<td>1.86 [1.73, 2.01]</td>
<td>8.23</td>
</tr>
<tr>
<td>Whittaker 2021</td>
<td>2.10 [1.76, 2.50]</td>
<td>7.75</td>
</tr>
<tr>
<td>Heterogeneity: t² = 0.12, I² = 98.07%, H² = 51.87</td>
<td>1.60 [0.66, 3.93]</td>
<td></td>
</tr>
<tr>
<td>Test of θ = 0: Q(2) = 115.77, p = 0.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of θ = 0: t(2) = 2.27, p = 0.15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rathmann 2022</td>
<td>1.28 [1.05, 1.57]</td>
<td>7.58</td>
</tr>
<tr>
<td>Subramanian 2022</td>
<td>1.56 [1.09, 2.23]</td>
<td>6.33</td>
</tr>
<tr>
<td>Sharma 2022</td>
<td>2.33 [1.99, 2.72]</td>
<td>7.87</td>
</tr>
<tr>
<td>Heterogeneity: t² = 0.08, I² = 86.68%, H² = 7.51</td>
<td>1.69 [0.77, 3.69]</td>
<td></td>
</tr>
<tr>
<td>Test of θ = 0: Q(2) = 22.05, p = 0.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of θ = 0: t(2) = 2.87, p = 0.10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patel 2022 - outpatient cohort</td>
<td>1.02 [0.90, 1.15]</td>
<td>8.05</td>
</tr>
<tr>
<td>Chevinsky 2021</td>
<td>1.10 [0.78, 1.56]</td>
<td>6.42</td>
</tr>
<tr>
<td>Patel 2022 - hospitalised cohort</td>
<td>1.30 [1.07, 1.57]</td>
<td>7.66</td>
</tr>
<tr>
<td>Al-Aly 2022</td>
<td>1.36 [1.32, 1.41]</td>
<td>8.32</td>
</tr>
<tr>
<td>Cohen 2022</td>
<td>1.49 [1.31, 1.70]</td>
<td>8.01</td>
</tr>
<tr>
<td>Daugherty 2021</td>
<td>1.83 [1.60, 2.10]</td>
<td>7.98</td>
</tr>
<tr>
<td>Ayoubkhani 2021</td>
<td>3.20 [2.62, 3.91]</td>
<td>7.58</td>
</tr>
<tr>
<td>Heterogeneity: t² = 0.14, I² = 97.37%, H² = 38.09</td>
<td>1.51 [1.06, 2.14]</td>
<td></td>
</tr>
<tr>
<td>Test of θ = 0: Q(6) = 112.14, p = 0.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of θ = 0: t(6) = 2.84, p = 0.03</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heterogeneity: t² = 0.10, I² = 97.18%, H² = 35.49</td>
<td>1.57 [1.28, 1.92]</td>
<td></td>
</tr>
<tr>
<td>Test of θ = 0: Q(12) = 273.61, p = 0.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of θ = 0: t(12) = 4.81, p = 0.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of group differences: Q_g(2) = 0.25, p = 0.88</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Meta-regression and testing for publication are not possible (<10 studies per variable). As there is little variation in effect estimates of the most adjusted group with the overall estimate, we used the overall estimate in the main manuscript.
Publication bias (Egger)

H0: \( \beta_1 = 0 \); no small-study effects

\[ \beta_1 = 0.26 \]
\[ \text{SE of } \beta_1 = 2.153 \]
\[ z = 0.12 \]
\[ \text{Prob > } |z| = 0.9049 \]
Analysis 1.2. Incidence of Thyroid Disorders

Meta-regression and testing for publication are not possible (<10 studies per variable). As there is little variation in effect estimates of the most adjusted group with the overall estimate, we used the overall estimate in the main manuscript.
Analysis 2.1. Any Psychiatric Disorder

<table>
<thead>
<tr>
<th>Study</th>
<th>exp(ES) with 95% CI</th>
<th>Weight (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xieng 2021</td>
<td>2.98 [1.67, 5.31]</td>
<td>8.06</td>
</tr>
<tr>
<td>Heterogeneity: t^2 = 0.00, I^2 = %, H^2 = .</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of θ = 0; Q(0) = 0.00, p = .</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of θ = 0; I(0) = 3.70, p = .</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Park 2021</td>
<td>1.57 [1.45, 1.69]</td>
<td>11.48</td>
</tr>
<tr>
<td>Heterogeneity: t^2 = 0.00, I^2 = %, H^2 = .</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of θ = 0; Q(0) = 0.00, p = .</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of θ = 0; I(0) = 11.14, p = .</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coleman 2021</td>
<td>1.00 [0.94, 1.06]</td>
<td>11.51</td>
</tr>
<tr>
<td>Abel 2021</td>
<td>1.69 [1.59, 1.81]</td>
<td>11.50</td>
</tr>
<tr>
<td>OhTx 2020</td>
<td>4.49 [3.97, 5.07]</td>
<td>11.35</td>
</tr>
<tr>
<td>Heterogeneity: t^2 = 0.58, I^2 = 99.97%, H^2 = 0.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of θ = 0; Q(2) = 481.36, p = 0.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of θ = 0; I(2) = 1.54, p = 0.26</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Al-Aly 2022 - unvaccinated</td>
<td>1.29 [1.28, 1.31]</td>
<td>11.57</td>
</tr>
<tr>
<td>Daugherty 2021</td>
<td>1.39 [1.29, 1.49]</td>
<td>11.49</td>
</tr>
<tr>
<td>Al-Aly 2022 - vaccinated</td>
<td>1.43 [1.39, 1.48]</td>
<td>11.55</td>
</tr>
<tr>
<td>Cohen 2022</td>
<td>1.47 [1.37, 1.58]</td>
<td>11.49</td>
</tr>
<tr>
<td>Heterogeneity: t^2 = 0.00, I^2 = 89.38%, H^2 = 9.41</td>
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</tr>
<tr>
<td>Test of θ = 0; Q(3) = 48.81, p = 0.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of θ = 0; I(3) = 11.23, p = 0.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall</td>
<td>1.69 [1.19, 2.40]</td>
<td></td>
</tr>
</tbody>
</table>

Random-effects Sidik-Jonkman model
Knapp-Hartung standard errors
Sorted by: effect

Meta-regression and testing for publication are not possible (<10 studies per variable). We used the most adjusted estimate in the manuscript.
Analysis 2.2. Mood Disorders

<table>
<thead>
<tr>
<th>Study</th>
<th>exp(ES) with 95% CI</th>
<th>Weight (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taquet 2021</td>
<td>1.08 [1.06, 1.11]</td>
<td>22.76</td>
</tr>
<tr>
<td>Heterogeneity: $\tau^2 = 0.00$, $I^2 = .00$, $H^2 = .00$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = \delta_i$; $Q(0) = 0.00$, $p = .1$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$: $t(0) = 6.55$, $p = .00$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Murata 2022 - vs RTI</td>
<td>0.76 [0.51, 1.14]</td>
<td>17.20</td>
</tr>
<tr>
<td>Murata 2022 - vs influenza</td>
<td>1.24 [0.77, 1.99]</td>
<td>15.74</td>
</tr>
<tr>
<td>Heterogeneity: $\tau^2 = 0.00$, $I^2 = .00$, $H^2 = .00$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = \delta_i$; $Q(1) = 2.39$, $p = .12$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$: $t(1) = -0.19$, $p = .08$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coleman 2021</td>
<td>1.11 [1.00, 1.23]</td>
<td>22.28</td>
</tr>
<tr>
<td>Heterogeneity: $\tau^2 = 0.00$, $I^2 = .00$, $H^2 = .00$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = \delta_i$; $Q(0) = 0.00$, $p = .1$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$: $t(0) = 1.92$, $p = .1$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wang 2022b</td>
<td>2.19 [1.92, 2.50]</td>
<td>22.02</td>
</tr>
<tr>
<td>Heterogeneity: $\tau^2 = 0.00$, $I^2 = .00$, $H^2 = .00$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = \delta_i$; $Q(0) = 0.00$, $p = .1$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$: $t(0) = 11.64$, $p = .00$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall</td>
<td>1.22 [0.76, 1.97]</td>
<td></td>
</tr>
<tr>
<td>Heterogeneity: $\tau^2 = 0.13$, $I^2 = 97.35%$, $H^2 = 37.76$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = \delta_i$; $Q(4) = 110.50$, $p = .00$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$: $t(4) = 1.16$, $p = .31$</td>
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</tr>
<tr>
<td>Test of group differences: $Q_3(3) = 107.33$, $p = .00$</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Random-effects Sidik–Jonkman model
Knapp–Hartung standard errors
Sorted by: effect

Meta-regression and testing for publication are not possible (<10 studies per variable). We used the most adjusted estimate in the manuscript.
## Analysis 2.3. Depressive Disorder

<table>
<thead>
<tr>
<th>Study</th>
<th>exp(ES) with 95% CI</th>
<th>Weight (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spiliopoulos 2022</td>
<td>1.52 [1.17, 1.98]</td>
<td>7.68</td>
</tr>
<tr>
<td>SnellerMc 2022</td>
<td>2.88 [0.94, 8.65]</td>
<td>3.34</td>
</tr>
<tr>
<td><strong>Heterogeneity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$\tau^2$ = 0.07, I² = 36.94%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$: Q(1) = 1.18, p = 0.28</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$: t(1) = 2.17, p = 0.27</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jacob 2022</td>
<td>1.02 [0.95, 1.10]</td>
<td>8.28</td>
</tr>
<tr>
<td><strong>Heterogeneity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$\tau^2$ = 0.00, I² = .</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$: Q(0) = 0.00, p = .</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$: t(0) = 0.53, p = .</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whitaker 2021</td>
<td>1.39 [1.08, 1.79]</td>
<td>7.72</td>
</tr>
<tr>
<td>Abel 2021</td>
<td>1.81 [1.66, 1.97]</td>
<td>8.26</td>
</tr>
<tr>
<td><strong>Heterogeneity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$\tau^2$ = 0.02, I² = 70.17%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$: Q(1) = 3.64, p = 0.06</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$: t(1) = 3.85, p = 0.16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Magnusdotter 2022</td>
<td>1.18 [1.03, 1.36]</td>
<td>8.14</td>
</tr>
<tr>
<td>Ohh 20K 2020</td>
<td>4.78 [4.18, 5.42]</td>
<td>8.17</td>
</tr>
<tr>
<td><strong>Heterogeneity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$\tau^2$ = 0.02, I² = 167.4%</td>
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<td></td>
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<tr>
<td>Test of $\theta = 0$: Q(1) = 207.91, p = 0.00</td>
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<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$: t(1) = 1.24, p = 0.43</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chevinsky 2021</td>
<td>0.76 [0.54, 1.07]</td>
<td>7.27</td>
</tr>
<tr>
<td>Patel 2021 - outpatient cohort</td>
<td>0.89 [0.82, 0.98]</td>
<td>8.25</td>
</tr>
<tr>
<td>Daugherity 2021</td>
<td>1.27 [1.15, 1.40]</td>
<td>8.23</td>
</tr>
<tr>
<td>Al-Aly 2022</td>
<td>1.39 [1.35, 1.44]</td>
<td>8.32</td>
</tr>
<tr>
<td>Patel 2021 - hospitalised cohort</td>
<td>1.53 [1.35, 1.73]</td>
<td>8.18</td>
</tr>
<tr>
<td>Wang 2022b</td>
<td>2.19 [1.92, 2.49]</td>
<td>8.16</td>
</tr>
<tr>
<td><strong>Heterogeneity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$\tau^2$ = 0.13, I² = 98.35%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$: Q(5) = 150.09, p = 0.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$: t(5) = 1.61, p = 0.17</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Overall</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heterogeneity: $\tau^2 = 0.21$, I² = 98.80%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$: Q(12) = 613.92, p = 0.00</td>
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<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$: t(12) = 3.01, p = 0.01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of group differences: Q(4) = 19.16, p = 0.00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Random-effects Sidik–Jonkman model
Knapp–Hartung standard errors
Sorted by: effect

Meta-regression and testing for publication are not possible (<10 studies per variable). As there is little variation in effect estimates of the most adjusted group with the overall estimate, we used the overall estimate in the main manuscript.
Publication bias (Egger)
H0: beta1 = 0; no small-study effects
beta1 = 0.73
SE of beta1 = 1.380
z = 0.53
Prob > |z| = 0.5980
Analysis 2.4 Anxiety Disorder

<table>
<thead>
<tr>
<th>Study</th>
<th>exp(ES) with 95% CI</th>
<th>Weight (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taquet 2021</td>
<td>1.13 [1.11, 1.15]</td>
<td>6.64</td>
</tr>
<tr>
<td>Spiliopoulos 2022</td>
<td>1.25 [1.05, 1.48]</td>
<td>6.32</td>
</tr>
<tr>
<td>Snellermc 2022</td>
<td>5.08 [1.21, 21.38]</td>
<td>1.39</td>
</tr>
<tr>
<td>Heterogeneity: $I^2 = 40%$, $H^2 = 33.50$</td>
<td>1.54 [0.28, 8.37]</td>
<td>3.97</td>
</tr>
<tr>
<td>Test of $6 \times 8$: $Q(2) = 5.49$, $p = 0.06$</td>
<td>1.09, $p = 0.39$</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jacob 2022</td>
<td>0.94 [0.83, 1.07]</td>
<td>6.46</td>
</tr>
<tr>
<td>Heterogeneity: $I^2 = 0.00$, $H^2 = 1.00$</td>
<td>0.94 [0.83, 1.07]</td>
<td>3.97</td>
</tr>
<tr>
<td>Test of $6 \times 8$: $Q(0) = 0.00$, $p = 0.00$</td>
<td>1.09, $p = 0.39$</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Murata 2022 vs RTI</td>
<td>0.55 [0.34, 0.86]</td>
<td>4.74</td>
</tr>
<tr>
<td>Murata 2022 vs influenza</td>
<td>0.86 [0.50, 1.48]</td>
<td>4.32</td>
</tr>
<tr>
<td>Park 2021</td>
<td>1.53 [1.39, 1.68]</td>
<td>6.54</td>
</tr>
<tr>
<td>Abel 2021</td>
<td>1.72 [1.58, 1.87]</td>
<td>6.56</td>
</tr>
<tr>
<td>Whittaker 2021</td>
<td>1.74 [1.38, 2.13]</td>
<td>6.06</td>
</tr>
<tr>
<td>Heterogeneity: $I^2 = 22%$, $H^2 = 34.66$</td>
<td>1.22 [0.66, 2.26]</td>
<td>3.97</td>
</tr>
<tr>
<td>Test of $6 \times 8$: $Q(4) = 28.94$, $p = 0.00$</td>
<td>1.09, $p = 0.39$</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Magnusdottir 2022</td>
<td>0.97 [0.91, 1.03]</td>
<td>6.60</td>
</tr>
<tr>
<td>Coleman 2021</td>
<td>1.00 [0.91, 1.10]</td>
<td>6.54</td>
</tr>
<tr>
<td>Heterogeneity: $I^2 = 0.00$, $H^2 = 1.03$</td>
<td>0.98 [0.82, 1.17]</td>
<td>3.97</td>
</tr>
<tr>
<td>Test of $6 \times 8$: $Q(1) = 0.28$, $p = 0.60$</td>
<td>1.09, $p = 0.39$</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chevinisky 2021 - outpatient</td>
<td>0.81 [0.64, 1.02]</td>
<td>6.06</td>
</tr>
<tr>
<td>Patel 2022 - outpatient cohort</td>
<td>0.82 [0.72, 0.94]</td>
<td>6.44</td>
</tr>
<tr>
<td>Patel 2022 - hospitalised cohort</td>
<td>1.30 [1.06, 1.67]</td>
<td>5.69</td>
</tr>
<tr>
<td>Al-Aly 2022</td>
<td>1.35 [1.31, 1.40]</td>
<td>6.63</td>
</tr>
<tr>
<td>Daughterty 2021</td>
<td>1.42 [1.32, 1.53]</td>
<td>6.58</td>
</tr>
<tr>
<td>Wong 2022b</td>
<td>2.08 [1.82, 2.38]</td>
<td>6.44</td>
</tr>
<tr>
<td>Heterogeneity: $I^2 = 12%$, $H^2 = 50.56$</td>
<td>1.23 [0.84, 1.80]</td>
<td>3.97</td>
</tr>
<tr>
<td>Test of $6 \times 8$: $Q(5) = 114.30$, $p = 0.00$</td>
<td>1.09, $p = 0.39$</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heterogeneity: $I^2 = 14%$, $H^2 = 103.51$</td>
<td>1.20 [0.99, 1.45]</td>
<td>3.97</td>
</tr>
<tr>
<td>Test of $6 \times 8$: $Q(16) = 411.03$, $p = 0.00$</td>
<td>1.09, $p = 0.39$</td>
<td></td>
</tr>
<tr>
<td>Test of group differences: $Q(4) = 5.06$, $p = 0.28$</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Meta-regression and testing for publication are not possible (<10 studies per variable). As there is little variation in effect estimates of the most adjusted group with the overall estimate, we used the overall estimate in the main manuscript.
Publication bias (Egger)

H0: beta1 = 0; no small-study effects

beta1 = 0.39
SE of beta1 = 0.964
z = 0.40
Prob > |z| = 0.6870
Analysis 2.5. Panic Disorder

<table>
<thead>
<tr>
<th>Study</th>
<th>exp(ES) with 95% CI</th>
<th>Weight (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patel 2022 - outpatient cohort</td>
<td>0.59 [0.46, 0.74]</td>
<td>35.92</td>
</tr>
<tr>
<td>Patel 2022 - hospitalised cohort</td>
<td>1.11 [0.71, 1.74]</td>
<td>32.90</td>
</tr>
<tr>
<td>Wang 2022b</td>
<td>2.30 [1.33, 3.98]</td>
<td>31.18</td>
</tr>
</tbody>
</table>

Heterogeneity: $\tau^2 = 0.41$, $I^2 = 90.75\%$, $H^2 = 10.81$
Test of $\theta = 0$: $Q(2) = 22.94$, $p = 0.00$
Test of $\theta = 0$: $t(2) = 0.26$, $p = 0.82$

Overall

Heterogeneity: $\tau^2 = 0.41$, $I^2 = 90.75\%$, $H^2 = 10.81$
Test of $\theta = 0$: $Q(2) = 22.94$, $p = 0.00$
Test of $\theta = 0$: $t(2) = 0.26$, $p = 0.82$
Test of group differences: $Q_0(0) = 0.00$, $p = .$

Random-effects Sidik–Jonkman model
Knapp–Hartung standard errors
Sorted by: effect

Meta-regression and testing for publication are not possible (<10 studies per variable). All studies were fully adjusted.
Analysis 2.6 Post-Traumatic Stress Disorder

<table>
<thead>
<tr>
<th>Study</th>
<th>exp(ES) with 95% CI</th>
<th>Weight (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patel 2022 - outpatient cohort</td>
<td>0.78 [0.69, 0.88]</td>
<td>27.84</td>
</tr>
<tr>
<td>Patel 2022 - hospitalised cohort</td>
<td>1.20 [0.94, 1.52]</td>
<td>26.71</td>
</tr>
<tr>
<td>Daugherty 2021</td>
<td>1.42 [1.09, 1.85]</td>
<td>26.33</td>
</tr>
<tr>
<td>Heterogeneity: $I^2 = 0.26$, $H^2 = 94.45%$, $F^2 = 18.03$</td>
<td>1.33 [0.56, 3.14]</td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = \theta_0$: $Q(3) = 34.43$, $p = 0.00$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$: $t(3) = 1.06$, $p = 0.37$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall</td>
<td>1.33 [0.56, 3.14]</td>
<td></td>
</tr>
<tr>
<td>Heterogeneity: $I^2 = 0.26$, $H^2 = 94.45%$, $F^2 = 18.03$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = \theta_0$: $Q(3) = 34.43$, $p = 0.00$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$: $t(3) = 1.06$, $p = 0.37$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of group differences: $Q_g(0) = 0.00$, $p = .$.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Random-effects Sidik–Jonkman model
Knapp–Hartung standard errors
Sorted by: effect

Meta-regression and testing for publication are not possible (<10 studies per variable). All studies were fully adjusted.
Analysis 2.7 Psychosis

<table>
<thead>
<tr>
<th>Study</th>
<th>exp(ES)</th>
<th>Weight (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>with 95% CI</td>
<td></td>
</tr>
<tr>
<td>Taquet 2021</td>
<td>1.27 [1.18, 1.37]</td>
<td>12.86</td>
</tr>
<tr>
<td>Heterogeneity: $\tau^2 = 0.00$, $I^2 = .$, $H^2 = .$.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = \delta$; $Q(0) = -0.00$, $p = .$.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$: $t(0) = 6.28$, $p = .$.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Park 2021</td>
<td>0.71 [0.56, 0.91]</td>
<td>12.28</td>
</tr>
<tr>
<td>Murata 2022 - vs RTI</td>
<td>0.84 [0.54, 1.31]</td>
<td>11.07</td>
</tr>
<tr>
<td>Abel 2021</td>
<td>1.00 [0.76, 1.33]</td>
<td>12.11</td>
</tr>
<tr>
<td>Park 2021</td>
<td>1.00 [0.58, 1.73]</td>
<td>10.30</td>
</tr>
<tr>
<td>Heterogeneity: $\tau^2 = 0.14$, $I^2 = 78.91%$, $H^2 = 4.74$.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = \delta$; $Q(4) = 13.60$, $p = 0.01$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$: $t(4) = 0.09$, $p = 0.93$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heterogeneity: $\tau^2 = 0.00$, $I^2 = .$, $H^2 = .$.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = \delta$; $Q(0) = 0.00$, $p = .$.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$: $t(0) = 4.30$, $p = .$.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cohen 2022</td>
<td>2.14 [1.64, 2.79]</td>
<td>12.19</td>
</tr>
<tr>
<td>Wang 2022b</td>
<td>2.26 [1.28, 3.99]</td>
<td>10.14</td>
</tr>
<tr>
<td>Heterogeneity: $\tau^2 = 0.00$, $I^2 = 0.05%$, $H^2 = 1.00$.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = \delta$; $Q(1) = 0.03$, $p = 0.86$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$: $t(1) = 35.95$, $p = 0.02$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall</td>
<td>1.44 [0.92, 2.27]</td>
<td></td>
</tr>
</tbody>
</table>

Random-effects Sidik–Jonkman model
Knapp–Hartung standard errors
Sorted by: effect

Meta-regression and testing for publication are not possible (<10 studies per variable). We used the most adjusted estimate in the manuscript.
Analysis 2.8 Any Substance Abuse Disorder

<table>
<thead>
<tr>
<th>Study</th>
<th>exp(ES) with 95% CI</th>
<th>Weight (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Park 2021</td>
<td>0.87 [0.51, 1.48]</td>
<td>18.78</td>
</tr>
<tr>
<td>Heterogeneity: $\tau^2 = 0.00$, $I^2 = 0%$, $H^2 = 0$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$: $Q(0) = -0.00$, $p = .$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$: $t(0) = -0.50$, $p = .$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Al-Aly 2022d</td>
<td>1.20 [1.15, 1.26]</td>
<td>43.12</td>
</tr>
<tr>
<td>Wang 2022b</td>
<td>1.59 [1.34, 1.89]</td>
<td>38.10</td>
</tr>
<tr>
<td>Heterogeneity: $\tau^2 = 0.03$, $I^2 = 88.50%$, $H^2 = 0.32$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$: $Q(1) = 9.34$, $p = 0.00$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$: $t(1) = 2.21$, $p = 0.27$</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Overall</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heterogeneity: $\tau^2 = 0.06$, $I^2 = 87.90%$, $H^2 = 8.26$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$: $Q(2) = 10.88$, $p = 0.00$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$: $t(2) = 1.50$, $p = 0.27$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of group differences: $Q_A(1) = 2.17$, $p = 0.14$</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Random-effects Sidik–Jonkman model
Knapp–Hartung standard errors
Sorted by: effect

Meta-regression and testing for publication are not possible (<10 studies per variable). As there is little variation in effect estimates of the most adjusted group with the overall estimate, we used the overall estimate in the main manuscript.
## Analysis 2.9 Alcohol Abuse Disorder

<table>
<thead>
<tr>
<th>Study</th>
<th>exp(ES)</th>
<th>Weight (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>with 95% CI</td>
<td></td>
</tr>
<tr>
<td>4 OhTk 2020</td>
<td>2.21 [1.40, 3.48]</td>
<td>27.32</td>
</tr>
<tr>
<td></td>
<td>2.21 [1.40, 3.48]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Test of $\theta = \delta$; $Q(0) = 0.00$, $p = .$. $t(0) = 3.41$, $p = .$.</td>
<td></td>
</tr>
<tr>
<td>5 Wang 2022b</td>
<td>2.50 [1.90, 3.29]</td>
<td>72.68</td>
</tr>
<tr>
<td></td>
<td>2.50 [1.90, 3.29]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Test of $\theta = \delta$; $Q(0) = 0.00$, $p = .$. $t(0) = 6.51$, $p = .$.</td>
<td></td>
</tr>
<tr>
<td>Overall</td>
<td>2.42 [1.60, 4.86]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.42 [1.60, 4.86]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Test of group differences: $Q_A(1) = 0.21$, $p = 0.65$.</td>
<td></td>
</tr>
</tbody>
</table>

Meta-regression and testing for publication are not possible (<10 studies per variable). As there is little variation in effect estimates of the most adjusted group with the overall estimate, we used the overall estimate in the main manuscript.
Analysis 3.1 Any cardiovascular disorder

<table>
<thead>
<tr>
<th>Study</th>
<th>exp(ES) with 95% CI</th>
<th>Weight (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xiong 2021</td>
<td>23.94 [3.30, 173.57]</td>
<td>9.18</td>
</tr>
<tr>
<td>Heterogeneity: $\tau^2 = 0.00$, $I^2 = 70%$, $H^2 = 1.00$</td>
<td>23.94 [3.30, 173.57]</td>
<td>9.18</td>
</tr>
<tr>
<td>Test of $\theta = 0$; Q(0) = -0.00, $p = .$</td>
<td>23.94 [3.30, 173.57]</td>
<td>9.18</td>
</tr>
<tr>
<td>Test of $\theta = 0$; t(0) = 3.14, $p = .$</td>
<td>23.94 [3.30, 173.57]</td>
<td>9.18</td>
</tr>
<tr>
<td>Rezel-Potts 2022</td>
<td>0.80 [0.73, 0.88]</td>
<td>18.16</td>
</tr>
<tr>
<td>Heterogeneity: $\tau^2 = 0.00$, $I^2 = 70%$, $H^2 = 1.00$</td>
<td>0.80 [0.73, 0.88]</td>
<td>18.16</td>
</tr>
<tr>
<td>Test of $\theta = 0$; Q(0) = 0.00, $p = .$</td>
<td>0.80 [0.73, 0.88]</td>
<td>18.16</td>
</tr>
<tr>
<td>Test of $\theta = 0$; t(0) = -4.68, $p = .$</td>
<td>0.80 [0.73, 0.88]</td>
<td>18.16</td>
</tr>
<tr>
<td>Wang 2022a</td>
<td>1.55 [1.53, 1.58]</td>
<td>18.19</td>
</tr>
<tr>
<td>Heterogeneity: $\tau^2 = 0.00$, $I^2 = 70%$, $H^2 = 1.00$</td>
<td>1.55 [1.53, 1.58]</td>
<td>18.19</td>
</tr>
<tr>
<td>Test of $\theta = 0$; Q(0) = 0.00, $p = .$</td>
<td>1.55 [1.53, 1.58]</td>
<td>18.19</td>
</tr>
<tr>
<td>Test of $\theta = 0$; t(0) = 51.42, $p = .$</td>
<td>1.55 [1.53, 1.58]</td>
<td>18.19</td>
</tr>
<tr>
<td>Al-Aly 2022 - vaccinated</td>
<td>1.51 [1.46, 1.57]</td>
<td>18.19</td>
</tr>
<tr>
<td>Al-Aly 2022 - unvaccinated</td>
<td>1.57 [1.54, 1.61]</td>
<td>18.19</td>
</tr>
<tr>
<td>Ayyoubkhan 2021</td>
<td>4.97 [4.25, 5.82]</td>
<td>18.08</td>
</tr>
<tr>
<td>Heterogeneity: $\tau^2 = 0.45$, $I^2 = 99.90%$, $H^2 = 1002.84$</td>
<td>2.27 [0.42, 12.15]</td>
<td>18.08</td>
</tr>
<tr>
<td>Test of $\theta = 0$; Q(2) = 212.43, $p = 0.00$</td>
<td>2.27 [0.42, 12.15]</td>
<td>18.08</td>
</tr>
<tr>
<td>Test of $\theta = 0$; t(2) = 2.10, $p = 0.17$</td>
<td>2.27 [0.42, 12.15]</td>
<td>18.08</td>
</tr>
<tr>
<td>Overall</td>
<td>2.18 [0.73, 6.47]</td>
<td>6.47</td>
</tr>
<tr>
<td>Heterogeneity: $\tau^2 = 1.04$, $I^2 = 99.97%$, $H^2 = 3036.61$</td>
<td>2.18 [0.73, 6.47]</td>
<td>6.47</td>
</tr>
<tr>
<td>Test of $\theta = 0$; Q(5) = 416.07, $p = 0.00$</td>
<td>2.18 [0.73, 6.47]</td>
<td>6.47</td>
</tr>
<tr>
<td>Test of $\theta = 0$; t(5) = 1.84, $p = 0.13$</td>
<td>2.18 [0.73, 6.47]</td>
<td>6.47</td>
</tr>
<tr>
<td>Test of group differences: $Q_c(3) = 195.70$, $p = 0.00$</td>
<td>2.18 [0.73, 6.47]</td>
<td>6.47</td>
</tr>
</tbody>
</table>

Random-effects Sidik–Jonkman model
Knapp–Hartung standard errors
Sorted by: effect

Meta-regression and testing for publication are not possible (<10 studies per variable). As there is little variation in effect estimates of the most adjusted group with the overall estimate, we used the overall estimate in the main manuscript.
Analysis 3.2 Hypertension

Meta-regression and testing for publication are not possible (<10 studies per variable). As there is little variation in effect estimates of the most adjusted group with the overall estimate, we used the overall estimate in the main manuscript.
Analysis 3.3 Pulmonary Hypertension

<table>
<thead>
<tr>
<th>Study</th>
<th>exp(ES) with 95% CI</th>
<th>Weight (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cohen 2022</td>
<td>1.28 [1.12, 1.46]</td>
<td>52.81</td>
</tr>
<tr>
<td>Daugherty 2021</td>
<td>3.20 [2.07, 4.95]</td>
<td>47.19</td>
</tr>
</tbody>
</table>

Test of $\theta = \theta_0$; $Q(1) = 15.48, p = 0.00$
Test of $\theta = 0$: $t(1) = 1.49, p = 0.38$

Overall

Heterogeneity: $I^2 = 93.20\%$, $H^2 = 14.71$
Test of $\theta = \theta_0$; $Q(1) = 15.48, p = 0.00$
Test of $\theta = 0$: $t(1) = 1.49, p = 0.38$
Test of group differences: $Q(0) = 0.00, p = .$

Random-effects Sidik–Jonkman model
Knapp–Hartung standard errors
Sorted by: effect

Meta-regression and testing for publication are not possible (<10 studies per variable). All studies were fully adjusted.
Analysis 3.4 Heart Failure

<table>
<thead>
<tr>
<th>Study</th>
<th>exp(ES) with 95% CI</th>
<th>Weight (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Priyadarshni 2022</td>
<td>0.50 [0.47, 0.54]</td>
<td>10.68</td>
</tr>
<tr>
<td>SnellerMc 2022</td>
<td>1.28 [0.11, 14.23]</td>
<td>1.87</td>
</tr>
<tr>
<td>Heterogeneity: $t^2 = 0.10$, $I^2 = 11.27%$, $H^2 = 1.19$</td>
<td>0.53 [0.03, 8.23]</td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$: $Q(1) = 0.57$, $p = 0.45$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$: $t(1) = -2.94$, $p = 0.21$</td>
<td></td>
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</tr>
<tr>
<td>Lund 2021</td>
<td>0.58 [0.23, 1.45]</td>
<td>6.39</td>
</tr>
<tr>
<td>Rezel-Potts 2022</td>
<td>0.72 [0.49, 1.06]</td>
<td>9.56</td>
</tr>
<tr>
<td>Heterogeneity: $t^2 = 0.00$, $I^2 = 1.50%$, $H^2 = 1.02$</td>
<td>0.70 [0.26, 1.89]</td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$: $Q(1) = 0.18$, $p = 0.67$</td>
<td></td>
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</tr>
<tr>
<td>Test of $\theta = 0$: $t(1) = -4.61$, $p = 0.14$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knight 2022</td>
<td>1.27 [1.16, 1.40]</td>
<td>10.64</td>
</tr>
<tr>
<td>Wang 2022a</td>
<td>2.30 [2.20, 2.40]</td>
<td>10.70</td>
</tr>
<tr>
<td>Whittaker 2021</td>
<td>3.02 [2.07, 4.41]</td>
<td>9.60</td>
</tr>
<tr>
<td>Heterogeneity: $t^2 = 0.18$, $I^2 = 96.53%$, $H^2 = 67.88$</td>
<td>2.02 [0.68, 6.03]</td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$: $Q(2) = 128.39$, $p = 0.00$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$: $t(2) = 2.77$, $p = 0.11$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patel 2022 - outpatient cohort</td>
<td>0.91 [0.81, 1.02]</td>
<td>10.61</td>
</tr>
<tr>
<td>Patel 2022 - hospitalised cohort</td>
<td>0.93 [0.83, 1.03]</td>
<td>10.62</td>
</tr>
<tr>
<td>Chevinsky Jr 2021 - outpatient</td>
<td>1.10 [0.73, 1.66]</td>
<td>9.41</td>
</tr>
<tr>
<td>Daugherty 2021</td>
<td>2.62 [1.91, 3.59]</td>
<td>9.92</td>
</tr>
<tr>
<td>Heterogeneity: $t^2 = 0.23$, $I^2 = 96.75%$, $H^2 = 30.74$</td>
<td>1.23 [0.56, 2.73]</td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$: $Q(3) = 40.11$, $p = 0.00$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$: $t(3) = 0.84$, $p = 0.46$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall</td>
<td>1.19 [0.79, 1.79]</td>
<td></td>
</tr>
</tbody>
</table>

Random-effects Sidik-Jonkman model
Knapp-Hartung standard errors
Sorted by: effect

Meta-regression and testing for publication are not possible (<10 studies per variable). As there is little variation in effect estimates of the most adjusted group with the overall estimate, we used the overall estimate in the main manuscript.
Publication bias (Egger)

H0: beta1 = 0; no small-study effects

beta1 = -0.14
SE of beta1 = 1.010
z = -0.14
Prob > |z| = 0.8870
Analysis 3.5 Postural tachycardia syndrome (POTS)

<table>
<thead>
<tr>
<th>Study</th>
<th>exp(ES) with 95% CI</th>
<th>Weight (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cohen 2022</td>
<td>1.43 [1.26, 1.62]</td>
<td>52.63</td>
</tr>
<tr>
<td>Daugherty 2021</td>
<td>2.48 [1.89, 3.25]</td>
<td>47.37</td>
</tr>
</tbody>
</table>

Heterogeneity: $I^2 = 0.13, I^2 = 91.87\%, H^2 = 12.31$
Test of $\theta = \theta_0$; $Q(1) = 13.04, p = 0.00$
Test of $\theta = 0$; $t(1) = 2.25, p = 0.27$

Overall

Heterogeneity: $I^2 = 0.13, I^2 = 91.87\%, H^2 = 12.31$
Test of $\theta = \theta_0$; $Q(1) = 13.04, p = 0.00$
Test of $\theta = 0$; $t(1) = 2.25, p = 0.27$

Test of group differences: $Q(0) = -0.00, p = 1$

Random-effects Sidik-Jonkman model
Knapp-Hartung standard errors
Sorted by: effect

Meta-regression and testing for publication are not possible (<10 studies per variable). All studies were fully adjusted.
**Analysis 3.6. Myocarditis**

<table>
<thead>
<tr>
<th>Study</th>
<th>exp(ES) with 95% CI</th>
<th>Weight (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Priyadarshni 2022</td>
<td>2.73 [1.78, 4.17]</td>
<td>18.53</td>
</tr>
<tr>
<td>Heterogeneity: τ² = 0.00, I² = %, H² = .</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of β = 0; Q(0) = 0.00, p = .</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of β = 0; t(0) = 4.62, p = .</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rezel-Potts 2022</td>
<td>1.11 [0.74, 1.66]</td>
<td>18.62</td>
</tr>
<tr>
<td>Heterogeneity: τ² = 0.00, I² = %, H² = .</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of β = 0; Q(0) = 0.00, p = .</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of β = 0; t(0) = 0.51, p = .</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wang 2022a</td>
<td>4.41 [2.89, 6.72]</td>
<td>18.55</td>
</tr>
<tr>
<td>Heterogeneity: τ² = 0.00, I² = %, H² = .</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of β = 0; Q(0) = 0.00, p = .</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of β = 0; t(0) = 6.89, p = .</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chevinsky Jr 2021 - outpatient</td>
<td>0.82 [0.48, 1.42]</td>
<td>17.99</td>
</tr>
<tr>
<td>Cohen 2022</td>
<td>3.20 [1.17, 8.74]</td>
<td>15.29</td>
</tr>
<tr>
<td>Daugherty 2021</td>
<td>20.97 [3.88, 113.31]</td>
<td>11.02</td>
</tr>
<tr>
<td>Heterogeneity: τ² = 2.13, I² = 89.44%, H² = 3.47</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of β = 0; Q(2) = 16.18, p = 0.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of β = 0; t(2) = 1.30, p = 0.32</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall</td>
<td>2.61 [0.87, 7.82]</td>
<td></td>
</tr>
</tbody>
</table>

Random-effects Sidik–Jonkman model
Knapp–Hartung standard errors
Sorted by: effect

Meta-regression and testing for publication are not possible (<10 studies per variable). We used the most adjusted estimate in the manuscript.
Analysis 3.7 Pericarditis

<table>
<thead>
<tr>
<th>Study</th>
<th>exp(ES) with 95% CI</th>
<th>Weight (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>0.53 [0.25, 1.13]</td>
<td>43.74</td>
</tr>
<tr>
<td>Tuvali 2022</td>
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<td></td>
</tr>
<tr>
<td>Heterogeneity: $\tau^2 = 0.00$, $I^2 = .$, $H^2 = .$.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$; $Q(0) = 0.00$, $p = .$.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$; $t(0) = -1.65$, $p = .$.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>1.62 [1.45, 1.81]</td>
<td>56.26</td>
</tr>
<tr>
<td>Wang 2022a</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heterogeneity: $\tau^2 = 0.00$, $I^2 = .$, $H^2 = .$.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$; $Q(0) = -0.00$, $p = .$.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$; $t(0) = 8.59$, $p = .$.</td>
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<td></td>
</tr>
<tr>
<td>Overall</td>
<td>0.99 [0.00, 1141.90]</td>
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</tr>
<tr>
<td>Heterogeneity: $\tau^2 = 0.50$, $I^2 = 86.93%$, $H^2 = 7.65$.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$; $Q(1) = 8.26$, $p = 0.00$.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$; $t(1) = -0.01$, $p = 0.99$.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of group differences: $Q_g(1) = 8.26$, $p = 0.00$.</td>
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<td></td>
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</tbody>
</table>

Random-effects Sidik–Jonkman model
Knapp–Hartung standard errors
Sorted by: effect

Meta-regression and testing for publication are not possible (<10 studies per variable). We used the most adjusted estimate in the manuscript.
Analysis 3.8 Myocardial infarction

<table>
<thead>
<tr>
<th>Study</th>
<th>exp(ES) with 95% CI</th>
<th>Weight (%)</th>
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</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Priyadarshini 2022</td>
<td>0.87 [0.80, 0.95]</td>
<td>11.64</td>
</tr>
<tr>
<td>Heterogeneity: $I^2 = 0.00$, $P = .$, $H^2 = .$.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = \theta_0$: $Q(0) = 0.00$, $p = .$.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$: $t(0) = -3.29$, $p = .$.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rezel-Potts 2022</td>
<td>0.80 [0.66, 0.97]</td>
<td>11.15</td>
</tr>
<tr>
<td>Heterogeneity: $I^2 = 0.00$, $P = .$, $H^2 = .$.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = \theta_0$: $Q(0) = 0.00$, $p = .$.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$: $t(0) = -2.21$, $p = .$.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knight 2022</td>
<td>1.21 [1.03, 1.42]</td>
<td>11.36</td>
</tr>
<tr>
<td>Wang 2022a</td>
<td>1.98 [1.63, 2.14]</td>
<td>11.65</td>
</tr>
<tr>
<td>Whittaker 2021</td>
<td>2.47 [1.72, 3.55]</td>
<td>9.95</td>
</tr>
<tr>
<td>Heterogeneity: $I^2 = 0.11$, $P = 94.42%$, $H^2 = 17.92$.</td>
<td>1.77 [0.72, 4.35]</td>
<td>11.11</td>
</tr>
<tr>
<td>Test of $\theta = \theta_0$: $Q(2) = 33.16$, $p = 0.00$.</td>
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<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$: $t(2) = 2.75$, $p = 0.11$.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patel 2022 - outpatient cohort</td>
<td>0.80 [0.72, 0.89]</td>
<td>11.56</td>
</tr>
<tr>
<td>Patel 2022 - hospitalised cohort</td>
<td>1.02 [0.92, 1.14]</td>
<td>11.55</td>
</tr>
<tr>
<td>Cohen 2022</td>
<td>1.35 [1.18, 1.54]</td>
<td>11.48</td>
</tr>
<tr>
<td>Daugherty 2021</td>
<td>2.45 [1.65, 3.64]</td>
<td>9.67</td>
</tr>
<tr>
<td>Heterogeneity: $I^2 = 0.20$, $P = 97.63%$, $H^2 = 42.12$.</td>
<td>1.25 [0.59, 2.63]</td>
<td>11.48</td>
</tr>
<tr>
<td>Test of $\theta = \theta_0$: $Q(3) = 55.88$, $p = 0.00$.</td>
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<tr>
<td>Test of $\theta = 0$: $t(3) = 0.95$, $p = 0.41$.</td>
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</tr>
<tr>
<td>Overall</td>
<td>1.28 [0.91, 1.81]</td>
<td></td>
</tr>
<tr>
<td>Heterogeneity: $I^2 = 0.19$, $P = 97.92%$, $H^2 = 48.00$.</td>
<td></td>
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</tr>
<tr>
<td>Test of $\theta = \theta_0$: $Q(8) = 328.25$, $p = 0.00$.</td>
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<tr>
<td>Test of $\theta = 0$: $t(8) = 1.66$, $p = 0.14$.</td>
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<tr>
<td>Test of group differences: $Q_0(3) = 14.81$, $p = 0.00$.</td>
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</tr>
</tbody>
</table>

Random-effects Sidik-Jonkman model
Knapp-Hartung standard errors
Sorted by: effect

Meta-regression and testing for publication are not possible (<10 studies per variable). As there is little variation in effect estimates of the most adjusted group with the overall estimate, we used the overall estimate in the main manuscript.
Analysis 3.9 Cardiogenic shock

<table>
<thead>
<tr>
<th>Study</th>
<th>exp(ES) with 95% CI</th>
<th>Weight (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wang 2022a</td>
<td>1.99 [1.60, 2.47]</td>
<td>35.08</td>
</tr>
<tr>
<td></td>
<td>1.99 [1.60, 2.47]</td>
<td></td>
</tr>
<tr>
<td>Heterogeneity: τ² = 0.00, I² = 0%, H² = .</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of θ = 0; Q(0) = 0.00, p = .</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of θ = 0; t(0) = 6.18, p = .</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chevinsky Jr 2021 - inpatient</td>
<td>0.69 [0.47, 1.01]</td>
<td>32.29</td>
</tr>
<tr>
<td>Cohen 2022</td>
<td>1.60 [1.12, 2.30]</td>
<td>32.63</td>
</tr>
<tr>
<td>Heterogeneity: τ² = 0.06, I² = 22.2%, H² = 69.96</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of θ = 0; Q(1) = 10.03, p = 0.00</td>
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<td></td>
</tr>
<tr>
<td>Test of θ = 0; t(1) = 0.13, p = 0.92</td>
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<td></td>
</tr>
<tr>
<td>Overall</td>
<td>1.05 [0.90, 1.22]</td>
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</tr>
<tr>
<td>Heterogeneity: τ² = 0.27, I² = 91.46%, H² = 11.71</td>
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</tr>
<tr>
<td>Test of θ = 0; Q(2) = 22.69, p = 0.00</td>
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<td></td>
</tr>
<tr>
<td>Test of θ = 0; t(2) = 0.86, p = 0.48</td>
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<td></td>
</tr>
<tr>
<td>Test of group differences: Qg(1) = 2.25, p = 0.13</td>
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</tr>
</tbody>
</table>

Random-effects Sidik–Jonkman model
Knapp–Hartung standard errors
Sorted by: effect

Meta-regression and testing for publication are not possible (<10 studies per variable). We used the most adjusted estimate in the manuscript.
## Analysis 3.10 Cardiomyopathy

<table>
<thead>
<tr>
<th>Study</th>
<th>exp(ES) with 95% CI</th>
<th>Weight (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>4</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wang 2022a</td>
<td>2.41 [2.23, 2.61]</td>
<td>66.92</td>
</tr>
<tr>
<td>Heterogeneity</td>
<td>$\tau^2 = 0.00$, $I^2 = .$, $H^2 = .$.</td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$: $Q(0) = 0.00$, $p = .$.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$: $t(0) = 22.48$, $p = .$.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>5</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daugherty 2021</td>
<td>3.27 [2.32, 4.61]</td>
<td>33.08</td>
</tr>
<tr>
<td>Heterogeneity</td>
<td>$\tau^2 = 0.00$, $I^2 = .$, $H^2 = .$.</td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$: $Q(0) = -0.00$, $p = .$.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$: $t(0) = 6.74$, $p = .$.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall</td>
<td>2.67 [0.43, 16.42]</td>
<td></td>
</tr>
<tr>
<td>Heterogeneity</td>
<td>$\tau^2 = 0.03$, $I^2 = 62.61%$, $H^2 = 2.67$.</td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$: $Q(1) = 2.85$, $p = 0.09$.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$: $t(1) = 6.86$, $p = 0.09$.</td>
<td></td>
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<tr>
<td>Test of group differences: $Q_g(1) = 2.85$, $p = 0.09$.</td>
<td>2.23</td>
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</tr>
</tbody>
</table>

Random-effects Sidik–Jonkman model
Knapp–Hartung standard errors
Sorted by: effect

Meta-regression and testing for publication are not possible (<10 studies per variable). We used the most adjusted estimate in the manuscript.
Analysis 3.11 Peripheral artery disease

Meta-regression and testing for publication are not possible (<10 studies per variable). As there is little variation in effect estimates of the most adjusted group with the overall estimate, we used the overall estimate in the main manuscript.
Analysis 3.12 Deep vein thrombosis

<table>
<thead>
<tr>
<th>Study</th>
<th>exp(ES) with 95% CI</th>
<th>Weight (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rezel-Potts 2022</td>
<td>0.88 [ 0.71, 1.10]</td>
<td>19.97</td>
</tr>
<tr>
<td>Heterogeneity:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$I^2 = 0.00$, $H^2 = .$.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$: $Q(0) = 0.00$, $p = .$.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$: $I(0) = 1.14$, $p = .$.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wang 2022a</td>
<td>1.88 [ 1.75, 2.02]</td>
<td>20.82</td>
</tr>
<tr>
<td>Knight 2022</td>
<td>1.99 [ 1.49, 2.65]</td>
<td>19.32</td>
</tr>
<tr>
<td>Heterogeneity:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$I^2 = 0.00$, $H^2 = .96%$, $H^2 = 1.01$.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$: $Q(1) = 0.14$, $p = 0.70$.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$: $I(1) = 46.12$, $p = 0.01$.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cohen 2022</td>
<td>2.81 [ 2.44, 3.23]</td>
<td>20.53</td>
</tr>
<tr>
<td>Daugherty 2021</td>
<td>3.50 [ 2.63, 4.65]</td>
<td>19.35</td>
</tr>
<tr>
<td>Heterogeneity:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$I^2 = 0.01$, $H^2 = .4709%$, $H^2 = 1.89$.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$: $Q(1) = 1.85$, $p = 0.17$.</td>
<td></td>
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</tr>
<tr>
<td>Test of $\theta = 0$: $I(1) = 10.65$, $p = 0.06$.</td>
<td></td>
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</tr>
<tr>
<td>Overall</td>
<td>2.00 [ 1.04, 3.83]</td>
<td></td>
</tr>
<tr>
<td>Heterogeneity:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$I^2 = 0.26$, $H^2 = .9742%$, $H^2 = 38.75$.</td>
<td></td>
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<tr>
<td>Test of $\theta = 0$: $Q(4) = 94.53$, $p = 0.00$.</td>
<td></td>
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</tr>
<tr>
<td>Test of $\theta = 0$: $I(4) = 2.96$, $p = 0.04$.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of group differences: $Q(2) = 66.44$, $p = 0.00$.</td>
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</tr>
</tbody>
</table>

Random-effects Sidik–Jonkmann model
Knapp–Hartung standard errors
Sorted by: effect

Meta-regression and testing for publication are not possible (<10 studies per variable). We used the most adjusted estimate in the manuscript.
Analysis 3.13 Pulmonary embolism

<table>
<thead>
<tr>
<th>Study</th>
<th>exp(ES) with 95% CI</th>
<th>Weight (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rezel-Potts 2022</td>
<td>0.66 [0.50, 0.87]</td>
<td>10.09</td>
</tr>
<tr>
<td>Lund 2021</td>
<td>1.77 [1.09, 2.87]</td>
<td>9.52</td>
</tr>
<tr>
<td>Heterogeneity: I^2 = 8.41%, H^4 = 33.65%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of θ: Q(1) = 12.09, p = 0.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of θ = 0: t(1) = 0.11, p = 0.93</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knight 2022</td>
<td>1.61 [1.23, 2.11]</td>
<td>10.10</td>
</tr>
<tr>
<td>Wang 2022a</td>
<td>2.65 [2.44, 2.87]</td>
<td>10.37</td>
</tr>
<tr>
<td>Heterogeneity: I^2 = 1.44%, I^4 = 99.06%, H^4 = 106.62</td>
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<tr>
<td>Test of θ: Q(2) = 107.49, p = 0.00</td>
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<td>Test of θ = 0: t(2) = 2.01, p = 0.18</td>
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<tr>
<td>5</td>
<td></td>
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<tr>
<td>Chevinsky Jr 2021 - inpatient</td>
<td>1.20 [0.69, 2.08]</td>
<td>9.29</td>
</tr>
<tr>
<td>Patel 2022 - hospitalised cohort</td>
<td>2.00 [1.77, 2.27]</td>
<td>10.33</td>
</tr>
<tr>
<td>Patel 2022 - outpatient cohort</td>
<td>2.36 [2.07, 2.72]</td>
<td>10.32</td>
</tr>
<tr>
<td>Cohen 2022</td>
<td>2.79 [2.33, 3.35]</td>
<td>10.26</td>
</tr>
<tr>
<td>Heterogeneity: I^2 = 0.12%, I^4 = 92.50%, H^4 = 13.32</td>
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<tr>
<td>Test of θ: Q(4) = 20.05, p = 0.00</td>
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<td></td>
</tr>
<tr>
<td>Test of θ = 0: t(4) = 5.10, p = 0.01</td>
<td></td>
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</tr>
<tr>
<td>Overall</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heterogeneity: I^2 = 0.66%, I^4 = 98.65%, H^4 = 74.19</td>
<td></td>
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<tr>
<td>Test of θ: Q(9) = 226.67, p = 0.00</td>
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<tr>
<td>Test of θ = 0: t(9) = 3.22, p = 0.01</td>
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<tr>
<td>Test of group differences: Q(2) = 3.22, p = 0.20</td>
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</table>

Random-effects Sidik-Jonkman model
Knapp-Hartung standard errors
Sorted by: effect

Meta-regression and testing for publication are not possible (<10 studies per variable). As there is little variation in effect estimates of the most adjusted group with the overall estimate, we used the overall estimate in the main manuscript.
Publication bias (Egger)
H0: beta1 = 0; no small-study effects
beta1 = -0.35
SE of beta1 = 3.665
z = -0.09
Prob > |z| = 0.9247
Analysis 3.14 Ischemic stroke

<table>
<thead>
<tr>
<th>Study</th>
<th>exp(ES) with 95% CI</th>
<th>Weight (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1.11 [1.06, 1.17]</td>
<td>14.99</td>
</tr>
<tr>
<td></td>
<td>Heterogeneity: $t^2 = 0.00$, $I^2 = %$</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Test of $\theta = 0$; $Q(0) = 0.00$, $p = .$.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Test of $\theta = 0$: $Q(1) = 4.14$, $p = .$.</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>0.70 [0.61, 0.81]</td>
<td>14.50</td>
</tr>
<tr>
<td></td>
<td>Heterogeneity: $t^2 = 0.00$, $I^2 = %$</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Test of $\theta = 0$; $Q(0) = 0.00$, $p = .$.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Test of $\theta = 0$: $Q(1) = 4.86$, $p = .$.</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>1.38 [1.13, 1.69]</td>
<td>14.00</td>
</tr>
<tr>
<td></td>
<td>Heterogeneity: $t^2 = 0.00$, $I^2 = 31.18%$, $H^2 = 1.45$</td>
<td></td>
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<tr>
<td></td>
<td>Test of $\theta = 0$; $Q(2) = 1.79$, $p = 0.41$</td>
<td></td>
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<tr>
<td></td>
<td>Test of $\theta = 0$: $Q(1) = 10.39$, $p = 0.01$</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>1.31 [1.18, 1.46]</td>
<td>14.74</td>
</tr>
<tr>
<td></td>
<td>Heterogeneity: $t^2 = 0.00$, $I^2 = %$</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Test of $\theta = 0$; $Q(1) = 14.10$, $p = 0.00$</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Test of $\theta = 0$: $Q(1) = 1.75$, $p = 0.33$</td>
<td></td>
</tr>
<tr>
<td>Overall</td>
<td>1.35 [0.94, 1.92]</td>
<td>12.45</td>
</tr>
<tr>
<td></td>
<td>Heterogeneity: $t^2 = 0.14$, $I^2 = 97.69%$, $H^2 = 42.50$</td>
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<tr>
<td></td>
<td>Test of $\theta = 0$; $Q(6) = 124.64$, $p = 0.00$</td>
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<tr>
<td></td>
<td>Test of $\theta = 0$: $Q(1) = 2.04$, $p = 0.09$</td>
<td></td>
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<tr>
<td></td>
<td>Test of group differences: $Q(3) = 80.74$, $p = 0.00$</td>
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</tr>
</tbody>
</table>

Random-effects Sidik-Jonkman model
Knapp-Hartung standard errors
Sorted by: effect

Meta-regression and testing for publication are not possible (<10 studies per variable). We used the most adjusted estimate in the manuscript.
Analysis 3.15 Hemorrhagic stroke

<table>
<thead>
<tr>
<th>Study</th>
<th>exp(ES) with 95% CI</th>
<th>Weight (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knight 2022</td>
<td>1.80 [1.29, 2.51]</td>
<td>33.44</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cohen 2022</td>
<td>1.44 [1.26, 1.64]</td>
<td>48.80</td>
</tr>
<tr>
<td>Daugherty 2021</td>
<td>2.59 [1.41, 4.75]</td>
<td>17.75</td>
</tr>
<tr>
<td>Overall</td>
<td>1.72 [0.89, 3.31]</td>
<td></td>
</tr>
</tbody>
</table>

Heterogeneity: $\chi^2 = 6.05, P = 0.25, H^2 = 28.6$
Test of $\theta = 0$: $Q(0) = 3.03, p = 0.29$
Test of $\theta = 0$: $t(1) = 2.03, p = 0.09$

Random-effects Sidik-Jonkman model
Knapp-Hartung standard errors
Sorted by: effect

Meta-regression and testing for publication are not possible (<10 studies per variable). As there is little variation in effect estimates of the most adjusted group with the overall estimate, we used the overall estimate in the main manuscript.
Analysis 3.16 Stroke (global)

<table>
<thead>
<tr>
<th>Study</th>
<th>exp(ES) with 95% CI</th>
<th>Weight (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rezel-Potts 2022</td>
<td>0.73 [0.59, 0.90]</td>
<td>13.04</td>
</tr>
<tr>
<td>Lund 2021</td>
<td>1.00 [0.55, 1.82]</td>
<td>9.02</td>
</tr>
<tr>
<td>Heterogeneity: t² = 0.02, F = 23.45%, H² = 1.00</td>
<td>0.78 [0.16, 3.82]</td>
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</tr>
<tr>
<td>Test of θ = 0; Q(1) = 0.95, p = 0.33</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of θ = 0; t(1) = -2.01, p = 0.29</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wang 2022a</td>
<td>1.62 [1.55, 1.69]</td>
<td>13.82</td>
</tr>
<tr>
<td>Whittaker 2021</td>
<td>2.49 [1.73, 3.59]</td>
<td>11.55</td>
</tr>
<tr>
<td>Heterogeneity: t² = 0.07, F = 79.27%, H² = 4.02</td>
<td>1.90 [0.13, 10.12]</td>
<td></td>
</tr>
<tr>
<td>Test of θ = 0; Q(1) = 5.27, p = 0.02</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of θ = 0; t(1) = 3.09, p = 0.20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patel 2022 - outpatient cohort</td>
<td>1.03 [0.88, 1.19]</td>
<td>13.40</td>
</tr>
<tr>
<td>Patel 2022 - hospitalised cohort</td>
<td>1.03 [0.89, 1.21]</td>
<td>13.38</td>
</tr>
<tr>
<td>Cohen 2022</td>
<td>1.31 [1.18, 1.45]</td>
<td>13.65</td>
</tr>
<tr>
<td>Daugherty 2021</td>
<td>2.46 [1.81, 3.35]</td>
<td>12.14</td>
</tr>
<tr>
<td>Heterogeneity: t² = 0.15, F = 95.90%, H² = 24.39</td>
<td>1.34 [0.71, 2.52]</td>
<td></td>
</tr>
<tr>
<td>Test of θ = 0; Q(3) = 31.17, p = 0.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of θ = 0; t(3) = 1.46, p = 0.24</td>
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</tr>
<tr>
<td>Overall</td>
<td>1.33 [0.92, 1.92]</td>
<td></td>
</tr>
</tbody>
</table>

Heterogeneity: t² = 0.17, F = 97.16%, H² = 35.18
Test of θ = 0; Q(7) = 127.70, p = 0.00
Test of θ = 0; t(7) = 1.84, p = 0.11
Test of group differences: Q(2) = 14.14, p = 0.00

Random-effects Sidik-Jonkman model
Knapp-Herstung standard errors
Sorted by: effect

Meta-regression and testing for publication are not possible (<10 studies per variable). As there is little variation in effect estimates of the most adjusted group with the overall estimate, we used the overall estimate in the main manuscript.
Analysis 4.1 Sensory disorder

Meta-regression and testing for publication are not possible (<10 studies per variable). We used the most adjusted estimate in the manuscript.
Analysis 4.2 Cognitive Impairment

Meta-regression and testing for publication are not possible (<10 studies per variable). As there is little variation in effect estimates of the most adjusted group with the overall estimate, we used the overall estimate in the main manuscript.
Analysis 4.3. Dementia

<table>
<thead>
<tr>
<th>Study</th>
<th>exp(ES) with 95% CI</th>
<th>Weight (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taquet 2021</td>
<td>1.33 [1.26, 1.41]</td>
<td>18.44</td>
</tr>
<tr>
<td>Heterogeneity: $\tau^2 = 0.00$, $I^2 = .$, $H^2 = .$</td>
<td></td>
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</tr>
<tr>
<td>Test of $\theta = \theta$: $Q(0) = 0.00, p = .$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$: $t(0) = 9.94, p = .$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Park 2021</td>
<td>0.59 [0.44, 0.78]</td>
<td>16.96</td>
</tr>
<tr>
<td>Heterogeneity: $\tau^2 = 0.00$, $I^2 = .$, $H^2 = .$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = \theta$: $Q(0) = -0.00, p = .$</td>
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<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$: $t(0) = -3.68, p = .$</td>
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</tr>
<tr>
<td>Patel 2022 - outpatient cohort</td>
<td>1.22 [1.01, 1.47]</td>
<td>17.78</td>
</tr>
<tr>
<td>Patel 2022 - hospitalised cohort</td>
<td>1.57 [1.33, 1.84]</td>
<td>17.98</td>
</tr>
<tr>
<td>Cohen 2022</td>
<td>1.60 [1.44, 1.78]</td>
<td>18.27</td>
</tr>
<tr>
<td>Daugherty 2021</td>
<td>3.21 [1.43, 7.22]</td>
<td>10.58</td>
</tr>
<tr>
<td>Heterogeneity: $\tau^2 = 0.09$, $I^2 = 91.67%$, $H^2 = 12.01$</td>
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</tr>
<tr>
<td>Test of $\theta = \theta$: $Q(3) = 9.66, p = 0.02$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$: $t(3) = 2.92, p = 0.06$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall</td>
<td>1.33 [0.79, 2.25]</td>
<td></td>
</tr>
<tr>
<td>Heterogeneity: $\tau^2 = 0.23$, $I^2 = 97.85%$, $H^2 = 46.41$</td>
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<tr>
<td>Test of $\theta = \theta$: $Q(5) = 52.17, p = 0.00$</td>
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<tr>
<td>Test of $\theta = 0$: $t(5) = 1.41, p = 0.22$</td>
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<tr>
<td>Test of group differences: $Q_g(2) = 32.18, p = 0.00$</td>
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</tbody>
</table>

Meta-regression and testing for publication are not possible (<10 studies per variable). As there is little variation in effect estimates of the most adjusted group with the overall estimate, we used the overall estimate in the main manuscript.
Analysis 4.4 Alzheimer’s Disease

Meta-regression and testing for publication are not possible (<10 studies per variable). We used the most adjusted estimate in the manuscript.
Analysis 4.5 Extrapyramidal and movement disorders

<table>
<thead>
<tr>
<th>Study</th>
<th>exp(ES) with 95% CI</th>
<th>Weight (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taquet 2021</td>
<td>1.04 [ 0.92, 1.17]</td>
<td>36.10</td>
</tr>
<tr>
<td>Heterogeneity: $\tau^2 = 0.00$, $I^2 = ., H^2 = .$. Test of $\theta = \theta_0$, $Q(0) = -0.00$, $p = .$. Test of $\theta = 0$, $t(0) = 0.64$, $p = .$.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zarifkar 2022</td>
<td>2.20 [ 1.46, 3.31]</td>
<td>26.87</td>
</tr>
<tr>
<td>Heterogeneity: $\tau^2 = 0.00$, $I^2 = ., H^2 = .$. Test of $\theta = \theta_0$, $Q(0) = 0.00$, $p = .$. Test of $\theta = 0$, $t(0) = 3.78$, $p = .$.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Al-Aly 2022</td>
<td>1.42 [ 1.34, 1.50]</td>
<td>37.03</td>
</tr>
<tr>
<td>Heterogeneity: $\tau^2 = 0.00$, $I^2 = ., H^2 = .$. Test of $\theta = \theta_0$, $Q(0) = 0.00$, $p = .$. Test of $\theta = 0$, $t(0) = 12.19$, $p = .$.</td>
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<td></td>
</tr>
<tr>
<td>Overall</td>
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<td></td>
</tr>
<tr>
<td>Heterogeneity: $\tau^2 = 0.11$, $I^2 = 96.38%$, $H^2 = 27.62$. Test of $\theta = \theta_0$, $Q(2) = 26.65$, $p = 0.00$. Test of $\theta = 0$, $t(2) = 1.71$, $p = 0.23$. Test of group differences: $Q(2) = 26.65$, $p = 0.00$.</td>
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</tr>
<tr>
<td>Random-effects Sidik–Jonkman model Knapp–Hartung standard errors Sorted by: effect</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Meta-regression and testing for publication are not possible (<10 studies per variable). As there is little variation in effect estimates of the most adjusted group with the overall estimate, we used the overall estimate in the main manuscript.
Analysis 4.6 Sleep apnea

Meta-regression and testing for publication are not possible (<10 studies per variable). All studies were fully adjusted.
Analysis 4.7 Other sleep disorders

<table>
<thead>
<tr>
<th>Study</th>
<th>exp(ES) with 95% CI</th>
<th>Weight (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taquet 2021</td>
<td>1.13 [ 1.10, 1.16]</td>
<td>10.92</td>
</tr>
<tr>
<td>Heterogeneity: $\tau^2 = 0.00, I^2 = .%$, $H^2 = .%$</td>
<td>1.13 [ 1.10, 1.16]</td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = \theta_0$: $Q(0) = -0.00, p = .%$</td>
<td>Test of $\theta = 0$: $t(0) = 9.02, p = .%$</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Murata 2022 - vs RTI</td>
<td>0.81 [ 0.59, 1.11]</td>
<td>8.68</td>
</tr>
<tr>
<td>Murata 2022 - vs influenza</td>
<td>1.40 [ 1.00, 1.96]</td>
<td>8.44</td>
</tr>
<tr>
<td>Park 2021</td>
<td>2.09 [ 1.89, 2.32]</td>
<td>10.65</td>
</tr>
<tr>
<td>Heterogeneity: $\tau^2 = 0.21, I^2 = 92.88%$, $H^2 = 14.05$</td>
<td>1.38 [ 0.44, 4.46]</td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = \theta_0$: $Q(2) = 34.33, p = 0.00$</td>
<td>Test of $\theta = 0$: $t(2) = 1.10, p = 0.39$</td>
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</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patel 2022 - outpatient cohort</td>
<td>0.83 [ 0.76, 0.91]</td>
<td>10.73</td>
</tr>
<tr>
<td>ChevinskyJr 2021 - outpatient</td>
<td>0.92 [ 0.67, 1.27]</td>
<td>8.59</td>
</tr>
<tr>
<td>Al-Aly 2022</td>
<td>1.41 [ 1.38, 1.45]</td>
<td>10.93</td>
</tr>
<tr>
<td>Patel 2022 - hospitalised cohort</td>
<td>1.51 [ 1.32, 1.72]</td>
<td>10.45</td>
</tr>
<tr>
<td>Wang 2022b</td>
<td>1.95 [ 1.60, 2.38]</td>
<td>9.90</td>
</tr>
<tr>
<td>Heterogeneity: $\tau^2 = 0.12, I^2 = 97.82%$, $H^2 = 45.77$</td>
<td>1.27 [ 0.82, 1.96]</td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = \theta_0$: $Q(4) = 148.85, p = 0.00$</td>
<td>Test of $\theta = 0$: $t(4) = 1.50, p = 0.21$</td>
<td></td>
</tr>
<tr>
<td>Overall</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heterogeneity: $\tau^2 = 0.11, I^2 = 99.07%$, $H^2 = 107.65$</td>
<td>1.28 [ 0.98, 1.68]</td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = \theta_0$: $Q(8) = 358.98, p = 0.00$</td>
<td>Test of $\theta = 0$: $t(8) = 2.13, p = 0.07$</td>
<td></td>
</tr>
<tr>
<td>Test of group differences: $Q_g(2) = 0.96, p = 0.62$</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Random-effects Sidik–Jonkman model  
Knapp–Hartung standard errors  
Sorted by: effect

Meta-regression and testing for publication are not possible (<10 studies per variable). As there is little variation in effect estimates of the most adjusted group with the overall estimate, we used the overall estimate in the main manuscript.
Publication bias (Egger)

H0: $\beta_1 = 0$; no small-study effects

$\beta_1 = -1.06$

SE of $\beta_1 = 1.888$

$z = -0.56$

Prob > |z| = 0.5750
Analysis 4.8 Peripheral Neuropathy

<table>
<thead>
<tr>
<th>Study</th>
<th>exp(ES) with 95% CI</th>
<th>Weight (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>S Chevinsky 2021 - outpatient</td>
<td>1.10 [0.71, 1.71]</td>
<td>16.60</td>
</tr>
<tr>
<td>Cohen 2022</td>
<td>1.16 [1.02, 1.31]</td>
<td>28.80</td>
</tr>
<tr>
<td>Al-Aly 2022</td>
<td>1.34 [1.29, 1.39]</td>
<td>30.61</td>
</tr>
<tr>
<td>Daugherty 2021</td>
<td>2.05 [1.59, 2.65]</td>
<td>23.99</td>
</tr>
<tr>
<td><strong>Heterogeneity:</strong> τ² = 0.06, I² = 92.13%, H² = 12.71</td>
<td>1.38 [0.89, 2.12]</td>
<td></td>
</tr>
<tr>
<td><strong>Test of θ = 0:</strong> Q(3) = 16.56, p = 0.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Test of θ = 0:</strong> t(3) = 2.35, p = 0.10</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Overall</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Heterogeneity:</strong> τ² = 0.06, I² = 92.13%, H² = 12.71</td>
<td>1.38 [0.89, 2.12]</td>
<td></td>
</tr>
<tr>
<td><strong>Test of θ = 0:</strong> Q(3) = 16.56, p = 0.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Test of θ = 0:</strong> t(3) = 2.35, p = 0.10</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Test of group differences:</strong> Q(0) = -0.00, p = .</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Random-effects Sidik–Jonkman model
Knapp–Hartung standard errors
Sorted by: effect

Meta-regression and testing for publication are not possible (<10 studies per variable). All studies were fully adjusted.
Analysis 4.9 Epilepsy or seizures

<table>
<thead>
<tr>
<th>Study</th>
<th>exp(ES) with 95% CI</th>
<th>Weight (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chevinsky 2021 - outpatient</td>
<td>1.30 [0.65, 2.60]</td>
<td>9.00</td>
</tr>
<tr>
<td>Cohen 2022</td>
<td>1.72 [1.41, 2.10]</td>
<td>30.88</td>
</tr>
<tr>
<td>Daugherty 2021</td>
<td>1.82 [1.28, 2.58]</td>
<td>21.16</td>
</tr>
<tr>
<td>Heterogeneity: $\tau^2 = 0.01, I^2 = 15.80%, H^2 = 1.19$</td>
<td>1.71 [1.32, 2.21]</td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = \theta$: Q(2) = 0.73, p = 0.70</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$: t(2) = 8.93, p = 0.01</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Overall

<table>
<thead>
<tr>
<th>Study</th>
<th>exp(ES) with 95% CI</th>
<th>Weight (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heterogeneity: $\tau^2 = 0.01, I^2 = 15.80%, H^2 = 1.19$</td>
<td>1.71 [1.32, 2.21]</td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = \theta$: Q(2) = 0.73, p = 0.70</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$: t(2) = 8.93, p = 0.01</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Test of group differences: $Q(0) = -0.00, p = .$

Random-effects Sidik–Jonkman model
Knapp–Hartung standard errors
Sorted by: effect

Meta-regression and testing for publication are not possible (<10 studies per variable). All studies were fully adjusted.
Analysis 4.10 Guillain Barré syndrome

Random-effects Sidik–Jonkman model
Knapp–Hartung standard errors
Sorted by: effect

Meta-regression and testing for publication are not possible (<10 studies per variable). We used the most adjusted estimate in the manuscript.
Analysis 4.11 Headaches and Migraines

<table>
<thead>
<tr>
<th>Study</th>
<th>exp(ES) with 95% CI</th>
<th>Weight (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 Chevinsky Jr 2021 - outpatient</td>
<td>1.00 [0.78, 1.27]</td>
<td>17.53</td>
</tr>
<tr>
<td>Cohen 2022</td>
<td>1.03 [0.84, 1.28]</td>
<td>20.21</td>
</tr>
<tr>
<td>Daugherty 2021</td>
<td>1.29 [1.12, 1.48]</td>
<td>27.02</td>
</tr>
<tr>
<td>Al-Aly 2022</td>
<td>1.32 [1.26, 1.39]</td>
<td>35.23</td>
</tr>
</tbody>
</table>

Heterogeneity: $\tau^2 = 0.01$, $I^2 = 73.97\%$, $H^2 = 3.84$
Test of $\theta = 0$: $Q(3) = 9.31$, $p = 0.03$
Test of $\theta = 0$: $t(3) = 2.47$, $p = 0.09$

Overall

Heterogeneity: $\tau^2 = 0.01$, $I^2 = 73.97\%$, $H^2 = 3.84$
Test of $\theta = 0$: $Q(3) = 9.31$, $p = 0.03$
Test of $\theta = 0$: $t(3) = 2.47$, $p = 0.09$
Test of group differences: $Q_a(0) = -0.00$, $p = .$

Random-effects Sidik–Jonkman model
Knapp–Hartung standard errors
Sorted by: effect

Meta-regression and testing for publication are not possible (<10 studies per variable). All studies were fully adjusted.
## Analysis 5.1 Acute kidney injury

<table>
<thead>
<tr>
<th>Study</th>
<th>exp(ES) with 95% CI</th>
<th>Weight (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lund 2021</td>
<td>1.13 [0.86, 1.48]</td>
<td>9.46</td>
</tr>
<tr>
<td>Heterogeneity: $\tau^2 = 0.00$, $I^2 = .$, $H^2 = .$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = \theta_0$; $Q(0) = 0.00$, $p = .$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$; $t(0) = 0.88$, $p = .$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chevinsky Jr 2021 - inpatient</td>
<td>0.56 [0.39, 0.80]</td>
<td>8.67</td>
</tr>
<tr>
<td>Chevinsky Jr 2021 - outpatient</td>
<td>1.00 [0.68, 1.46]</td>
<td>8.46</td>
</tr>
<tr>
<td>Patel 2022 - outpatient cohort</td>
<td>1.34 [1.19, 1.50]</td>
<td>10.50</td>
</tr>
<tr>
<td>Al-Aly 2022 - unvaccinated</td>
<td>1.39 [1.35, 1.44]</td>
<td>10.74</td>
</tr>
<tr>
<td>Birkelo 2021</td>
<td>1.41 [1.26, 1.59]</td>
<td>10.50</td>
</tr>
<tr>
<td>Cohen 2022</td>
<td>1.46 [1.35, 1.59]</td>
<td>10.63</td>
</tr>
<tr>
<td>Al-Aly 2022 - vaccinated</td>
<td>1.49 [1.43, 1.55]</td>
<td>10.73</td>
</tr>
<tr>
<td>Patel 2022 - hospitalised cohort</td>
<td>1.71 [1.58, 1.85]</td>
<td>10.64</td>
</tr>
<tr>
<td>Heterogeneity: $\tau^2 = 0.15$, $I^2 = 99.05%$, $H^2 = 105.34$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = \theta_0$; $Q(0) = 83.77$, $p = 0.00$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$; $t(0) = 2.36$, $p = 0.05$</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Overall</strong></td>
<td>1.35 [1.03, 1.78]</td>
<td></td>
</tr>
<tr>
<td>Heterogeneity: $\tau^2 = 0.14$, $I^2 = 98.83%$, $H^2 = 85.57$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = \theta_0$; $Q(9) = 86.96$, $p = 0.00$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$; $t(9) = 2.47$, $p = 0.04$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of group differences: $Q_g(1) = 1.03$, $p = 0.31$</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Random-effects Sidik–Jonkman model
Knapp–Hartung standard errors
Sorted by: effect

Meta-regression and testing for publication are not possible (<10 studies per variable). As there is little variation in effect estimates of the most adjusted group with the overall estimate, we used the overall estimate in the main manuscript.
Publication bias (Egger)

H0: beta1 = 0; no small-study effects

beta1 = -2.87
SE of beta1 = 1.864
z = -1.54
Prob > |z| = 0.1240
### Analysis 5.2 Chronic kidney disease

<table>
<thead>
<tr>
<th>Study</th>
<th>exp(ES) with 95% CI</th>
<th>Weight (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chevinsky Jr 2021 - outpatient</td>
<td>0.96 [0.64, 1.43]</td>
<td>11.83</td>
</tr>
<tr>
<td>Patel 2022 - outpatient cohort</td>
<td>1.02 [0.90, 1.15]</td>
<td>18.26</td>
</tr>
<tr>
<td>Cohen 2022</td>
<td>1.02 [0.94, 1.11]</td>
<td>18.83</td>
</tr>
<tr>
<td>Patel 2022 - hospitalised cohort</td>
<td>1.30 [1.16, 1.47]</td>
<td>18.33</td>
</tr>
<tr>
<td>Daugherty 2021</td>
<td>1.60 [1.29, 1.98]</td>
<td>16.44</td>
</tr>
<tr>
<td>Ayoubkhani 2021</td>
<td>1.92 [1.55, 2.38]</td>
<td>16.32</td>
</tr>
</tbody>
</table>

Heterogeneity: $\tau^2 = 0.07$, $I^2 = 92.46\%$, $H^2 = 13.27$

Test of $\theta = 0$: $Q(5) = 48.10$, $p = 0.00$

Test of $\theta = 0$: $t(5) = 2.07$, $p = 0.09$

Heterogeneity: $\tau^2 = 0.07$, $I^2 = 92.46\%$, $H^2 = 13.27$

Test of $\theta = 0$: $Q(5) = 48.10$, $p = 0.00$

Test of $\theta = 0$: $t(5) = 2.07$, $p = 0.09$

Test of group differences: $Q_{1}(0) = 0.00$, $p = .$

Random-effects Sidik-Jonkman model
Knapp-Hartung standard errors
Sorted by: effect

Meta-regression and testing for publication are not possible (<10 studies per variable). All studies were fully adjusted.
Analysis 5.3 Fluid and electrolyte disorders

<table>
<thead>
<tr>
<th>Study</th>
<th>exp(ES) with 95% CI</th>
<th>Weight (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chevinsky Jr 2021 - inpatient</td>
<td>0.77 [0.51, 1.17]</td>
<td>28.50</td>
</tr>
<tr>
<td>Patel 2022 - outpatient cohort</td>
<td>1.28 [1.17, 1.40]</td>
<td>35.69</td>
</tr>
<tr>
<td>Patel 2022 - hospitalised cohort</td>
<td>1.88 [1.75, 2.03]</td>
<td>35.81</td>
</tr>
</tbody>
</table>

Heterogeneity: $t^2 = 0.17, I^2 = 98.17\%, H^2 = 54.60$

Test of $\theta = 0$: $Q(2) = 56.33$, $p = 0.00$

Test of $\theta = 0$: $t(2) = 0.95$, $p = 0.44$

Overall

Heterogeneity: $t^2 = 0.17, I^2 = 98.17\%, H^2 = 54.60$

Test of $\theta = 0$: $Q(2) = 56.33$, $p = 0.00$

Test of $\theta = 0$: $t(2) = 0.95$, $p = 0.44$

Test of group differences: $Q(0) = 0.00$, $p = .$

Random-effects Sidik–Jonkman model
Knapp–Hartung standard errors
Sorted by: effect

Meta-regression and testing for publication are not possible (<10 studies per variable). All studies were fully adjusted.
### Analysis 6.1 Liver disorders

<table>
<thead>
<tr>
<th>Study</th>
<th>exp(ES) with 95% CI</th>
<th>Weight (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>4</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whittaker 2021</td>
<td>2.71 [1.92, 3.83]</td>
<td>16.24</td>
</tr>
<tr>
<td>Heterogeneity: $I^2 = 0.00$, $I^2 = %$, $H^2 = %$</td>
<td>2.71 [1.92, 3.83]</td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = \theta$; $Q(0) = -0.00$, $p = . $</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$; $t(0) = 5.66$, $p = . $</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>5</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patel 2022 - outpatient cohort</td>
<td>0.75 [0.66, 0.85]</td>
<td>17.31</td>
</tr>
<tr>
<td>Patel 2022 - hospitalised cohort</td>
<td>1.06 [0.90, 1.24]</td>
<td>17.20</td>
</tr>
<tr>
<td>Cohen 2022</td>
<td>1.26 [1.14, 1.39]</td>
<td>17.38</td>
</tr>
<tr>
<td>Daugherty 2021</td>
<td>1.72 [1.52, 1.94]</td>
<td>17.32</td>
</tr>
<tr>
<td>Heterogeneity: $I^2 = 0.43$, $I^2 = 98.79%$, $H^2 = 82.62$</td>
<td>1.46 [0.63, 3.37]</td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = \theta$; $Q(4) = 112.00$, $p = 0.00$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$; $t(4) = 1.26$, $p = 0.27$</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Overall</strong></td>
<td>1.61 [0.81, 3.20]</td>
<td></td>
</tr>
<tr>
<td>Heterogeneity: $I^2 = 0.40$, $I^2 = 98.47%$, $H^2 = 65.24$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = \theta$; $Q(5) = 132.83$, $p = 0.00$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$; $t(5) = 1.80$, $p = 0.13$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of group differences: $Q(1) = 3.16$, $p = 0.08$</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Random-effects Sidik–Jonkman model
Knapp–Hartung standard errors
Sorted by: effect

Meta-regression and testing for publication are not possible (<10 studies per variable). As there is little variation in effect estimates of the most adjusted group with the overall estimate, we used the overall estimate in the main manuscript.
Analysis 7.1 Lung disorders (general)

<table>
<thead>
<tr>
<th>Study</th>
<th>exp(ES) with 95% CI</th>
<th>Weight (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>2.26 [ 0.00, 1.6e+05]</td>
<td>0.45</td>
</tr>
<tr>
<td></td>
<td>Heterogeneity: $t^2 = 0.00$, $I^2 = .$, $H^2 = .$.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Test of $\theta = 0$: $Q(0) = 0.00$, $p =$ .</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Test of $\theta = 0$: $t(0) = 0.14$, $p =$ .</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>2.01 [ 0.00, 4.48]</td>
<td>12.65</td>
</tr>
<tr>
<td></td>
<td>Heterogeneity: $t^2 = 0.00$, $I^2 = .$, $H^2 = .$.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Test of $\theta = 0$: $Q(0) = 0.00$, $p =$ .</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Test of $\theta = 0$: $t(0) = 1.71$, $p =$ .</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>1.17 [ 1.06, 1.29]</td>
<td>14.71</td>
</tr>
<tr>
<td></td>
<td>Patel 2022 - outpatient cohort</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.50 [ 1.01, 2.24]</td>
<td>14.16</td>
</tr>
<tr>
<td></td>
<td>Chevinsky, Jr 2021 - inpatient</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.90 [ 1.68, 2.15]</td>
<td>14.68</td>
</tr>
<tr>
<td></td>
<td>Patel 2022 - hospitalised cohort</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.53 [ 2.20, 2.92]</td>
<td>14.66</td>
</tr>
<tr>
<td></td>
<td>Cohen 2022</td>
<td></td>
</tr>
<tr>
<td></td>
<td>7.71 [ 4.92, 12.08]</td>
<td>14.01</td>
</tr>
<tr>
<td></td>
<td>Daugherty 2021</td>
<td></td>
</tr>
<tr>
<td></td>
<td>25.35 [ 22.26, 28.87]</td>
<td>14.68</td>
</tr>
<tr>
<td></td>
<td>Ayoukbhani 2021</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Heterogeneity: $t^2 = 1.37$, $I^2 = 99.57%$, $H^2 = 232.16$</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Test of $\theta = 0$: $Q(5) = 1489.16$, $p =$ 0.00</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Test of $\theta = 0$: $t(5) = 2.56$, $p =$ 0.05</td>
<td></td>
</tr>
<tr>
<td>Overall</td>
<td>3.20 [ 1.28, 7.98]</td>
<td>7.98</td>
</tr>
<tr>
<td></td>
<td>Heterogeneity: $t^2 = 1.01$, $I^2 = 99.19%$, $H^2 = 123.39$</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Test of $\theta = 0$: $Q(7) = 1489.90$, $p =$ 0.00</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Test of $\theta = 0$: $t(7) = 3.01$, $p =$ 0.02</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Test of group differences: $Q(2) = 0.72$, $p =$ 0.70</td>
<td></td>
</tr>
</tbody>
</table>

Random-effects Sidik-Jonkman model
Knapp-Hartung standard errors
Sorted by: effect

Meta-regression and testing for publication are not possible (<10 studies per variable). As there is little variation in effect estimates of the most adjusted group with the overall estimate, we used the overall estimate in the main manuscript.
Analysis 7.2 Acute respiratory disorder

<table>
<thead>
<tr>
<th>Study</th>
<th>exp(ES) with 95% CI</th>
<th>Weight (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cohen 2022</td>
<td>1.93 [1.75, 2.13]</td>
<td>53.39</td>
</tr>
<tr>
<td>Daugherty 2021</td>
<td>3.94 [2.73, 5.69]</td>
<td>46.61</td>
</tr>
</tbody>
</table>

Test of $\theta = 0$: $Q(1) = 13.50$, $p = 0.00$
Test of $\theta = 0$: $t(1) = 2.78$, $p = 0.22$

Overall

Test of $\theta = 0$: $Q(1) = 13.50$, $p = 0.00$
Test of $\theta = 0$: $t(1) = 2.78$, $p = 0.22$
Test of group differences: $Q(0) = 0.60$, $p = 0.22$

Random-effects Sidik–Jonkman model
Knapp–Hartung standard errors
Sorted by: effect

Meta-regression and testing for publication are not possible (<10 studies per variable). All studies were fully adjusted.
Analysis 7.3 Chronic respiratory failure

<table>
<thead>
<tr>
<th>Study</th>
<th>exp(ES) with 95% CI</th>
<th>Weight (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cohen 2022</td>
<td>3.59 [3.06, 4.23]</td>
<td>53.93</td>
</tr>
<tr>
<td>Daugherty 2021</td>
<td>12.85 [6.39, 25.84]</td>
<td>46.07</td>
</tr>
</tbody>
</table>

Test of $\theta = 0$: $Q(1) = 12.13$, $p = 0.00$
Test of $\theta = 0$: $t(1) = 2.94$, $p = 0.21$

Overall
Heterogeneity: $I^2 = 91.24\%$, $H^2 = 11.41$
Test of $\theta = 0$: $Q(1) = 12.13$, $p = 0.00$
Test of $\theta = 0$: $t(1) = 2.94$, $p = 0.21$

Test of group differences: $Q(0) = 0.00$, $p = .$

Random-effects Sidik-Jonkman model
Knapp-Hartung standard errors
Sorted by: effect

Meta-regression and testing for publication are not possible (<10 studies per variable). All studies were fully adjusted.
Analysis 7.4 Respiratory failure (unspecified)

Meta-regression and testing for publication are not possible (<10 studies per variable). All studies were fully adjusted.
Analysis 8.1 Coagulation disorders

<table>
<thead>
<tr>
<th>Study</th>
<th>exp(ES)</th>
<th>Weight (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>with 95% CI</td>
<td></td>
</tr>
<tr>
<td>Chevinsky Jr 2021 - inpatient</td>
<td>0.66 [0.45, 0.97]</td>
<td>11.54</td>
</tr>
<tr>
<td>Chevinsky Jr 2021 - outpatient</td>
<td>0.75 [0.46, 1.21]</td>
<td>10.80</td>
</tr>
<tr>
<td>Patel 2022 - outpatient cohort</td>
<td>1.60 [1.35, 1.90]</td>
<td>12.81</td>
</tr>
<tr>
<td>Al-Aly 2022 - unvaccinated</td>
<td>1.64 [1.59, 1.69]</td>
<td>13.14</td>
</tr>
<tr>
<td>Cohen 2022</td>
<td>2.13 [1.94, 2.34]</td>
<td>13.04</td>
</tr>
<tr>
<td>Patel 2022 - hospitalised cohort</td>
<td>2.40 [2.11, 2.72]</td>
<td>12.95</td>
</tr>
<tr>
<td>Daugherty 2021</td>
<td>3.13 [2.55, 3.84]</td>
<td>12.65</td>
</tr>
</tbody>
</table>

Heterogeneity: $I^2 = 99.01\%$, $H^2 = 101.27$

Test of $\theta = 0$: $Q(7) = 158.93$, $p = 0.00$

Test of $\theta = 0$: $t(7) = 2.66$, $p = 0.03$

Overall

Heterogeneity: $I^2 = 99.01\%$, $H^2 = 101.27$

Test of $\theta = 0$: $Q(7) = 158.93$, $p = 0.00$

Test of $\theta = 0$: $t(7) = 2.66$, $p = 0.03$

Test of group differences: $Q(0) = 0.00$, $p = .$

Random-effects Sidik–Jonkman model
Knapp–Hartung standard errors
Sorted by: effect

Meta-regression and testing for publication are not possible (<10 studies per variable). All studies were fully adjusted.
Analysis 8.2 Anemia

<table>
<thead>
<tr>
<th>Study</th>
<th>exp(ES) with 95% CI</th>
<th>Weight (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whittaker 2021</td>
<td>1.97 [1.52, 2.56]</td>
<td>39.60</td>
</tr>
<tr>
<td>Heterogeneity: $\tau^2 = 0.00$, $I^2 = .%$, $H^2 = .%$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = \theta$; $Q(0) = 0.00$, $p = .%$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$: $t(0) = 5.07$, $p = .%$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cohen 2022</td>
<td>1.47 [1.36, 1.60]</td>
<td>60.40</td>
</tr>
<tr>
<td>Heterogeneity: $\tau^2 = 0.00$, $I^2 = .%$, $H^2 = .%$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = \theta$; $Q(0) = 0.00$, $p = .%$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$: $t(0) = 9.15$, $p = .%$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall</td>
<td>1.65 [0.97, 10.00]</td>
<td></td>
</tr>
<tr>
<td>Heterogeneity: $\tau^2 = 0.03$, $I^2 = 74.56%$, $H^2 = 3.93$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = \theta$; $Q(1) = 4.30$, $p = 0.04$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of $\theta = 0$: $t(1) = 3.54$, $p = 0.18$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test of group differences: $Q_e(1) = 4.30$, $p = 0.04$</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Random-effects Sidik–Jonkman model
Knapp–Hartung standard errors
Sorted by: effect

Meta-regression and testing for publication are not possible (<10 studies per variable). As there is little variation in effect estimates of the most adjusted group with the overall estimate, we used the overall estimate in the main manuscript.
Analysis 8.3 Urticaria

Meta-regression and testing for publication are not possible (<10 studies per variable). All studies were fully adjusted.
Analysis 8.4 Atopic dermatitis

<table>
<thead>
<tr>
<th>Study</th>
<th>exp(ES)</th>
<th>with 95% CI</th>
<th>Weight (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(%)</td>
<td></td>
</tr>
<tr>
<td>Cohen 2022</td>
<td>0.87 [0.70, 1.09]</td>
<td>49.69</td>
<td></td>
</tr>
<tr>
<td>Daugherty 2021</td>
<td>1.24 [1.00, 1.53]</td>
<td>50.31</td>
<td></td>
</tr>
</tbody>
</table>

Test of ϑ = 0; Q(1) = 5.12, p = 0.02
Test of ϑ = 0; t(1) = 0.24, p = 0.85

Overall

Heterogeneity: τ² = 0.04, I² = 78.64%, H² = 4.68
Test of ϑ = 0; Q(1) = 5.12, p = 0.02
Test of ϑ = 0; t(1) = 0.24, p = 0.85
Test of group differences: Q(0) = -0.00, p = .

Random-effects Sidik–Jonkman model
Knapp–Hartung standard errors
Sorted by: effect

Meta-regression and testing for publication are not possible (<10 studies per variable). All studies were fully adjusted.
### Analysis 9. Other diagnosis (no meta-analysis)

<table>
<thead>
<tr>
<th>Study</th>
<th>Definition</th>
<th>$\exp(ES)$ with 95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daugherty 2021</td>
<td>Arrhythmia</td>
<td>2.50 [2.21, 2.82]</td>
</tr>
<tr>
<td>Cohen 2022</td>
<td>Cardiac Arrhythmia</td>
<td>1.32 [1.21, 1.43]</td>
</tr>
<tr>
<td>Cohen 2022</td>
<td>Cardiac Rhythm Disorders</td>
<td>1.47 [1.36, 1.58]</td>
</tr>
<tr>
<td>Daugherty 2021</td>
<td>Cardiac Arrhythmia</td>
<td>2.44 [2.05, 2.90]</td>
</tr>
<tr>
<td>Patel 2022 - hospitalised</td>
<td>Cardiac Arrhythmia</td>
<td>1.42 [1.30, 1.55]</td>
</tr>
<tr>
<td>cohort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patel 2022 - outpatient</td>
<td>Cardiac Arrhythmia</td>
<td>1.30 [1.20, 1.41]</td>
</tr>
<tr>
<td>cohort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chevinsky Jr 2021 - outpatient</td>
<td>Cardiac Arrhythmia</td>
<td>1.20 [0.82, 1.75]</td>
</tr>
<tr>
<td>Wang 2022a</td>
<td>Ventricular arrhythmias</td>
<td>1.60 [1.53, 1.67]</td>
</tr>
<tr>
<td>Cohen 2022</td>
<td>Tachycardia</td>
<td>1.73 [1.58, 1.89]</td>
</tr>
<tr>
<td>Daugherty 2021</td>
<td>Tachycardia</td>
<td>2.74 [2.37, 3.16]</td>
</tr>
<tr>
<td>Wang 2022a</td>
<td>Tachycardia</td>
<td>1.68 [1.63, 1.74]</td>
</tr>
<tr>
<td>Sneller &amp; Mc 2022</td>
<td>Abnormal ECG</td>
<td>0.87 [0.48, 1.58]</td>
</tr>
<tr>
<td>Wang 2022a</td>
<td>Bradycardia</td>
<td>1.60 [1.53, 1.67]</td>
</tr>
<tr>
<td>Wang 2022a</td>
<td>Cardiac arrest</td>
<td>1.75 [1.53, 2.01]</td>
</tr>
<tr>
<td>Rezel-Potts 2022</td>
<td>Atrial arrhythmias</td>
<td>0.85 [0.68, 1.06]</td>
</tr>
<tr>
<td>Wang 2022a</td>
<td>Atrial fibrillation and flutter</td>
<td>2.41 [2.30, 2.52]</td>
</tr>
<tr>
<td>Subramanian 2022</td>
<td>Vitiligo</td>
<td>1.28 [0.77, 2.14]</td>
</tr>
<tr>
<td>Chevinsky Jr 2021 - inpatient</td>
<td>Pressure ulcer of skin</td>
<td>0.99 [0.71, 1.38]</td>
</tr>
<tr>
<td>Subramanian 2022</td>
<td>Psoriasis</td>
<td>1.23 [1.06, 1.43]</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.19 [1.04, 1.36]</td>
</tr>
<tr>
<td>Subramanian 2022</td>
<td>Coeliac disease</td>
<td>1.30 [0.90, 1.88]</td>
</tr>
<tr>
<td>Chevinsky Jr 2021 - outpatient</td>
<td>Diverticulosis and diverticulitis</td>
<td>1.10 [0.73, 1.66]</td>
</tr>
<tr>
<td>Chevinsky Jr 2021 - outpatient</td>
<td>Esophageal disorders</td>
<td>0.82 [0.63, 1.08]</td>
</tr>
<tr>
<td>Whittaker 2021</td>
<td>Gastro-oesophageal reflux disease</td>
<td>1.16 [0.79, 1.70]</td>
</tr>
<tr>
<td>Chevinsky Jr 2021 - outpatient</td>
<td>Gastrointestinal hemorrhage</td>
<td>1.10 [0.71, 1.71]</td>
</tr>
<tr>
<td>Chevinsky Jr 2021 - outpatient</td>
<td>Hemorrhoids</td>
<td>1.00 [0.61, 1.63]</td>
</tr>
<tr>
<td>Noviello 2021</td>
<td>Irritable bowel syndrome</td>
<td>1.07 [0.72, 1.60]</td>
</tr>
<tr>
<td>Subramanian 2022</td>
<td>Inflammatory bowel disease</td>
<td>1.52 [1.23, 1.88]</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.13 [0.96, 1.35]</td>
</tr>
<tr>
<td>Chevinsky Jr 2021 - outpatient</td>
<td>Aplastic anemia</td>
<td>1.20 [0.90, 1.60]</td>
</tr>
<tr>
<td>Chevinsky Jr 2021 - outpatient</td>
<td>Nutritional anemia</td>
<td>0.95 [0.66, 1.37]</td>
</tr>
<tr>
<td>Subramanian 2022</td>
<td>Pernicious anaemia</td>
<td>1.34 [0.77, 2.33]</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.13 [0.92, 1.39]</td>
</tr>
</tbody>
</table>

Random-effects REML model
<table>
<thead>
<tr>
<th>Study</th>
<th>Definition</th>
<th>( \text{exp}(\text{ES}) ) with 95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chevinsky et al. 2021 - inpatient</td>
<td>Fungal infections</td>
<td>1.10 [0.70, 1.73]</td>
</tr>
<tr>
<td>Chevinsky et al. 2021 - inpatient</td>
<td>Urinary tract infections</td>
<td>0.99 [0.76, 1.30]</td>
</tr>
<tr>
<td>Chevinsky et al. 2021 - inpatient</td>
<td>Bacterial infections</td>
<td>1.10 [0.78, 1.56]</td>
</tr>
<tr>
<td>Chevinsky et al. 2021 - outpatient</td>
<td>Bacterial infections</td>
<td>1.60 [1.13, 2.26]</td>
</tr>
<tr>
<td>Chevinsky et al. 2021 - outpatient</td>
<td>Urinary tract infections</td>
<td>1.40 [1.04, 1.88]</td>
</tr>
<tr>
<td>Chevinsky et al. 2021 - outpatient</td>
<td>Other respiratory infections</td>
<td>1.10 [0.75, 1.60]</td>
</tr>
<tr>
<td>Chevinsky et al. 2021 - inpatient</td>
<td>Pneumonia (except tuberculosis)</td>
<td>1.00 [0.55, 1.81]</td>
</tr>
<tr>
<td>Chevinsky et al. 2021 - outpatient</td>
<td>Fungal infections</td>
<td>0.85 [0.51, 1.41]</td>
</tr>
<tr>
<td>Chevinsky et al. 2021 - inpatient</td>
<td>Septicemia</td>
<td>0.94 [0.67, 1.32]</td>
</tr>
<tr>
<td>Chevinsky et al. 2021 - outpatient</td>
<td>Septicemia</td>
<td>1.90 [1.22, 2.95]</td>
</tr>
<tr>
<td>Hou 2021</td>
<td>Secondary infections (sepsis, endocarditis, CNS)</td>
<td>8.19 [3.33, 20.59]</td>
</tr>
<tr>
<td>Cohen 2022</td>
<td>Herpesviral Vesicular Dermatitis</td>
<td>1.77 [1.09, 2.86]</td>
</tr>
<tr>
<td>Daugherty 2021</td>
<td>Herpesviral Vesicular Dermatitis</td>
<td>1.30 [0.89, 1.90]</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.42 [1.02, 1.98]</td>
</tr>
<tr>
<td>Zarifkar 2022</td>
<td>Intracerebral hemorrhage</td>
<td>1.00 [0.61, 1.63]</td>
</tr>
<tr>
<td>Zarifkar 2022</td>
<td>Multiple sclerosis</td>
<td>0.90 [0.52, 1.56]</td>
</tr>
<tr>
<td>Zarifkar 2022</td>
<td>Subarachnoid hemorrhage</td>
<td>0.70 [0.39, 1.36]</td>
</tr>
<tr>
<td>Taquet 2021</td>
<td>Encephalitis</td>
<td>0.96 [0.85, 1.08]</td>
</tr>
<tr>
<td>Cohen 2022</td>
<td>Encephalopathy</td>
<td>2.13 [1.92, 2.36]</td>
</tr>
<tr>
<td>Daugherty 2021</td>
<td>Encephalopathy</td>
<td>6.26 [4.02, 9.75]</td>
</tr>
<tr>
<td>Subramanian 2022</td>
<td>Myasthenia gravis</td>
<td>0.92 [0.35, 2.43]</td>
</tr>
<tr>
<td>Taquet 2021</td>
<td>Myoneural junction or muscle disease</td>
<td>1.89 [1.76, 2.03]</td>
</tr>
<tr>
<td>Taquet 2021</td>
<td>Nerve, nerve root and plexus disorder</td>
<td>0.88 [0.87, 0.91]</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.35 [0.86, 2.12]</td>
</tr>
<tr>
<td>Park 2021</td>
<td>Eating disorders</td>
<td>0.50 [0.12, 2.00]</td>
</tr>
<tr>
<td>Wang 2022b</td>
<td>Mania/Bipolar affective disorder</td>
<td>2.64 [1.51, 4.61]</td>
</tr>
<tr>
<td>Park 2021</td>
<td>Personality disorders</td>
<td>1.45 [0.35, 5.96]</td>
</tr>
<tr>
<td>Oh/Tk.2020</td>
<td>Drug use disorder</td>
<td>3.19 [0.15, 67.16]</td>
</tr>
<tr>
<td>Wang 2022b</td>
<td>Tobacco consumption</td>
<td>1.32 [1.06, 1.64]</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.52 [0.90, 2.57]</td>
</tr>
<tr>
<td>Cohen 2022</td>
<td>Kidney Injury (unspecified)</td>
<td>1.08 [1.01, 1.18]</td>
</tr>
<tr>
<td>Daugherty 2021</td>
<td>Kidney Injury (unspecified)</td>
<td>1.70 [1.42, 2.04]</td>
</tr>
<tr>
<td>Patel 2022 - hospitalised cohort</td>
<td>Dialysis</td>
<td>1.57 [1.22, 2.03]</td>
</tr>
<tr>
<td>Patel 2022 - outpatient cohort</td>
<td>Dialysis</td>
<td>1.27 [0.94, 1.73]</td>
</tr>
<tr>
<td>Whittaker 2021</td>
<td>Renal failure</td>
<td>3.42 [2.67, 4.38]</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.66 [1.13, 2.43]</td>
</tr>
<tr>
<td>Whittaker 2021</td>
<td>Asthma</td>
<td>0.75 [0.61, 0.93]</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.75 [0.61, 0.93]</td>
</tr>
<tr>
<td>Whittaker 2021</td>
<td>Arthritis</td>
<td>0.76 [0.56, 1.03]</td>
</tr>
<tr>
<td>Chevinsky et al. 2021 - outpatient</td>
<td>Osteoarthritis</td>
<td>0.83 [0.58, 1.16]</td>
</tr>
<tr>
<td>Subramanian 2022</td>
<td>Rheumatoid arthritis</td>
<td>1.06 [0.81, 1.39]</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.89 [0.72, 1.10]</td>
</tr>
<tr>
<td>Chevinsky et al. 2021 - outpatient</td>
<td>Gout</td>
<td>2.20 [1.09, 4.35]</td>
</tr>
<tr>
<td>Chevinsky et al. 2021 - outpatient</td>
<td>Inflammatory diseases of female pelvic organs</td>
<td>1.20 [0.69, 2.29]</td>
</tr>
<tr>
<td>Subramanian 2022</td>
<td>Sjogren's syndrome</td>
<td>0.17 [0.02, 1.35]</td>
</tr>
<tr>
<td>Subramanian 2022</td>
<td>Systemic lupus erythematosus</td>
<td>1.02 [0.51, 2.04]</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.24 [0.78, 1.97]</td>
</tr>
<tr>
<td>Study</td>
<td>Definition</td>
<td>exp(ES) with 95% CI</td>
</tr>
<tr>
<td>------------------</td>
<td>-----------------------------</td>
<td>--------------------</td>
</tr>
<tr>
<td>Chevinsky Jr 2021 - outpatient</td>
<td>Hyperplasia of prostate</td>
<td>1.50 [0.80, 2.81]</td>
</tr>
<tr>
<td>Chevinsky Jr 2021 - inpatient</td>
<td>Malnutrition</td>
<td>1.10 [0.79, 1.54]</td>
</tr>
<tr>
<td>Chevinsky Jr 2021 - outpatient</td>
<td>Malnutrition</td>
<td>2.00 [1.12, 3.57]</td>
</tr>
<tr>
<td>Chevinsky Jr 2021 - outpatient</td>
<td>Menopausal disorders</td>
<td>1.00 [0.58, 1.73]</td>
</tr>
<tr>
<td>Chevinsky Jr 2021 - outpatient</td>
<td>Nutritional deficiencies</td>
<td>0.71 [0.50, 1.01]</td>
</tr>
<tr>
<td>Chevinsky Jr 2021 - outpatient</td>
<td>Obesity</td>
<td>0.90 [0.68, 1.20]</td>
</tr>
<tr>
<td>Wang 2022a</td>
<td>Superficial vein thrombosis</td>
<td>1.59 [1.44, 1.76]</td>
</tr>
<tr>
<td>SnellerMc 2022</td>
<td>Valvular abnormality</td>
<td>1.28 [0.43, 3.83]</td>
</tr>
</tbody>
</table>

Random-effects REML model
Supplementary table. Estimated rates of incident diagnosis in covid and control groups.

<table>
<thead>
<tr>
<th>Group</th>
<th>Outcome</th>
<th>Median rate in the control group</th>
<th>Estimated rate in the covid group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metabolic</td>
<td>Diabetes</td>
<td>0.54%</td>
<td>0.85% (0.69% to 1.04%)</td>
</tr>
<tr>
<td>Metabolic</td>
<td>Thyroid disease</td>
<td>0.00%</td>
<td>0.00% (0.00% to 0.01%)</td>
</tr>
<tr>
<td>Psychiatric</td>
<td>Any psychiatric disorder</td>
<td>7.61%</td>
<td>10.58% (9.59% to 11.57%)</td>
</tr>
<tr>
<td>Psychiatric</td>
<td>Mood disorders</td>
<td>3.70%</td>
<td>8.11% (7.11% to 9.25%)</td>
</tr>
<tr>
<td>Psychiatric</td>
<td>Depressive disorders</td>
<td>1.00%</td>
<td>1.50% (1.12% to 2.01%)</td>
</tr>
<tr>
<td>Psychiatric</td>
<td>Anxiety disorder</td>
<td>1.17%</td>
<td>1.41% (1.16% to 1.70%)</td>
</tr>
<tr>
<td>Psychiatric</td>
<td>Panic disorder</td>
<td>0.22%</td>
<td>0.24% (0.04% to 1.33%)</td>
</tr>
<tr>
<td>Psychiatric</td>
<td>Post-traumatic stress disorder</td>
<td>0.75%</td>
<td>1.00% (0.42% to 2.36%)</td>
</tr>
<tr>
<td>Psychiatric</td>
<td>Psychosis</td>
<td>0.19%</td>
<td>0.42% (0.32% to 0.55%)</td>
</tr>
<tr>
<td>Psychiatric</td>
<td>Any substance use disorders</td>
<td>0.26%</td>
<td>0.33% (0.17% to 0.63%)</td>
</tr>
<tr>
<td>Psychiatric</td>
<td>Alcohol use disorder</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Cardiovascular</td>
<td>All cardiovascular</td>
<td>0.54%</td>
<td>1.18% (0.40% to 3.52%)</td>
</tr>
<tr>
<td>Cardiovascular</td>
<td>Arterial Hypertension</td>
<td>1.84%</td>
<td>2.14% (1.69% to 2.71%)</td>
</tr>
<tr>
<td>Cardiovascular</td>
<td>Pulmonary hypertension</td>
<td>0.47%</td>
<td>0.92% (0.00% to 100.00%)</td>
</tr>
<tr>
<td>Cardiovascular</td>
<td>Heart failure</td>
<td>0.83%</td>
<td>0.99% (0.66% to 1.49%)</td>
</tr>
<tr>
<td>Cardiovascular</td>
<td>Postural Tachycardia Syndrome</td>
<td>0.50%</td>
<td>0.94% (0.03% to 30.65%)</td>
</tr>
<tr>
<td>Cardiovascular</td>
<td>Myocarditis</td>
<td>0.01%</td>
<td>0.02% (0.00% to 0.90%)</td>
</tr>
<tr>
<td>Cardiovascular</td>
<td>Pericarditis</td>
<td>0.02%</td>
<td>0.03% (0.02% to 0.03%)</td>
</tr>
<tr>
<td>Cardiovascular</td>
<td>Myocardial infarction</td>
<td>0.50%</td>
<td>0.64% (0.45% to 0.90%)</td>
</tr>
<tr>
<td>Cardiovascular</td>
<td>Cardiogenic shock</td>
<td>0.03%</td>
<td>0.03% (0.00% to 6.85%)</td>
</tr>
<tr>
<td>Cardiovascular</td>
<td>Cardiomiopathy</td>
<td>0.04%</td>
<td>0.15% (0.10% to 0.21%)</td>
</tr>
<tr>
<td>Cardiovascular</td>
<td>Peripheral artery disease</td>
<td>0.50%</td>
<td>0.48% (0.26% to 0.91%)</td>
</tr>
<tr>
<td>Cardiovascular</td>
<td>Deep vein thrombosis</td>
<td>0.19%</td>
<td>0.59% (0.16% to 2.20%)</td>
</tr>
<tr>
<td>Cardiovascular</td>
<td>Pulmonary embolism</td>
<td>0.24%</td>
<td>0.57% (0.31% to 1.03%)</td>
</tr>
<tr>
<td>Cardiovascular</td>
<td>Hemorrhagic stroke</td>
<td>0.46%</td>
<td>0.80% (0.55% to 1.15%)</td>
</tr>
<tr>
<td>Cardiovascular</td>
<td>Stroke (general)</td>
<td>0.60%</td>
<td>14.87% (14.51% to 15.23%)</td>
</tr>
<tr>
<td>Neurological</td>
<td>Sensory disorders</td>
<td>11.90%</td>
<td>3.21% (2.04% to 5.06%)</td>
</tr>
<tr>
<td>Neurological</td>
<td>Cognitive impairment</td>
<td>1.65%</td>
<td>1.30% (0.77% to 2.20%)</td>
</tr>
<tr>
<td>Neurological</td>
<td>Dementia</td>
<td>0.98%</td>
<td>0.03% (0.01% to 0.15%)</td>
</tr>
<tr>
<td>Neurological</td>
<td>Alzheimer's disease</td>
<td>0.02%</td>
<td>0.04% (0.02% to 0.09%)</td>
</tr>
<tr>
<td>Category</td>
<td>Condition</td>
<td>Incidence</td>
<td>Confidence Interval</td>
</tr>
<tr>
<td>-------------------</td>
<td>------------------------------------------------</td>
<td>-----------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>Neurological</td>
<td>Extrapyramidal and other movement disorders</td>
<td>0.03%</td>
<td>1.49% (0.81% to 2.72%)</td>
</tr>
<tr>
<td>Neurological</td>
<td>Sleep apnea</td>
<td>1.27%</td>
<td>3.20% (2.45% to 4.20%)</td>
</tr>
<tr>
<td>Neurological</td>
<td>Other sleep disorders</td>
<td>2.50%</td>
<td>0.77% (0.50% to 1.18%)</td>
</tr>
<tr>
<td>Neurological</td>
<td>Peripheral neuropathy</td>
<td>0.56%</td>
<td>0.31% (0.24% to 0.40%)</td>
</tr>
<tr>
<td>Neurological</td>
<td>Epilepsy or seizure</td>
<td>0.18%</td>
<td>0.01% (0.00% to 0.04%)</td>
</tr>
<tr>
<td>Neurological</td>
<td>Guillain Barré syndrome</td>
<td>0.00%</td>
<td>0.24% (0.19% to 0.30%)</td>
</tr>
<tr>
<td>Neurological</td>
<td>Headaches and migraine</td>
<td>0.20%</td>
<td>5.79% (4.42% to 7.64%)</td>
</tr>
<tr>
<td>Renal</td>
<td>Acute kidney injury</td>
<td>4.29%</td>
<td>1.70% (1.28% to 2.28%)</td>
</tr>
<tr>
<td>Renal</td>
<td>Chronic kidney injury</td>
<td>1.35%</td>
<td>5.91% (2.00% to 17.51%)</td>
</tr>
<tr>
<td>Renal</td>
<td>Fluid and electrolyte disorders</td>
<td>4.66%</td>
<td>1.19% (0.60% to 2.37%)</td>
</tr>
<tr>
<td>Hepatic</td>
<td>Liver disease</td>
<td>0.74%</td>
<td>2.63% (1.05% to 6.56%)</td>
</tr>
<tr>
<td>Pulmonary</td>
<td>Lung disorders</td>
<td>0.82%</td>
<td>2.00% (0.02% to 100.00%)</td>
</tr>
<tr>
<td>Pulmonary</td>
<td>Acute respiratory failure</td>
<td>0.74%</td>
<td>1.42% (0.00% to 100.00%)</td>
</tr>
<tr>
<td>Pulmonary</td>
<td>Chronic respiratory failure</td>
<td>0.22%</td>
<td>1.75% (0.24% to 12.88%)</td>
</tr>
<tr>
<td>Pulmonary</td>
<td>Respiratory failure (unspecified)</td>
<td>1.03%</td>
<td>1.37% (0.87% to 2.14%)</td>
</tr>
<tr>
<td>Hematic</td>
<td>Coagulopathy</td>
<td>0.82%</td>
<td>2.18% (0.36% to 13.31%)</td>
</tr>
<tr>
<td>Hematic</td>
<td>Anemia</td>
<td>1.32%</td>
<td>0.12% (0.06% to 0.25%)</td>
</tr>
<tr>
<td>Dermal</td>
<td>Urticaria</td>
<td>0.08%</td>
<td>0.21% (0.02% to 1.96%)</td>
</tr>
<tr>
<td>Dermal</td>
<td>Atopic dermatitis</td>
<td>0.20%</td>
<td>0.85% (0.69% to 1.04%)</td>
</tr>
</tbody>
</table>

N/A Not available