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

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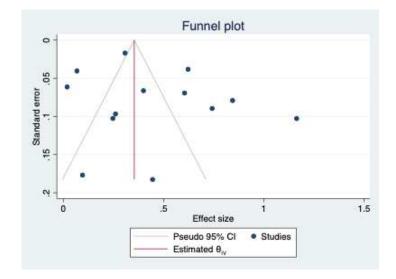
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Analyses: Incident medical diagnosis stratified by number of core confounders

Analysis 1.1. Incidence of Diabetes

Study	exp(ES) with 95% CI	Weight (%)
3		
Rezel-Potts 2022	1.07 [0.99, 1.16]	8.22
Wander 2022	1.86 [1.73, 2.01]	8.23
Whittaker 2021	2.10 [1.76, 2.50]	7.75
Heterogeneity: τ ² = 0.12, l ² = 98.07%, H ² = 51.87	1.60 [0.66, 3.93]	
Test of $\theta_i = \theta_i$: Q(2) = 115.77, p = 0.00		
Test of $\theta = 0$: t(2) = 2.27, p = 0.15		
4		
Rathmann 2022	1.28 [1.05, 1.57]	7.58
Subramanian 2022	1.56 [1.09, 2.23]	6.33
Sharma 2022		7.87
Heterogeneity: τ ² = 0.08, I ² = 86.68%, H ² = 7.51	1.69 [0.77, 3.69]	
Test of $\theta_i = \theta_i$: Q(2) = 22.05, p = 0.00		
Test of θ = 0: t(2) = 2.87, p = 0.10		
5		
Patel 2022 - outpatient cohort -	1.02 [0.90, 1.15]	8.05
Chevinsky 2021	1.10 [0.78, 1.56]	6.42
Patel 2022 - hospitalised cohort	1.30 [1.07, 1.57]	7.66
Al-Aly 2022	1.36 [1.32, 1.41]	8.32
Cohen 2022 -	1.49 [1.31, 1.70]	8.01
Daugherty 2021 -	1.83 [1.60, 2.10]	7.98
Ayoubkhani 2021		7.58
Heterogeneity: τ ² = 0.14, I ² = 97.37%, H ² = 38.09	1.51 [1.06, 2.14]	
Test of $\theta_i = \theta_j$: Q(6) = 112.14, p = 0.00		
Test of $\theta = 0$: t(6) = 2.84, p = 0.03		
Overall	1.57 [1.28, 1.92]	
Heterogeneity: $\tau^2 = 0.10$, $I^2 = 97.18\%$, $H^2 = 35.49$		
Test of $\theta_i = \theta_j$: Q(12) = 273.61, p = 0.00		
Test of $\theta = 0$: t(12) = 4.81, p = 0.00		
Test of group differences: Q _o (2) = 0.25, p = 0.88		
i	2	
Random-effects Sidik–Jonkman model Knapp–Hartung standard errors		

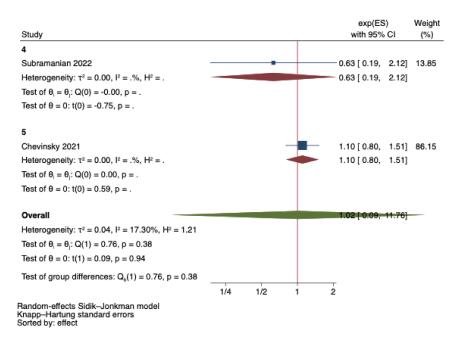
Knapp–Hartung standard error Sorted by: effect



Publication bias (Egger)

н0:	betal =	0; no	small-study	effects
		beta1	= 0.26	
	SE of	beta1	= 2.153	
		Z	= 0.12	
	Prob	> z	= 0.9049	

Analysis 1.2. Incidence of Thyroid Disorders



Analysis 2.1. Any Psychiatric Disorder

Study		exp(ES) with 95%	Weight (%)	
0				
Xiong 2021		2.98 [1.67,	5.31]	8.06
Heterogeneity: τ^2 = 0.00, I^2 = .%, H^2 = .		2.98 [1.67,	5.31]	
Test of $\theta_i = \theta_j$: Q(0) = 0.00, p = .				
Test of θ = 0: t(0) = 3.70, p = .				
3				
Park 2021	-	1.57 [1.45,	1.69]	11.48
Heterogeneity: τ^2 = 0.00, I^2 = .%, H^2 = .	•	1.57 [1.45,	1.69]	
Test of $\theta_i = \theta_j$: Q(0) = -0.00, p = .				
Test of $\theta = 0$: t(0) = 11.14, p = .				
4				
Coleman 2021		1.00 [0.94,	1.06]	11.51
Abel 2021	-	1.69 [1.59,	1.81]	11.50
OhTk 2020		- 4.49 [3.97,	5.07]	11.35
Heterogeneity: τ ² = 0.58, I ² = 99.72%, H ² = 882.00		1.96 [0.30,	13.0 2]	
Test of $\theta_i = \theta_j$: Q(2) = 481.38, p = 0.00				
Test of $\theta = 0$: t(2) = 1.54, p = 0.26				
5				
Al-Aly 2022 - unvaccinated		1.29 [1.28,	1.31]	11.57
Daugherty 2021		1.39 [1.29,	1.49]	11.49
Al-Aly 2022 - vaccinated		1.43 [1.39,	1.48]	11.55
Cohen 2022		1.47 [1.37,	1.58]	11.49
Heterogeneity: $\tau^{_2}$ = 0.00, $I^{_2}$ = 89.38%, $H^{_2}$ = 9.41	•	1.39 [1.26,	1.52]	
Test of $\theta_i = \theta_j$: Q(3) = 48.81, p = 0.00				
Test of $\theta = 0$: t(3) = 11.23, p = 0.00				
Overall		1.69 [1.19,	2.40]	
Heterogeneity: $\tau^2 = 0.20$, $I^2 = 99.71\%$, $H^2 = 347.37$				
Test of $\theta_i = \theta_j$: Q(8) = 589.43, p = 0.00				
Test of 0 = 0: t(8) = 3.44, p = 0.01				
Test of group differences: $Q_b(3) = 12.64$, $p = 0.01$				
	1 2 4			
Random-effects Sidik–Jonkman model Knapp–Hartung standard errors Sorted by: effect				

Sorted by: effect

Analysis 2.2. Mood Disorders

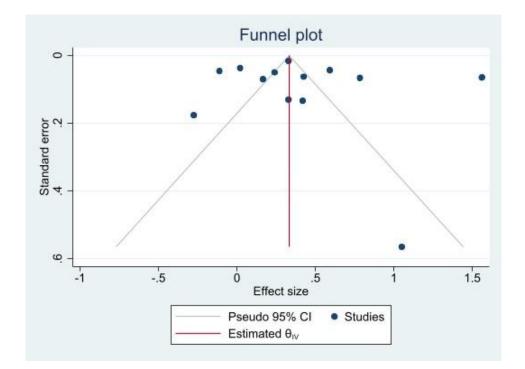
Study			exp(ES) with 95% CI	
0				
Taquet 2021		1.08 [1.06,	1.11]	22.76
Heterogeneity: τ ² = 0.00, I ² = .%, H ² = .	+	1.08 [1.06,	1.11]	
Test of $\theta_i = \theta_i$: Q(0) = 0.00, p = .				
Test of $\theta = 0$: t(0) = 6.55, p = .				
3				
Murata 2022 - vs RTI		0.76 [0.51,	1.14]	17.20
Murata 2022 - vs influenza		1.24 [0.77,	1.99]	15.74
Heterogeneity. + = 0.07, i' = 00.00		0.95 [0.04,	21.25]	
Test of $\theta_i = \theta_j$: Q(1) = 2.39, p = 0.12				
Test of $\theta = 0$: t(1) = -0.19, p = 0.88				
4				
Coleman 2021		1.11 [1.00,	1.23]	22.28
Heterogeneity: τ ² = 0.00, I ² = .%, H ² = .	•	1.11 [1.00,	1.23]	
Test of $\theta_i = \theta_j$: Q(0) = -0.00, p = .				
Test of $\theta = 0$: t(0) = 1.92, p = .				
5				
Wang 2022b			2.50]	22.02
Heterogeneity: τ ² = 0.00, I ² = .%, H ² = .		🔶 2.19 [1.92,	2.50]	
Test of $\theta_i = \theta_j$: Q(0) = 0.00, p = .				
Test of $\theta = 0$: t(0) = 11.64, p = .				
Overall		1.22 [0.76,	1.97]	
Heterogeneity: τ ² = 0.13, I ² = 97.35%, H ² = 37.76				
Test of $\theta_i = \theta_j$: Q(4) = 110.50, p = 0.00				
Test of θ = 0: t(4) = 1.16, p = 0.31				
Test of group differences: Q _b (3) = 107.33, p = 0.00				
_	1	2		
Random-effects Sidik-Jonkman model Knapp-Hartung standard errors				

Sorted by: effect

Analysis 2.3. Depressive Disorder

Study	exp(ES) with 95% Cl	Weigh (%)
o		
Spiliopoulos 2022	1.52 [1.17, 1.98	
SnellerMc 2022	2.86 [0.94, 8.65	
Heterogeneity: τ ² = 0.07, l ² = 30.51%, H ² = 1	1.71 [0.07, 39.82	2]
Test of $\theta_i = \theta_j$: Q(1) = 1.18, p = 0.28		
Test of $\theta = 0$: t(1) = 2.17, p = 0.27		
2		
Jacob 2022	1.02 [0.95, 1.10] 8.28
Heterogeneity: τ ² = 0.00, l ² = .%, H ² = .	1.02 [0.95, 1.10	0]
Test of $\theta_i = \theta_j$: Q(0) = -0.00, p = .		
Test of $\theta = 0$: t(0) = 0.53, p = .		
3		
Whittaker 2021 -	1.39 [1.08, 1.79] 7.72
Abel 2021	1.81 [1.66, 1.97] 8.26
Heterogeneity: τ ² = 0.02, l ² = 70.17%, H ² = 3.35	1.64 [0.32, 8.29	9]
Test of $\theta_i = \theta_j$: Q(1) = 3.64, p = 0.06		
Test of θ = 0: t(1) = 3.85, p = 0.16		
4		
Magnusdottir 2022	1.18 [1.03, 1.36	6] 8.14
OhTk 2020	4.76 [4.18, 5.42	2] 8.17
	2.37 [0.00, 16714.21	
Test of $\theta_i = \theta_j$: Q(1) = 207.91, p = 0.00		
Test of θ = 0: t(1) = 1.24, p = 0.43		
5		
Chevinsky 2021	0.76 [0.54, 1.07	7] 7.27
Patel 2022 - outpatient cohort	0.89 [0.82, 0.98	8.25
Daugherty 2021	1.27 [1.15, 1.40	8.23
Al-Aly 2022	1.39 [1.35, 1.44	8.32
Patel 2022 - hospitalised cohort	1.53 [1.35, 1.73	8] 8.18
Wang 2022b	2.19 [1.92, 2.49] 8.16
Heterogeneity: τ ² = 0.13, l ² = 98.35%, H ² = 60.55	1.28 [0.86, 1.89	- 91
Test of $\theta_i = \theta_i$: Q(5) = 150.09, p = 0.00	•	
Test of θ = 0: t(5) = 1.61, p = 0.17		
Overall	1.49 [1.12, 2.00	01
Heterogeneity: τ ² = 0.21, l ² = 98.80%, H ² = 83.28	,,	•
Test of $\theta_i = \theta_i$: Q(12) = 613.92, p = 0.00		
Test of $\theta = 0$: t(12) = 3.01, p = 0.01		
Test of group differences: Q _b (4) = 19.16, p = 0.00	· · · · · · · · · · · · · · · · · · ·	
1	2 4 8	
tandom-effects Sidik–Jonkman model .napp–Hartung standard errors		

Knapp-Hartung standard errors Sorted by: effect

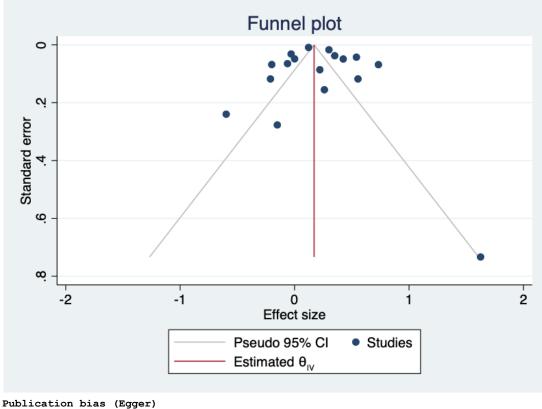


Publication bias (Egger)

H0: beta1 = 0; no small-study effects beta1 = 0.73 SE of beta1 = 1.380 z = 0.53Prob > |z| = 0.5980

Analysis 2.4 Anxiety Disorder

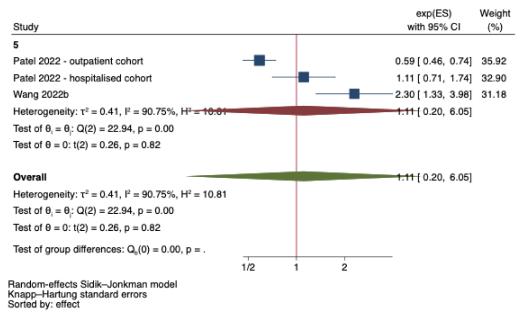
Study	exp(ES) with 95% Cl	Weight (%)
0		
Taquet 2021	1.13 [1.11, 1.15]	6.64
Spiliopoulos 2022	1.25 [1.05, 1.48]	6.32
SnellerMc 2022	5.08 [1.21, 21.38]	1.39
Heterogeneity: τ ² = 0.40, l ² = 98.20%, H ² = 55.50	1.54 [0.28, 8.37]	
Test of $\theta_i = \theta_i$: Q(2) = 5.49, p = 0.06		
Test of $\theta = 0$: t(2) = 1.09, p = 0.39		
2		
Jacob 2022	0.94 [0.83, 1.07]	6.46
Heterogeneity: $\tau^2 = 0.00$, $I^2 = .\%$, $H^2 = .$	🔶 0.94 [0.83, 1.07]	
Test of $\theta_i = \theta_j$: Q(0) = -0.00, p = .		
Test of $\theta = 0$: t(0) = -0.95, p = .		
3		
Murata 2022 - vs RTI -	- 0.55 [0.34, 0.88]	4.74
Murata 2022 - vs influenza —	0.86 [0.50, 1.48]	4.32
Park 2021	1.53 [1.39, 1.68]	6.54
Abel 2021	1.72 [1.58, 1.87]	6.56
Whittaker 2021	1.74 [1.38, 2.19]	6.06
Heterogeneity: τ ² = 0.22, I ² = 97.11%, H ² = 34.66	1.22 [0.66, 2.26]	
Test of $\theta_i = \theta_j$: Q(4) = 28.94, p = 0.00		
Test of $\theta = 0$: t(4) = 0.90, p = 0.42		
4		
Magnusdottir 2022	0.97 [0.91, 1.03]	6.60
Coleman 2021	1.00 [0.91, 1.10]	6.54
Heterogeneity: $\tau^2 = 0.00$, $I^2 = 3.28\%$, $H^2 = 1.03$	• 0.98 [0.82, 1.17]	
Test of $\theta_i = \theta_j$: Q(1) = 0.28, p = 0.60		
Test of $\theta = 0$: t(1) = -1.51, p = 0.37		
5		
Chevinsky 2021 - outpatient	0.81 [0.64, 1.02]	6.06
Patel 2022 - outpatient cohort	0.82 [0.72, 0.94]	6.44
Patel 2022 - hospitalised cohort	1.30 [0.96, 1.76]	5.69
Al-Aly 2022	1.35 [1.31, 1.40]	6.63
Daugherty 2021	1.42 [1.32, 1.53]	6.58
Wang 2022b	2.08 [1.82, 2.38]	6.44
Heterogeneity: τ ² = 0.12, I ² = 98.02%, H ² = 50.56	1.23 [0.84, 1.80]	
Test of θ _i = θ _j : Q(5) = 114.30, p = 0.00		
Test of θ = 0: t(5) = 1.43, p = 0.21		
Overall	1.20 [0.99, 1.45]	
Heterogeneity: $\tau^2 = 0.14$, $I^2 = 99.03\%$, $H^2 = 103.51$		
Test of $\theta_i = \theta_j$: Q(16) = 411.03, p = 0.00		
Test of $\theta = 0$: t(16) = 1.97, p = 0.07		
Test of group differences: Q _b (4) = 5.06, p = 0.28		
1/2 Pandom-effects Sidik-Jonkman model Knapp-Hartung standard errors Sorted by: effect	1 2 4 8 16	



H0: beta1 = 0; no small-study effects

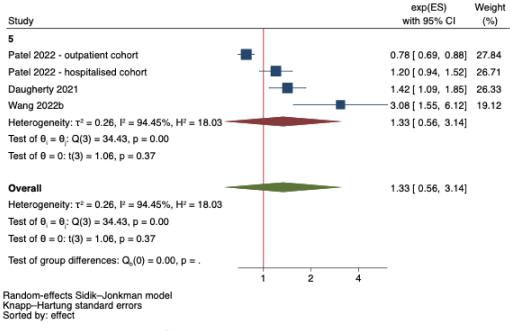
beta1 = 0.39SE of beta1 = 0.964 z = 0.40 Prob > |z| = 0.6870

Analysis 2.5. Panic Disorder



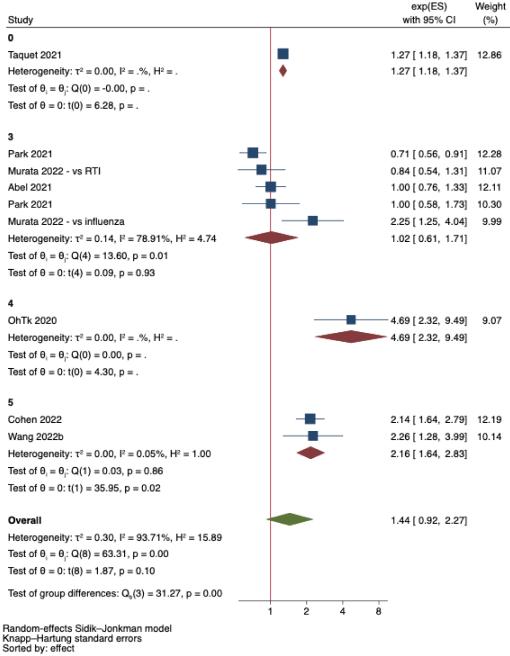
Meta-regression and testing for publication are not possible (<10 studies per variable). All studies were fully adjusted.

Analysis 2.6 Post-Traumatic Stress Disorder

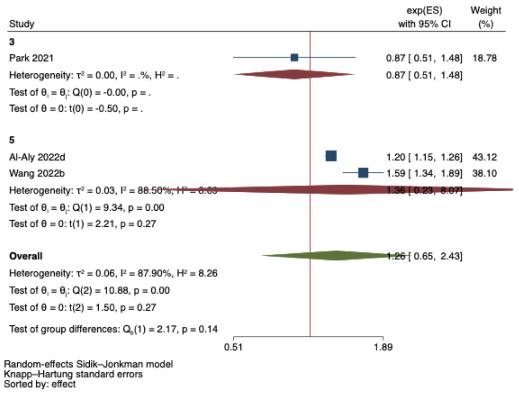


Meta-regression and testing for publication are not possible (<10 studies per variable). All studies were fully adjusted.

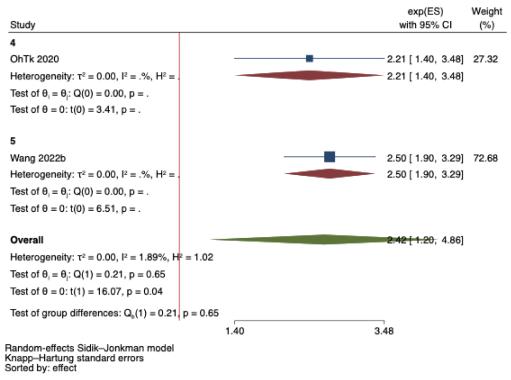
Analysis 2.7 Psychosis



Analysis 2.8 Any Substance Abuse Disorder



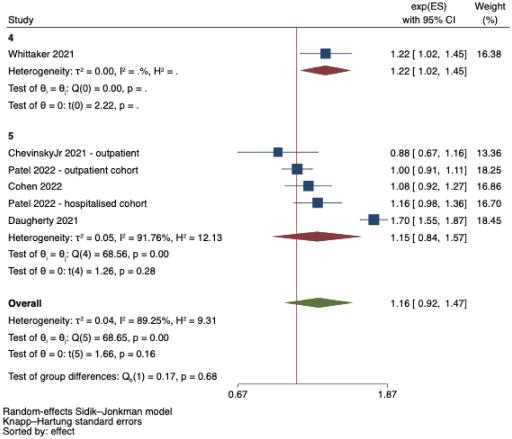
Analysis 2.9 Alcohol Abuse Disorder



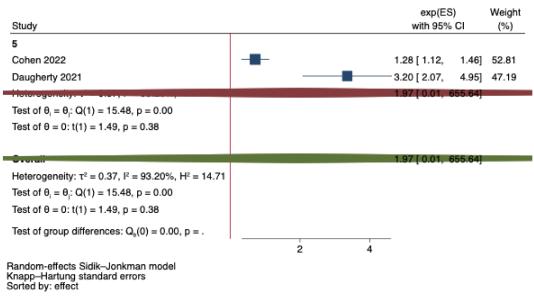
Analysis 3.1 Any cardiovascular disorder

Study			exp(ES) with 95% Cl				
0							
Xiong 2021					23.94 [3.30,	173.57]	9.18
Heterogeneity: τ^{2} = 0.00, I^{2} = .%, H^{2} = .					23.94 [3.30,	173.57]	
Test of $\theta_i = \theta_i$: Q(0) = -0.00, p = .							
Test of $\theta = 0$: t(0) = 3.14, p = .							
3							
Rezel-Potts 2022					0.80 [0.73,	0.88]	18.16
Heterogeneity: τ^{2} = 0.00, I^{2} = .%, H^{2} = .	•				0.80 [0.73,	0.88]	
Test of $\theta_i = \theta_i$: Q(0) = 0.00, p = .							
Test of $\theta = 0$: t(0) = -4.68, p = .							
4							
Wang 2022a					1.55 [1.53,	1.58]	18.19
Heterogeneity: τ^2 = 0.00, I^2 = .%, H^2 = .	1				1.55 [1.53,	1.58]	
Test of $\theta_i = \theta_i$: Q(0) = 0.00, p = .							
Test of $\theta = 0$: t(0) = 51.42, p = .							
5							
Al-Aly 2022 - vaccinated					1.51 [1.46,	1.57]	18.19
Al-Aly 2022 - unvaccinated					1.57 [1.54,	1.61]	18.19
Ayoubkhani 2021					4.97 [4.25,	5.82]	18.08
Heterogeneity: τ^{2} = 0.45, I ² = 99.90%, H ² = 1002.84					2.27 [0.42,	12.15]	
Test of $\theta_i = \theta_j$: Q(2) = 212.43, p = 0.00							
Test of θ = 0: t(2) = 2.10, p = 0.17							
Overall					2.18 [0.73,	6.47]	
Heterogeneity: τ^{z} = 1.04, l^{z} = 99.97%, H^{z} = 3036.61							
Test of $\theta_i = \theta_j$: Q(5) = 416.07, p = 0.00							
Test of $\theta = 0$: t(5) = 1.84, p = 0.13							
Test of group differences: $Q_b(3) = 195.70$, p = 0.00							
	1	4	16	64			
Random-effects Sidik–Jonkman model Knapp–Hartung standard errors Sorted by: effect							

Analysis 3.2 Hypertension



Analysis 3.3 Pulmonary Hypertension

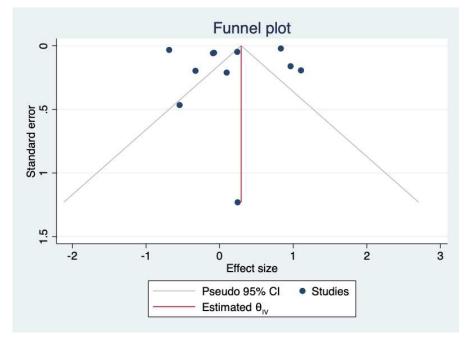


Meta-regression and testing for publication are not possible (<10 studies per variable). All studies were fully adjusted.

Analysis 3.4 Heart Failure

Study					exp(ES with 95%		Weight (%)
0							
Priyadarshni 2022					0.50 [0.47,	0.54]	10.68
SnellerMc 2022			-		- 1.28 [0.11,	14.23]	1.87
Heterogeneity: τ ² = 0.10, l ² = 11.27%, H ² = 1.13					0.53 [0.03,	8.23]	
Test of $\theta_i = \theta_i$: Q(1) = 0.57, p = 0.45							
Test of $\theta = 0$: t(1) = -2.94, p = 0.21							
3							
Lund 2021	-	_	-		0.58 [0.23,	1.45]	6.39
Rezel-Potts 2022			-		0.72 [0.49,	1.06]	9.56
Heterogeneity: $\tau^2 = 0.00$, $I^2 = 1.50\%$, $H^2 = 1.02$					0.70 [0.26,	1.89]	
Test of $\theta_i = \theta_i$: Q(1) = 0.18, p = 0.67							
Test of $\theta = 0$: t(1) = -4.61, p = 0.14							
4							
Knight 2022					1.27 [1.16,	1.40]	10.64
Wang 2022a					2.30 [2.20,	2.40]	10.70
Whittaker 2021					3.02 [2.07,	4.41]	9.60
Heterogeneity: $\tau^{_2}$ = 0.18, $I^{_2}$ = 98.53%, $H^{_2}$ = 67.88					2.02 [0.68,	6.03]	
Test of $\theta_i = \theta_i$: Q(2) = 128.39, p = 0.00							
Test of $\theta = 0$: t(2) = 2.77, p = 0.11							
5							
Patel 2022 - outpatient cohort					0.91 [0.81,	1.02]	10.61
Patel 2022 - hospitalised cohort					0.93 [0.83,	1.03]	10.62
ChevinskyJr 2021 - outpatient		-	-		1.10 [0.73,	1.66]	9.41
Daugherty 2021					2.62 [1.91,	3.59]	9.92
Heterogeneity: $\tau^{\rm z}$ = 0.23, I^{\rm z} = 96.75%, H^{\rm z} = 30.74					1.23 [0.56,	2.73]	
Test of $\theta_i = \theta_i$: Q(3) = 40.11, p = 0.00							
Test of $\theta = 0$: t(3) = 0.84, p = 0.46							
Overall					1.19 [0.79,	1.79]	
Heterogeneity: $\tau^2 = 0.32$, $I^2 = 98.91\%$, $H^2 = 92.10$							
Test of $\theta_i = \theta_j$: Q(10) = 1635.87, p = 0.00							
Test of θ = 0: t(10) = 0.93, p = 0.37							
Test of group differences: $Q_b(3) = 16.68$, p = 0.00	-	4.00			_		
Random-effects Sidik–Jonkman model Knapp–Hartung standard errors Sorted bv: effect	1/8	1/2	2	8			

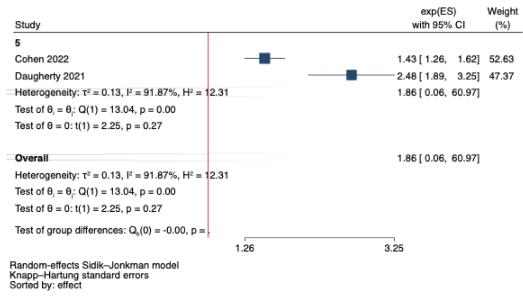
Knapp–Hartung s Sorted by: effect



Publication bias (Egger)

H0: beta1 = 0; no small-study effects beta1 = -0.14SE of beta1 = 1.010z = -0.14Prob > |z| = 0.8870

Analysis 3.5 Postural tachycardia syndrome (POTS)

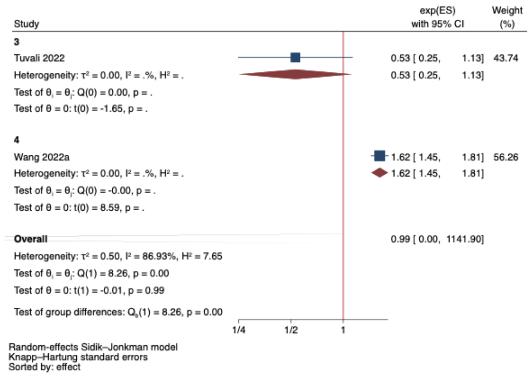


Meta-regression and testing for publication are not possible (<10 studies per variable). All studies were fully adjusted.

Analysis 3.6. Myocarditis

Study			exp(ES) with 95% Cl				
0							
Priyadarshni 2022					2.73 [1.78,	4.17]	18.53
Heterogeneity: τ^{2} = 0.00, I^{2} = .%, H^{2} = .		-			2.73 [1.78,	4.17]	
Test of $\theta_i = \theta_i$: Q(0) = 0.00, p = .							
Test of $\theta = 0$: t(0) = 4.62, p = .							
3							
Rezel-Potts 2022		-			1.11 [0.74,	1.66]	18.62
Heterogeneity: τ^2 = 0.00, I^2 = .%, H^2 = .	- 🔶				1.11 [0.74,	1.66]	
Test of $\theta_i = \theta_i$: Q(0) = -0.00, p = .							
Test of $\theta = 0$: t(0) = 0.51, p = .							
4							
Wang 2022a		-	-		4.41 [2.89,	6.72]	18.55
Heterogeneity: $\tau^{_2}$ = 0.00, $I^{_2}$ = .%, $H^{_2}$ = .		<			4.41 [2.89,	6.72]	
Test of $\theta_i = \theta_i$: Q(0) = 0.00, p = .							
Test of $\theta = 0$: t(0) = 6.89, p = .							
5							
ChevinskyJr 2021 - outpatient		-			0.82 [0.48,	1.42]	17.99
Cohen 2022	-	-			3.20 [1.17,	8.74]	15.29
Daugherty 2021		-				113.31]	11.02
Heterogeneity: $\tau^2 = 2.13$, $I^2 = 89.44\%$, $H^2 = 3.47$					3.30 [0.06,	173.90]	
Test of $\theta_i = \theta_j$: Q(2) = 16.18, p = 0.00							
Test of θ = 0: t(2) = 1.30, p = 0.32							
Overall	-				2.61 [0.87,	7.82]	
Heterogeneity: $\tau^{z}=0.97,l^{z}=92.63\%,H^{z}=13.58$						-	
Test of $\theta_i = \theta_i$: Q(5) = 42.10, p = 0.00							
Test of $\theta = 0$: t(5) = 2.24, p = 0.08							
Test of group differences: $Q_{\rm b}(3)$ = 22.39, p = 0.00							
	1/2	2	8	32			
Random-effects Sidik–Jonkman model Knapp–Hartung standard errors Sorted by: effect							

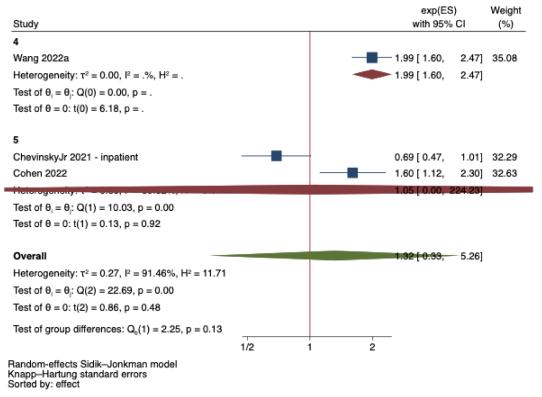
Analysis 3.7 Pericarditis



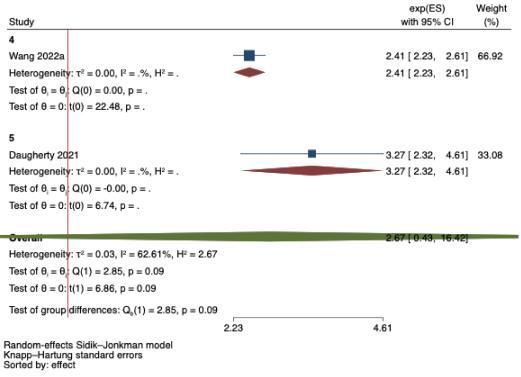
Analysis 3.8 Myocardial infarction

Study				exp(ES) with 95% Cl	Weight (%)
0					
Priyadarshni 2022	-			0.87 [0.80, 0.95]	11.64
Heterogeneity: τ ² = 0.00, I ² = .%, H ² = .	•			0.87 [0.80, 0.95]	
Test of $\theta_i = \theta_i$: Q(0) = 0.00, p = .					
Test of $\theta = 0$: t(0) = -3.29, p = .					
3					
Rezel-Potts 2022	_			0.80 [0.66, 0.97]	11.15
Heterogeneity: $\tau^2 = 0.00$, $I^2 = .\%$, $H^2 = .$	-			0.80 [0.66, 0.97]	
Test of $\theta_i = \theta_j$: Q(0) = -0.00, p = .					
Test of θ = 0: t(0) = -2.21, p = .					
4					
Knight 2022		_		1.21 [1.03, 1.42]	11.36
Wang 2022a			-	1.98 [1.83, 2.14]	11.65
Whittaker 2021				— 2.47 [1.72, 3.55]	9.95
Heterogeneity: $\tau^2 = 0.11$, $I^2 = 94.42\%$, $H^2 = 17.92$				1.77 [0.72, 4.35]	
Test of $\theta_i = \theta_i$: Q(2) = 33.16, p = 0.00					
Test of θ = 0: t(2) = 2.75, p = 0.11					
5					
Patel 2022 - outpatient cohort	-			0.80 [0.72, 0.89]	11.56
Patel 2022 - hospitalised cohort	-	-		1.02 [0.92, 1.14]	11.55
Cohen 2022				1.35 [1.18, 1.54]	11.48
Daugherty 2021					9.67
Heterogeneity: $\tau^{\rm 2}$ = 0.20, $I^{\rm 2}$ = 97.63%, $H^{\rm 2}$ = 42.12				1.25 [0.59, 2.63]	
Test of $\theta_i = \theta_j$: Q(3) = 55.88, p = 0.00					
Test of θ = 0: t(3) = 0.95, p = 0.41					
Overall	-		-	1.28 [0.91, 1.81]	
Heterogeneity: $\tau^2 = 0.19$, $I^2 = 97.92\%$, $H^2 = 48.00$					
Test of $\theta_i = \theta_j$: Q(8) = 328.25, p = 0.00					
Test of $\theta = 0$: t(8) = 1.66, p = 0.14					
Test of group differences: $\mathrm{Q}_{\mathrm{b}}(3)$ = 14.81, p = 0.00			1		
Random-effects Sidik-Jonkman model		I	2		
Knapp–Hartung standard errors Sorted by: effect					

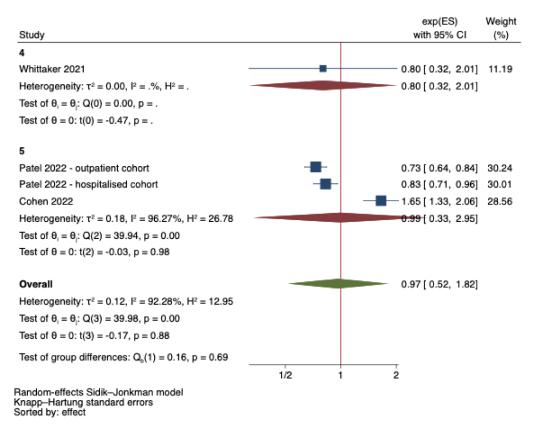
Analysis 3.9 Cardiogenic shock



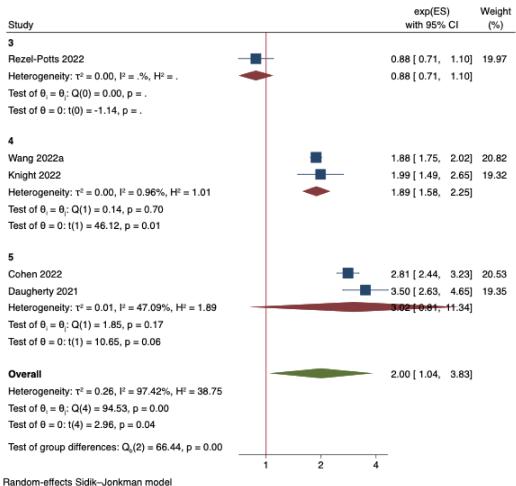
Analysis 3.10 Cardiomyopathy



Analysis 3.11 Peripheral artery disease



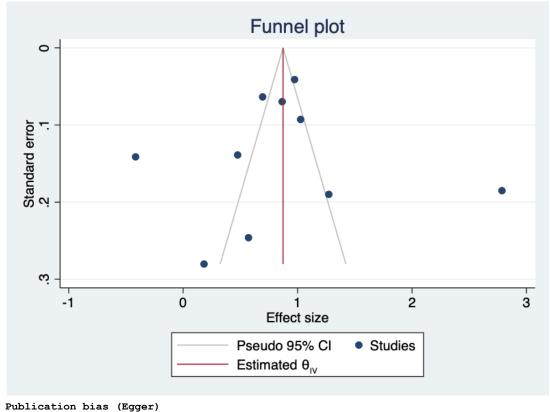
Analysis 3.12 Deep vein thrombosis



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

Analysis 3.13 Pulmonary embolism

Study			exp(ES) with 95% CI				Weigh (%)	
3								. ,
Rezel-Potts 2022 -	-				0.66 [0	.50,	0.87]	10.09
Lund 2021					1.77 [1	.09,	2.87]	9.52
Heterogeneity: 1° = 0.42, 1° = 01.2011, 1					1.06[0	.00,	553.91]	
Test of $\theta_i = \theta_i$: Q(1) = 12.09, p = 0.00								
Test of $\theta = 0$: t(1) = 0.11, p = 0.93								
4								
Knight 2022					1.61 [1	.23,	2.11]	10.10
Wang 2022a					2.65 [2	.44,	2.87]	10.37
Whittaker 2021			-	-	16.21 [11	.28,	23.30]	9.88
Heterogeneity: τ ² = 1.44, l ² = 99.06%, H ² = 106.62					4.08[0	.20,	82.68]	
Test of $\theta_i = \theta_i$: Q(2) = 107.49, p = 0.00								
Test of θ = 0: t(2) = 2.01, p = 0.18								
5								
ChevinskyJr 2021 - inpatient					1.20[0	.69,	2.08]	9.29
Patel 2022 - hospitalised cohort					2.00 [1	.77,	2.27]	10.3
Patel 2022 - outpatient cohort					2.38 [2	.07,	2.72]	10.3
Cohen 2022		-			2.79[2	.33,	3.35]	10.26
Daugherty 2021		-			3.57 [2	.46,	5.18]	9.85
Heterogeneity: τ ² = 0.12, I ² = 92.50%, H ² = 13.32					2.31 [1	.47,	3.65]	
Test of $\theta_i = \theta_i$: Q(4) = 20.05, p = 0.00								
Test of $\theta = 0$: t(4) = 5.10, p = 0.01								
Overall					2.33 [1	.29,	4.22]	
Heterogeneity: τ ² = 0.66, l ² = 98.65%, H ² = 74.19								
Test of $\theta_i = \theta_j$: Q(9) = 226.67, p = 0.00								
Test of $\theta = 0$: t(9) = 3.22, p = 0.01								
Test of group differences: Q _b (2) = 3.22, p = 0.20								
landom-effects Sidik–Jonkman model napp–Hartung standard errors iorted by: effect	12	4	8	16				



H0: beta1 = 0; no small-study effects beta1 = -0.35SE of beta1 = 3.665z = -0.09

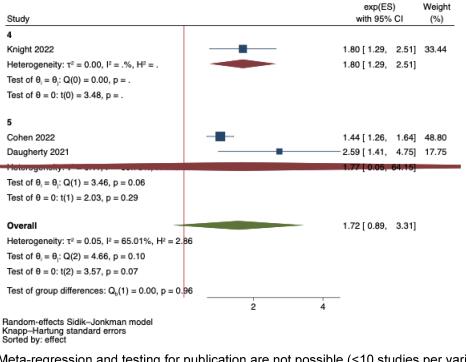
0.9247

Prob > |z| =

Analysis 3.14 Ischemic stroke

tudy		exp(Es with 95%	Weight (%)			
0						
Taquet 2021				1.11 [1.06,	1.17]	14.99
Heterogeneity: τ^2 = 0.00, I^2 = .%, H^2 = .		•		1.11 [1.06,	1.17]	
Test of $\theta_i = \theta_i$: Q(0) = 0.00, p = .						
Test of θ = 0: t(0) = 4.14, p = .						
3						
Zarifkar 2022				0.70 [0.61,	0.81]	14.50
Heterogeneity: τ^2 = 0.00, I^2 = .%, H^2 = .	٠			0.70 [0.61,	0.81]	
Test of $\theta_i = \theta_i$: Q(0) = 0.00, p = .						
Test of $\theta = 0$: t(0) = -4.86, p = .						
4						
Knight 2022				1.38 [1.13,	1.69]	14.00
Wang 2022a				1.50 [1.35,	1.67]	14.75
Knight 2022		-	F	1.62 [1.42,	1.85]	14.56
Heterogeneity: $\tau^2 = 0.00, \ l^2 = 31.18\%, \ H^2 = 1.45$		-	•	1.52 [1.28,	1.80]	
Test of $\theta_i = \theta_i$: Q(2) = 1.79, p = 0.41						
Test of θ = 0: t(2) = 10.39, p = 0.01						
5						
Cohen 2022				1.31 [1.18,	1.46]	14.74
Daugherty 2021				— 2.58 [1.84,	3.61]	12.45
Heterogeneity. (= 0.20, 1 = 02.0.1.1, 1				1.80 [0.02,	130.25]	
Test of $\theta_i = \theta_j$: Q(1) = 14.10, p = 0.00						
Test of $\theta = 0$: t(1) = 1.75, p = 0.33						
Overall	-		-	1.35 [0.94,	1.92]	
Heterogeneity: $\tau^2 = 0.14$, $I^2 = 97.65\%$, $H^2 = 42.50$						
Test of $\theta_i = \theta_i$: Q(6) = 124.64, p = 0.00						
Test of $\theta = 0$: t(6) = 2.04, p = 0.09						
Test of group differences: $Q_b(3) = 80.74$, p = 0.00			2	_		
Random-effects Sidik–Jonkman model Knapp–Hartung standard errors Sorted by: effect			٤			

Analysis 3.15 Hemorrhagic stroke

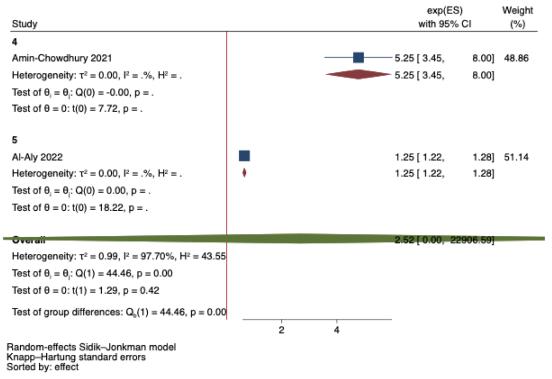


Analysis 3.16 Stroke (global)

Study	exp(ES) with 95% Cl	Weight (%)
3		
Rezel-Potts 2022	0.73 [0.59, 0.90) 13.04
Lund 2021	1.00 [0.55, 1.82	2] 9.02
Heterogeneity: τ ² = 0.02, I ² = 23.45%, H ² = 1.6	0.78 [0.16, 3.82	<u>2]</u>
Test of $\theta_i = \theta_j$: Q(1) = 0.95, p = 0.33		
Test of θ = 0: t(1) = -2.01, p = 0.29		
4		
Wang 2022a	1.62 [1.55, 1.69)] 13.82
Whittaker 2021	2.49 [1.73, 3.59)] 11.55
Heterogeneity: τ ² = 0.07, I ² = 79.27%, II ² = 4.62	1.92 [0.13, 28.12	<u>[]</u>
Test of $\theta_i = \theta_j$: Q(1) = 5.27, p = 0.02		
Test of θ = 0: t(1) = 3.09, p = 0.20		
5		
Patel 2022 - outpatient cohort	1.03 [0.88, 1.19) 13.40
Patel 2022 - hospitalised cohort	1.03 [0.89, 1.21] 13.38
Cohen 2022	- 1.31 [1.18, 1.45	5] 13.65
Daugherty 2021	2.46 [1.81, 3.35	j] 12.14
Heterogeneity: τ ² = 0.15, I ² = 95.90%, H ² = 24.39	1.34 [0.71, 2.52	2]
Test of $\theta_i = \theta_i$: Q(3) = 31.17, p = 0.00		
Test of $\theta = 0$: t(3) = 1.46, p = 0.24		
Overall	1.33 [0.92, 1.92	2]
Heterogeneity: τ ² = 0.17, I ² = 97.16%, H ² = 35.18		
Test of $\theta_i = \theta_j$: Q(7) = 127.70, p = 0.00		
Test of 0 = 0: t(7) = 1.84, p = 0.11		
Test of group differences: Q _b (2) = 14.14, p = 0.00		
1	2	
Random-effects Sidik-Jonkman model Knapp-Hartung standard errors		

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

Analysis 4.1 Sensory disorder



Analysis 4.2 Cognitive Impairment

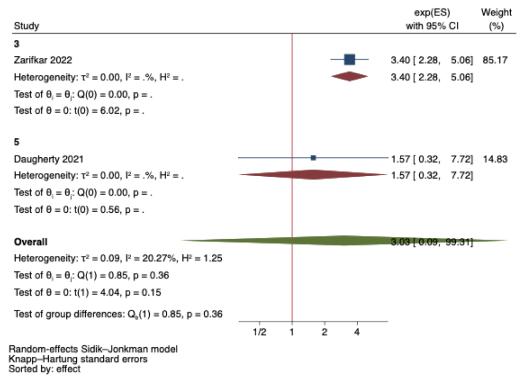
Study			exp(ES) with 95% CI			
0						
Taquet 2021			1.	36 [1.33,	1.39]	14.48
Heterogeneity: τ^2 = 0.00, I^2 = .%, H^2 = .	+		1.	36 [1.33,	1.39]	
Test of $\theta_i = \theta_i$: Q(0) = 0.00, p = .						
Test of $\theta = 0$: t(0) = 27.32, p = .						
4						
Liu 2022 - non severe			1.	59 [0.82,	3.09]	10.12
Liu 2022 - severe			7.	58 [3.58,	16.04]	9.34
Hotorogonolity			3.	43 [0.00, 6	69904.73]	
Test of $\theta_i = \theta_i$: Q(1) = 9.35, p = 0.00						
Test of $\theta = 0$: t(1) = 1.58, p = 0.36						
5						
ChevinskyJr 2021 - inpatient			1.	10 [0.72,	1.69]	12.27
Cohen 2022			1.	56 [1.44,	1.68]	14.41
Al-Aly 2022			1.	80 [1.72,	1.89]	14.45
Daugherty 2021			2.	48 [2.08,	2.95]	14.07
ChevinskyJr 2021 - outpatient			2.	50 [1.39,	4.48]	10.86
Heterogeneity: τ^{2} = 0.08, I^{2} = 96.17%, H^{2} = 26.14			1.	80 [1.21,	2.66]	
Test of $\theta_i = \theta_i$: Q(4) = 31.76, p = 0.00						
Test of $\theta = 0$: t(4) = 4.15, p = 0.01						
Overall			1.	95 [1.24,	3.07]	
Heterogeneity: τ² = 0.27, l² = 99.37%, H² = 159.42						
Test of $\theta_i = \theta_i$: Q(7) = 175.82, p = 0.00						
Test of θ = 0: t(7) = 3.48, p = 0.01						
Test of group differences: $Q_b(2) = 5.25$, $p = 0.07$						
Random-effects Sidik–Jonkman model Knapp–Hartung standard errors Sorted by: effect	12	4	8 16			

Analysis 4.3. Dementia

Study					exp(ES) with 95% Cl	Weight (%)
0						
Taquet 2021					1.33 [1.26, 1.41]	18.44
Heterogeneity: τ^2 = 0.00, I^2 = .%, H^2 = .		•			1.33 [1.26, 1.41]	
Test of $\theta_i = \theta_j$: Q(0) = 0.00, p = .						
Test of $\theta = 0$: t(0) = 9.94, p = .						
3						
Park 2021					0.59 [0.44, 0.78]	16.96
Heterogeneity: $\tau^{_2}$ = 0.00, $I^{_2}$ = .%, $H^{_2}$ = .	•				0.59 [0.44, 0.78]	
Test of $\theta_i = \theta_j$: Q(0) = -0.00, p = .						
Test of $\theta = 0$: t(0) = -3.68, p = .						
5						
Patel 2022 - outpatient cohort					1.22 [1.01, 1.47]	17.78
Patel 2022 - hospitalised cohort		1	-		1.57 [1.33, 1.84]	17.98
Cohen 2022		1			1.60 [1.44, 1.78]	18.27
Daugherty 2021		-				10.58
Heterogeneity: $\tau^{_2}$ = 0.09, $I^{_2}$ = 91.67%, $H^{_2}$ = 12.01					1.59 [0.96, 2.63]	
Test of $\theta_i = \theta_j$: Q(3) = 9.66, p = 0.02						
Test of θ = 0: t(3) = 2.92, p = 0.06						
Overall	-				1.33 [0.79, 2.25]	
Heterogeneity: $\tau^2 = 0.23$, $I^2 = 97.85\%$, $H^2 = 46.41$						
Test of $\theta_i = \theta_j$: Q(5) = 52.17, p = 0.00						
Test of $\theta = 0$: t(5) = 1.41, p = 0.22						
Test of group differences: $Q_b(2) = 32.18$, p = 0.00	1/2	1	2	4		
Random-effects Sidik–Jonkman model Knapp–Hartung standard errors			-			

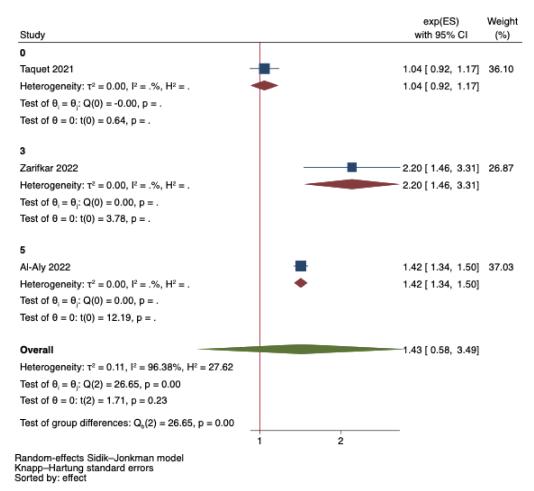
Sorted by: effect

Analysis 4.4 Alzheimer's Disease

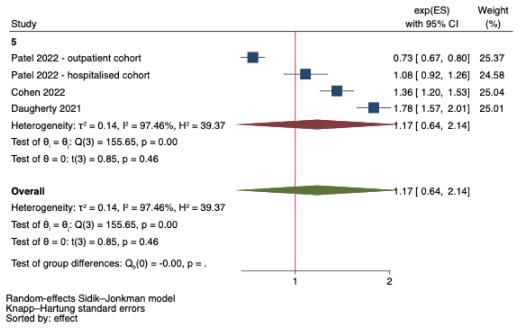


Meta-regression and testing for publication are not possible (<10 studies per variable). We used the most adjusted estimate in the manuscript.

Analysis 4.5 Extrapyramidal and movement disorders

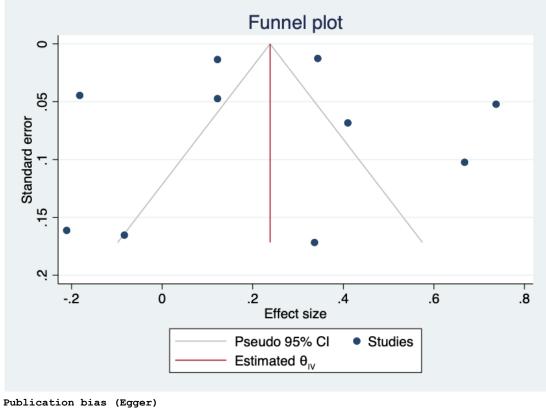


Analysis 4.6 Sleep apnea



Analysis 4.7 Other sleep disorders

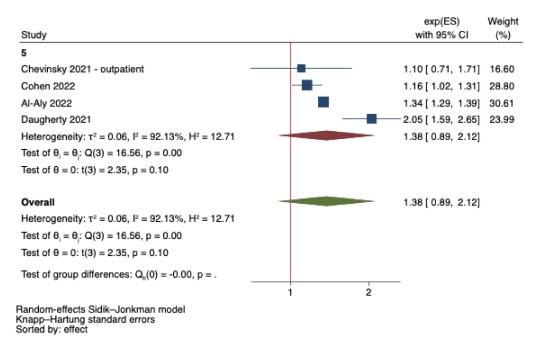
Study		exp(ES) with 95% CI	Weight (%)
0			
Taquet 2021		1.13 [1.10, 1.16]	10.92
Heterogeneity: τ^2 = 0.00, I^2 = .%, H^2 = .	•	1.13 [1.10, 1.16]	
Test of $\theta_i = \theta_j$: Q(0) = -0.00, p = .			
Test of θ = 0: t(0) = 9.02, p = .			
3			
Murata 2022 - vs RTI		0.81 [0.59, 1.11]	8.68
Murata 2022 - vs influenza		1.40 [1.00, 1.96]	8.44
Park 2021	-	- 2.09 [1.89, 2.32]	10.65
Heterogeneity: $\tau^2 = 0.21$, $I^2 = 92.88\%$, $H^2 = 14.05$		1.35 [0.41, 4.46]	
Test of $\theta_i = \theta_j$: Q(2) = 34.33, p = 0.00			
Test of $\theta = 0$: t(2) = 1.10, p = 0.39			
5			
Patel 2022 - outpatient cohort		0.83 [0.76, 0.91]	10.73
ChevinskyJr 2021 - outpatient		0.92 [0.67, 1.27]	8.59
Al-Aly 2022		1.41 [1.38, 1.45]	10.93
Patel 2022 - hospitalised cohort		1.51 [1.32, 1.72]	10.45
Wang 2022b		— 1.95 [1.60, 2.38]	9.90
Heterogeneity: $\tau^2 = 0.12$, $I^2 = 97.82\%$, $H^2 = 45.77$		1.27 [0.82, 1.96]	
Test of $\theta_i = \theta_j$: Q(4) = 148.85, p = 0.00			
Test of $\theta = 0$: t(4) = 1.50, p = 0.21			
Overall		1.28 [0.98, 1.68]	
Heterogeneity: $\tau^2 = 0.11$, $I^2 = 99.07\%$, $H^2 = 107.65$			
Test of $\theta_i = \theta_j$: Q(8) = 358.98, p = 0.00			
Test of θ = 0: t(8) = 2.13, p = 0.07			
Test of group differences: $Q_b(2) = 0.96$, p = 0.62			
Random-effects Sidik–Jonkman model Knapp–Hartung standard errors Sorted by: effect	1 2		



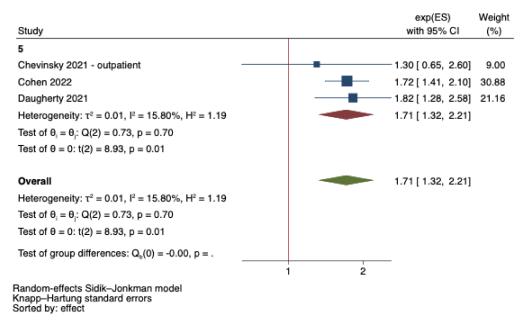
H0: betal = 0; no small-study effects betal = -1.06

 $\begin{array}{rcl} \text{SE of beta1} &=& -1.00\\ \text{SE of beta1} &=& 1.888\\ & z &=& -0.56\\ \text{Prob} > |z| &=& 0.5750 \end{array}$

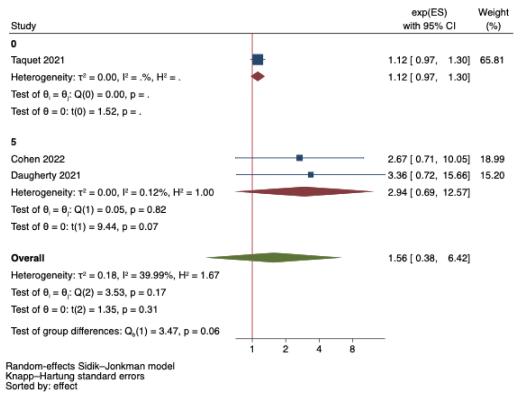
Analysis 4.8 Peripheral Neuropathy



Analysis 4.9 Epilepsy or seizures

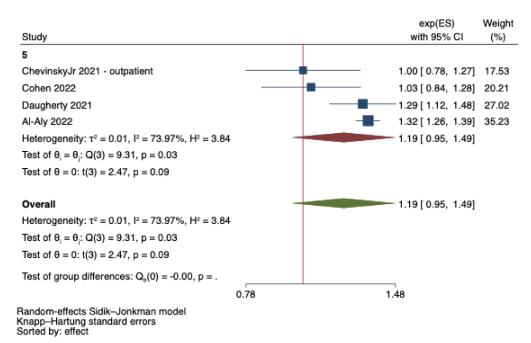


Analysis 4.10 Guillain Barré syndrome



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

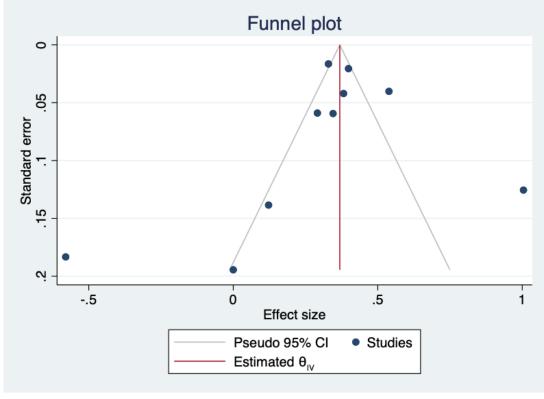
Analysis 4.11 Headaches and Migraines



Analysis 5.1 Acute kidney injury

Study			exp(ES) with 95% CI	Weight (%)
3				
Lund 2021	-		1.13 [0.86, 1.48]	9.46
Heterogeneity: $\tau^2 = 0.00$, $I^2 = .\%$, $H^2 = .$	-		1.13 [0.86, 1.48]	
Test of $\theta_i = \theta_i$: Q(0) = 0.00, p = .				
Test of $\theta = 0$: t(0) = 0.88, p = .				
5				
ChevinskyJr 2021 - inpatient			0.56 [0.39, 0.80]	8.67
ChevinskyJr 2021 - outpatient		•	1.00 [0.68, 1.46]	8.46
Patel 2022 - outpatient cohort		-	1.34 [1.19, 1.50]	10.50
Al-Aly 2022 - unvaccinated			1.39 [1.35, 1.44]	10.74
Birkelo 2021		-	1.41 [1.26, 1.59]	10.50
Cohen 2022		-	1.46 [1.35, 1.59]	10.63
Al-Aly 2022 - vaccinated			1.49 [1.43, 1.55]	10.73
Patel 2022 - hospitalised cohort			1.71 [1.58, 1.85]	10.64
Daugherty 2021			- 2.73 [2.13, 3.49]	9.67
Heterogeneity: τ^{2} = 0.15, l^{2} = 99.05%, H^{2} = 105.34			1.37 [1.01, 1.88]	
Test of $\theta_i = \theta_i$: Q(8) = 83.77, p = 0.00				
Test of $\theta = 0$: t(8) = 2.36, p = 0.05				
Overall		-	1.35 [1.03, 1.78]	
Heterogeneity: τ² = 0.14, l² = 98.83%, H² = 85.57				
Test of $\theta_i = \theta_i$: Q(9) = 86.96, p = 0.00				
Test of $\theta = 0$: t(9) = 2.47, p = 0.04				
Test of group differences: $Q_b(1) = 1.03$, $p = 0.31$			_	
	1/2	1 2		
Random-effects Sidik-Jonkman model				

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

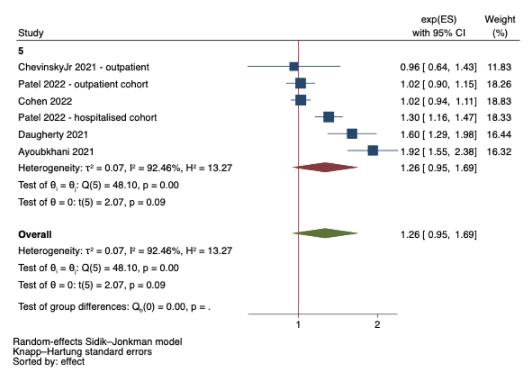


Publication bias (Egger)

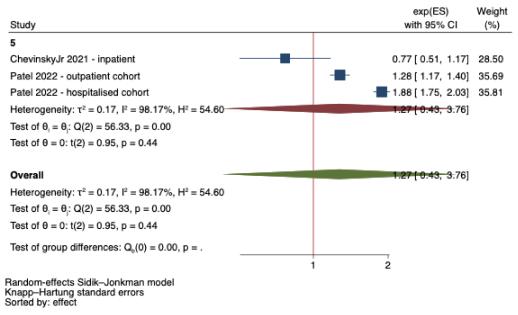
H0: beta1 = 0; no small-study effects beta1 = -2.87SE of beta1 = 1.864z = -1.54

|z| = -1.54Prob > |z| = 0.1240

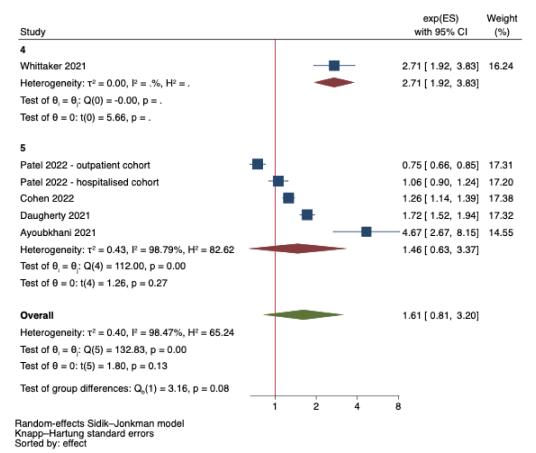
Analysis 5.2 Chronic kidney disease



Analysis 5.3 Fluid and electrolyte disorders



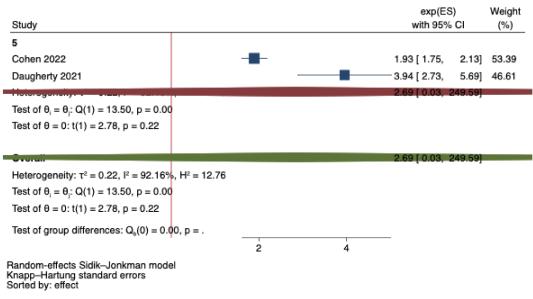
Analysis 6.1 Liver disorders



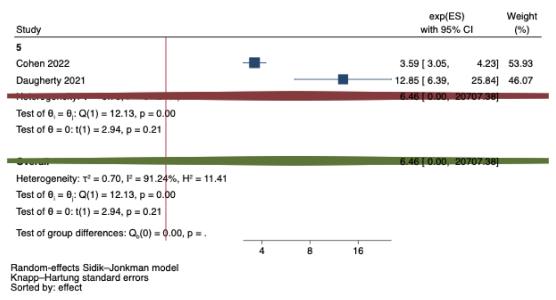
Analysis 7.1 Lung disorders (general)

Study					exp(E ith 95%		Weight (%)
0							
SnellerMc 2022			•	2.26 [0.00,	1.6e+05]	0.45
Heterogeneity: τ^2 = 0.00, I^2 = .%, H^2 = .				2.26 [0.00,	1.6e+05]	
Test of $\theta_i = \theta_j$: Q(0) = 0.00, p = .							
Test of $\theta = 0$: t(0) = 0.14, p = .							
4							
Whittaker 2021				2.01 [0.90,	4.48]	12.65
Heterogeneity: τ^2 = 0.00, I^2 = .%, H^2 = .			•	2.01 [0.90,	4.48]	
Test of $\theta_i = \theta_j$: Q(0) = -0.00, p = .							
Test of $\theta = 0$: t(0) = 1.71, p = .							
5							
Patel 2022 - outpatient cohort				1.17 [1.06,	1.29]	14.71
ChevinskyJr 2021 - inpatient				1.50 [1.01,	2.24]	14.16
Patel 2022 - hospitalised cohort				1.90 [1.68,	2.15]	14.68
Cohen 2022				2.53 [2.20,	2.92]	14.66
Daugherty 2021				7.71 [4.92,	12.08]	14.01
Ayoubkhani 2021				25.35 [22.26,	28.87]	14.68
Heterogeneity: $\tau^2 = 1.37$, $I^2 = 99.57\%$, $H^2 = 232.16$	6		٠	3.43 [0.99,	11.86]	
Test of $\theta_i = \theta_i$: Q(5) = 1489.16, p = 0.00							
Test of $\theta = 0$: t(5) = 2.56, p = 0.05							
Overall			•	3.20 [1.28,	7.98]	
Heterogeneity: τ ² = 1.01, I ² = 99.19%, H ² = 123.39)			-			
Test of $\theta_i = \theta_i$: Q(7) = 1489.90, p = 0.00							
Test of $\theta = 0$: t(7) = 3.01, p = 0.02							
Test of group differences: $Q_{\rm b}(2)$ = 0.72, p = 0.70							
	1/16384	1/16	64	65536			
Random-effects Sidik–Jonkman model Knapp–Hartung standard errors Sorted by: effect							

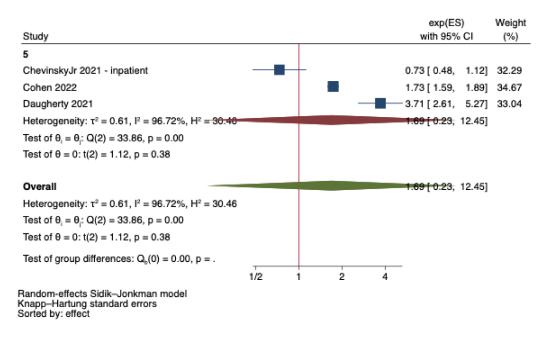
Analysis 7.2 Acute respiratory disorder



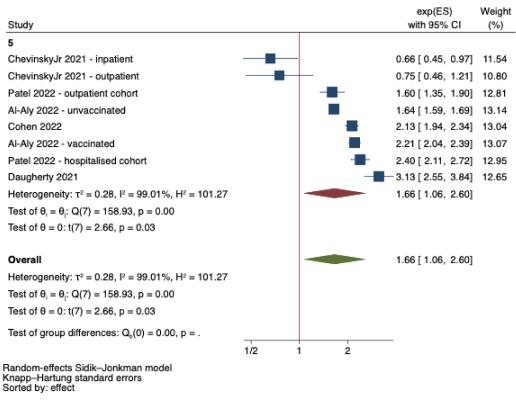
Analysis 7.3 Chronic respiratory failure



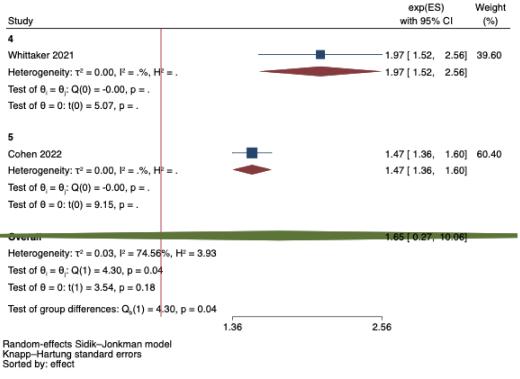
Analysis 7.4 Respiratory failure (unspecified)



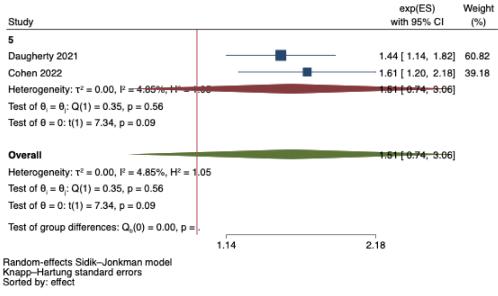
Analysis 8.1 Coagulation disorders



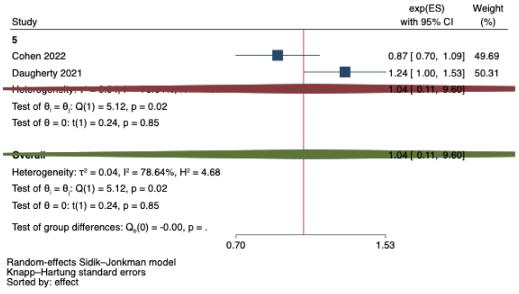
Analysis 8.2 Anemia



Analysis 8.3 Urticaria



Analysis 8.4 Atopic dermatitis



Analysis 9. Other diagnosis (no meta-analysis)

Study	Definition		exp(ES) with 95% CI
Daugherty 2021	Arrythmia		- 2.50 [2.21, 2.82]
Cohen 2022	Cardiac Arrhythmia		1.32 [1.21, 1.43]
Cohen 2022	Cardiac Rhythm Disorders		1.47 [1.36, 1.58]
Daugherty 2021	Cardiac Arrhythmia		- 2.44 [2.05, 2.90]
Patel 2022 - hospitalised cohort	Cardiac Arrhythmia		1.42 [1.30, 1.55]
Patel 2022 - outpatient cohort	Cardiac Arrhythmia		1.30 [1.20, 1.41]
ChevinskyJr 2021 - outpatient	Cardiac Arrhythmia		1.20 [0.82, 1.75]
Wang 2022a	Ventricular arrhythmias		1.60 [1.53, 1.67]
Cohen 2022	Tachycardia		1.73 [1.58, 1.89]
Daugherty 2021	Tachycardia		2.74 [2.37, 3.16]
Wang 2022a	Tachycardia		1.68 [1.63, 1.74]
SnellerMc 2022	Abnormal ECG		0.87 [0.48, 1.58]
Wang 2022a	Bradycardia		1.60 [1.53, 1.67]
Wang 2022a	Cardiac arrest		1.75 [1.53, 2.01]
Rezel-Potts 2022	Atrial arritmias		0.85 [0.68, 1.06]
Wang 2022a	Atrial fibrillation and flutter		2.41 [2.30, 2.52]
Wally 2022a			1.63 [1.39, 1.91]
			1.00 [1.00, 1.01]
Subramanian 2022	Vitiligo		1.28 [0.77, 2.14]
ChevinskyJr 2021 - inpatient	Pressure ulcer of skin		0.99 [0.71, 1.38]
Subramanian 2022	Psoriasis		1.23 [1.06, 1.43]
		•	1.19 [1.04, 1.36]
Subramanian 2022	Coeliac disease		1.30 [0.90, 1.88]
ChevinskyJr 2021 - outpatient	Diverticulosis and diverticulitis		1.10 [0.73, 1.66]
ChevinskyJr 2021 - outpatient	Esophageal disorders		0.82 [0.63, 1.08]
Whittaker 2021	Gastro-oesophageal reflux disease		1.16 [0.79, 1.70]
ChevinskyJr 2021 - outpatient	Gastrointestinal hemorrhage		1.10 [0.71, 1.71]
ChevinskyJr 2021 - outpatient	Hemorrhoids		1.00 [0.61, 1.63]
Noviello 2021	Irritable bowel syndrome		1.07 [0.72, 1.60]
Subramanian 2022	Inflammatory bowel disease		1.52 [1.23, 1.88]
		•	1.13 [0.96, 1.35]
ChevinskyJr 2021 - outpatient	Aplastic anemia		1.20 [0.90, 1.60]
ChevinskyJr 2021 - outpatient	Nutritional anemia		0.95 [0.66, 1.37]
Subramanian 2022	Pernicious anaemia		1.34 [0.77, 2.33]
Subramanian 2022	i enticious anacifiid		1.13 [0.92, 1.39]
		1/2 1 2	

Random-effects REML model

Study	Definition		with 95%	
ChevinskyJr 2021 - inpatient	Fungal infections	_	1.10 [0.70,	1.
ChevinskyJr 2021 - inpatient	Urinary tract infections		0.99 [0.76,	1.
ChevinskyJr 2021 - inpatient	Bacterial infections		1.10 [0.78,	
ChevinskyJr 2021 - outpatient	Bacterial infections	T_	1.60 [1.13,	
ChevinskyJr 2021 - outpatient	Urinary tract infections		1.40 [1.04,	
ChevinskyJr 2021 - outpatient	Other respiratory infections		1.10 [0.75,	
ChevinskyJr 2021 - inpatient	Pneumonia (except tuberculosis)		1.00 [0.55,	
ChevinskyJr 2021 - outpatient	Fungal infections		0.85 [0.51,	
ChevinskyJr 2021 - inpatient	Septicemia	1	0.94 [0.67,	
ChevinskyJr 2021 - outpatient	Septicemia	T	1.90 [1.22,	
Hou 2021	Secondary infections (sepsis, endocarditis, CNS	3)	8.19 [6.33,	
Cohen 2022	Herpesviral Vesicular Dermatitis	,,	1.77 [1.09,	
Daugherty 2021	Herpesviral Vesicular Dermatitis		1.30 [0.89,	
Daughony 2021		•	1.42 [1.02,	
Zarifkar 2022	Intracerebral hemorrhage		1.00 [0.61,	1.
Zarifkar 2022	Multiple sclerosis		0.90 [0.52,	1.
Zarifkar 2022	Subarachnoid hemorrhage		0.70 [0.39,	1.
Taquet 2021	Encephalitis	, in the second s	0.96 [0.85,	1
Cohen 2022	Encephalopathy		2.13 [1.92,	2
Daugherty 2021	Encephalopathy		6.26 [4.02,	9
Subramanian 2022	Myasthenia gravis		0.92 [0.35,	2
Taquet 2021	Myoneural junction or muscle disease		1.89 [1.76,	2
Taquet 2021	Nerve, nerve root and plexus disorder		0.89 [0.87,	0
		•	1.35 [0.86,	2.
Park 2021	Eating disorders		0.50 [0.12,	2.
Wang 2022b	Mania/Bipolar affective disorder		2.64 [1.51,	4
Park 2021	Personality disorders		1.45 [0.35,	5
OhTk 2020	Drug use disorder		3.19 [0.15,	67.
Wang 2022b	Tobacco consumption		1.32 [1.06,	1
		•	1.52 [0.90,	2
Cohen 2022	Kidney Injury (unspecified)	•	1.09 [1.01,	
Daugherty 2021	Kidney Injury (unspecified)		1.70 [1.42,	
Patel 2022 - hospitalised cohort	Dialysis		1.57 [1.22,	2
Patel 2022 - outpatient cohort	Dialysis	—	1.27 [0.94,	1
Whittaker 2021	Renal failure		3.42 [2.67,	4
		•	1.66 [1.13,	2
Whittaker 2021	Asthma		0.75 [0.61,	
		•	0.75 [0.61,	0
Whittaker 2021	Arthritis	-	0.76 [0.56,	1
ChevinskyJr 2021 - outpatient	Osteoarthritis	-	0.83 [0.58,	1
Subramanian 2022	Rheumatoid arthritis	—	1.06 [0.81,	1.
		•	0.89 [0.72,	1
ChevinskyJr 2021 - outpatient	Gout		2.20 [1.09,	4
ChevinskyJr 2021 - outpatient	Inflammatory diseases of female pelvic organs	-	1.20 [0.69,	2
Subramanian 2022	Sjogren's syndrome		0.17 [0.02,	1.
Subramanian 2022	Systemic lupus erythematosus		1.02 [0.51,	2
		•	1.24 [0.78,	1

Study	Definition			exp(ES) with 95% CI
ChevinskyJr 2021 - outpatient ChevinskyJr 2021 - inpatient ChevinskyJr 2021 - outpatient ChevinskyJr 2021 - outpatient ChevinskyJr 2021 - outpatient ChevinskyJr 2021 - outpatient Wang 2022a SnellerMc 2022	Hyperplasia of prostata Malnutrition Malnutrition Menopausal disorders Nutritional deficiencies Obesity Superficial vein thrombosis Valvular abnormality			1.50 [0.80, 2.81] 1.10 [0.79, 1.54] 2.00 [1.12, 3.57] 1.00 [0.58, 1.73] 0.71 [0.50, 1.01] 0.90 [0.68, 1.20] 1.59 [1.44, 1.76] - 1.28 [0.43, 3.83] 1.17 [0.90, 1.51]
		1/2	1 2	_

Random-effects REML model

Supplementary table. Estimated rates of incident diagnosis in covid and control groups.

•		Median rate in the control	Estimated rate in the covid
Group	Outcome	group	group
Metabolic	Diabetes		0.85% (0.69% to 1.04%)
Metabolic	Thyroid disease		0.00% (0.00% to 0.01%)
Psychiatric	Any psychiatric disorder		10.58% (9.59% to 11.57%)
Psychiatric	Mood disorders	3.70%	8.11% (7.11% to 9.25%)
Psychiatric	Depressive disorders	1.00%	1.50% (1.12% to 2.01%)
Psychiatric	Anxiety disorder	1.17%	1.41% (1.16% to 1.70%)
Psychiatric	Panic disorder	0.22%	0.24% (0.04% to 1.33%)
Psychiatric	Post-traumatic stress disorder	0.75%	1.00% (0.42% to 2.36%)
Psychiatric	Psychosis	0.19%	0.42% (0.32% to 0.55%)
Psychiatric	Any substance use disorders	0.26%	0.33% (0.17% to 0.63%)
Psychiatric	Alcohol use disorder	N/A	N/A
Cardiovascular	All cardiovascular	0.54%	1.18% (0.40% to 3.52%)
Cardiovascular	Arterial Hypertension	1.84%	2.14% (1.69% to 2.71%)
Cardiovascular	Pulmonary hypertension	0.47%	0.92% (0.00% to 100.00%)
Cardiovascular	Heart failure	0.83%	0.99% (0.66% to 1.49%)
Cardiovascular	Postural Tachycardia Syndrome	0.50%	0.94% (0.03% to 30.65%)
Cardiovascular	Myocarditis	0.01%	0.02% (0.00% to 0.90%)
Cardiovascular	Pericarditis	0.02%	0.03% (0.02% to 0.03%)
Cardiovascular	Myocardial infarction	0.50%	0.64% (0.45% to 0.90%)
Cardiovascular	Cardiogenic shock	0.03%	0.03% (0.00% to 6.85%)
Cardiovascular	Cardiomiopathy	0.04%	0.15% (0.10% to 0.21%)
Cardiovascular	Peripheral artery disease	0.50%	0.48% (0.26% to 0.91%)
Cardiovascular	Deep vein thrombosis	0.19%	0.59% (0.16% to 2.20%)
Cardiovascular	Pulmonary embolism	0.24%	0.57% (0.31% to 1.03%)
Cardiovascular	Hemorrhagic stroke	0.46%	0.80% (0.55% to 1.15%)
Cardiovascular	Stroke (general)	0.60%	14.87% (14.51% to 15.23%)
Neurological	Sensory disorders	11.90%	3.21% (2.04% to 5.06%)
Neurological	Cognitive impairment	1.65%	1.30% (0.77% to 2.20%)
Neurological	Dementia	0.98%	0.03% (0.01% to 0.15%)
Neurological	Alzheimer's disease	0.02%	0.04% (0.02% to 0.09%)

Neurological	Extrapyramidal and other movement disorders	0.03%	1.49% (0.81% to 2.72%)
Neurological	Sleep apnea	1.27%	3.20% (2.45% to 4.20%)
Neurological	Other sleep disorders	2.50%	0.77% (0.50% to 1.18%)
Neurological	Peripheral neuropathy	0.56%	0.31% (0.24% to 0.40%)
Neurological	Epilepsy or seizure	0.18%	0.01% (0.00% to 0.04%)
Neurological	Guillain Barré syndrome	0.00%	0.24% (0.19% to 0.30%)
Neurological	Headaches and migraine	0.20%	5.79% (4.42% to 7.64%)
Renal	Acute kidney injury	4.29%	1.70% (1.28% to 2.28%)
Renal	Chronic kidney injury	1.35%	5.91% (2.00% to 17.51%)
Renal	Fluid and electrolyte disorders	4.66%	1.19% (0.60% to 2.37%)
Hepatic	Liver disease	0.74%	2.63% (1.05% to 6.56%)
Pulmonary	Lung disorders	0.82%	2.00% (0.02% to 100.00%)
Pulmonary	Acute respiratory failure	0.74%	1.42% (0.00% to 100.00%)
Pulmonary	Chronic respiratory failure	0.22%	1.75% (0.24% to 12.88%)
Pulmonary	Respiratory failure (unspecified)	1.03%	1.37% (0.87% to 2.14%)
Hematic	Coagulopathy	0.82%	2.18% (0.36% to 13.31%)
Hematic	Anemia	1.32%	0.12% (0.06% to 0.25%)
Dermal	Urticaria	0.08%	0.21% (0.02% to 1.96%)
Dermal	Atopic dermatitis	0.20%	0.85% (0.69% to 1.04%)

N/A Not available