

Supplemental Information

SUPPLEMENTAL TABLE 4 COVID-19 Associated Conditions and Complications

Condition	ICD-10 Code
Acute kidney injury	N17.9, N17.0, N17.1, N17.2, N17.8, S37.0, S37.091, S37.092A, S37.099A, S37.00
Acute liver injury	R74.01, R94.5, K72, K72.90, K72.91, K72.00, K72.01
Aseptic meningitis	A87, A87.8, A87.9, G03.8, G03.9, G03.0, G03.9, G03
Asthma	J45.21, J45.22, J45.31, J45.32, J45.41, J45.42, J45.51, J45.52, J45.901, J45.902, Exclude patients < 2 year of age
Bronchiolitis	J21.0, J21.1, J21.8, J21.9: exclude patient > 2 years
Cerebral infarction	I63, I630, I631, I632, I633, I634, I635, I636, I638, I639
Croup	J04.0, J04.1, J04.2, J04.30, J04.31, J05.0, J05.10, J05.11, J06.0
Encephalitis	A85, A85.8, A86, B941, G04, G04.0, G04.8, G04.9, G05, G05.3
Encephalopathy	G04.3, G04.30, G93.4, G93.40, G93.49, J10.81, J11.81
Febrile infant	Age < 90 days AND one of the following codes: R50, P81, R50.9, R50.81
Febrile seizure	R56.0, R56.00, R56.01, R56.9
Gastroenteritis/dehydration	A08.4, A08.8, A08.0, E86.0
Kawasaki disease/MIS-C*	M30.3, M35.8
Myocarditis/pericarditis/heart failure	I51.4, I40.1, I40, I41, I40.0, I40.8, I40.9, I51.4, B33.22, I30, I30.9, I30.8, I30.0, I30.1, B33.23
Nonfebrile seizure	G40.1, G40.20, G40.21, G40.30, G40.31, G40.4, G40.5, G40.6, G40.7, G40.8, G40.9, R56.8, R56.9
Pancreatitis	K85, K86.1
Pneumonia, lung effusion, or empyema	J12.0, J12.1, J12.2, J12.3, J12.81, J12.89, J12.9, J13, J14, J15.0, J15.1, J15.20, J15.211, J15.212, J15.29, J15.3, J15.4, J15.5, J15.6, J15.7, J15.8, J15.9, J16.0, J16.8, J17, J18.0, J18.1, J18.2, J18.8, J18.9, J69.0, J69.1, J69.8, B34.9, B34, J81.0, J12.82
Respiratory failure	J96, P28.5, J96.90, J96.91, J96.9, J96.00, J96.01, J96.02, J96.0, R09.2, J96.2, J80
Sepsis	R65.20, R65.21, A41.9, A41.89, A41, I95.9, I95.8, I95
Sickle cell complications	D57.01, D57.211, D57.411, D57.811, D57.02, D57.212, D57.412, D57.812, D57.41, D57.81
Thrombotic complications	I82.49, I82.59, I26, I60, I61, I62
Unspecified Influenza-like Illness	B97.89, H66.90, H66.91, H66.92, H66.93, J00, J01.90, J06.9, J20.9, J40, R05, R50

SUPPLEMENTAL TABLE 5 Times Period Definitions for Preeminent Circulating SARS-CoV-2 Strain or Variant

	Predominant Circulating Strain or Variant Period	
	Start	End
Wildtype	04/01/2020	03/08/2021
Washout	03/09/2021	04/04/2021
Alpha	04/05/2021	05/031/2021
Washout	06/01/2021	06/27/2021
Delta	06/28/2021	12/18/2021
Washout	12/19/2021	12/24/2021
Omicron	12/25/2021	03/30/2022

SUPPLEMENTAL TABLE 6 Neurologic Complication Diagnosis Codes

Outcome	ICD-10 Code
Encephalopathy	G043, G0430, G934, G9340, G9349, J1081, J1181
Other*	R4182, F05, R404
Encephalitis	A85, A858, A86, B941, G04, G040, G048, G049, G05, G053
Aseptic Meningitis	A87, A878, A879, G038, G039, G030, G039, G03
Cerebral Infarctions	I63, I630, I631, I632, I633, I634, I635, I636, I638, I639
Febrile Seizures	R560, R5600, R5601, R569
Non Febrile Seizures	G401, G4020, G4021, G4030, G4031, G404, G405, G406, G407, G408, G409, R568, R569
Brain Abscess & Bacterial Meningitis	G060, G060, CG060, EG060, FA5482, A0221, A3211, A390, A5481, G000, G001, G002, G003, G008, G009, G01
Reye Syndrome	G937

* Other diagnoses included: altered mental status, delirium and transient alteration of awareness.

SUPPLEMENTAL TABLE 7 Adjusted Odds of COVID-19 Associated Neurologic Complications Stratified by Age

Risk Factor	2 mo–4 years	5–11 years	12–17 years
Race or ethnicity			
Non-Hispanic white	ref	ref	ref
Non-Hispanic Black	1.15 (0.88–1.51)	0.8 (0.59–1.08)	1.45 (1.14–1.85)
Hispanic	1.02 (0.8–1.3)	0.63 (0.43–0.91)	1.04 (0.8–1.34)
Asian	1.55 (0.94–2.56)	1.21 (0.61–2.43)	1.22 (0.53–2.83)
Other	1.24 (0.88–1.74)	1.07 (0.66–1.75)	1.29 (0.71–2.35)
Neurologic CCC			
No	ref	ref	ref
Yes	2.75 (2.16–3.51)	3.9 (3–5.06)	5.97 (4.48–7.95)
Non-Neurologic CCCs			
0	ref	ref	ref
1	0.63 (0.48–0.84)	1.03 (0.75–1.42)	0.86 (0.63–1.16)
2+	0.73 (0.47–1.13)	0.69 (0.46–1.05)	1.44 (1.05–1.98)
Remdesivir or dexamethasone exposure			
No	ref	ref	ref
Yes	0.49 (0.36–0.67)	0.69 (0.5–0.93)	0.73 (0.53–0.99)
Preeminent circulating strain			
Wildtype	ref	ref	ref
Washout 1	0.64 (0.34–1.21)	0.64 (0.27–1.55)	0.86 (0.37–2.01)
Alpha	0.66 (0.38–1.15)	1.5 (0.85–2.66)	0.77 (0.46–1.27)
Washout 2	1.42 (0.78–2.58)	1.82 (0.65–5.1)	1.23 (0.46–3.25)
Delta	0.65 (0.5–0.86)	0.76 (0.62–0.95)	0.72 (0.5–1.04)
Washout 3	1.11 (0.67–1.85)	1.72 (0.84–3.5)	1.04 (0.45–2.4)
Omicron	0.93 (0.69–1.25)	1.44 (0.68–3.04)	0.78 (0.39–1.54)