

## Supplemental Digital Content 4

### Results of Sensitivity Analyzes.

Table 1. Influence of an unmeasured confounder with odds ratio of 1.1 on length of hospital stay > 4 days

P <sub>PsD</sub>	P <sub>c</sub>					
	0	0.1	0.2	0.3	0.4	0.5
0	1.90 (1.52-2.37)					
0.1	1.88 (1.50-2.35)	1.90 (1.52-2.37)				
0.2	1.86 (1.49-2.32)	1.88 (1.51-2.35)	1.90 (1.52-2.37)			
0.3	1.84 (1.48-2.30)	1.86 (1.49-2.32)	1.88 (1.51-2.35)	1.90 (1.52-2.37)		
0.4	1.83 (1.46-2.28)	1.85 (1.48-2.30)	1.86 (1.49-2.32)	1.88 (1.51-2.35)	1.90 (1.52-2.37)	
0.5	1.81 (1.45-2.26)	1.83 (1.46-2.28)	1.85 (1.48-2.30)	1.86 (1.49-2.32)	1.88 (1.51-2.35)	1.90 (1.52-2.37)
0.6	1.79 (1.43-2.24)	1.81 (1.45-2.26)	1.83 (1.46-2.28)	1.85 (1.48-2.30)	1.86 (1.49-2.33)	1.88 (1.51-2.35)
0.7	1.78 (1.42-2.21)	1.79 (1.43-2.24)	1.81 (1.45-2.26)	1.83 (1.46-2.28)	1.85 (1.48-2.30)	1.86 (1.49-2.33)
0.8	1.76 (1.41-2.19)	1.78 (1.42-2.22)	1.79 (1.44-2.24)	1.81 (1.45-2.26)	1.83 (1.46-2.28)	1.85 (1.48-2.30)
0.9	1.74 (1.39-2.17)	1.76 (1.41-2.20)	1.78 (1.42-2.22)	1.80 (1.44-2.24)	1.81 (1.45-2.26)	1.83 (1.46-2.28)
1	1.73 (1.38-2.15)	1.74 (1.40-2.18)	1.76 (1.41-2.20)	1.78 (1.42-2.22)	1.80 (1.44-2.24)	1.81 (1.45-2.26)

P<sub>PsD</sub>: Prevalence of unmeasured confounder in patients with psychiatric disorder (PsD) P<sub>c</sub>: Prevalence of unmeasured confounder in controls. Results are the new odds ratio with 95% confidence intervals for PsD. Bold line marks cut-off for no significance for PsD, blanks are where odds ratio for PsD would have increased.

Table 2. Influence of an unmeasured confounder with odds ratio of 1.1 on 90-day surgery-related readmissions

	$P_c$					
$P_{PsD}$	0	0.1	0.2	0.3	0.4	0.5
0	1.68 (1.34-2.10)					
0.1	1.66 (1.33-2.08)	1.68 (1.34-2.10)				
0.2	1.65 (1.31-2.06)	2.08 (1.33-2.08)	1.68 (1.34-2.10)			
0.3	1.63 (1.30-2.04)	1.65 (1.31-2.06)	1.66 (1.33-2.08)	1.68 (1.34-2.10)		
0.4	1.62 (1.29-2.02)	1.63 (1.30-2.04)	1.65 (1.31-2.06)	1.66 (1.33-2.08)	1.68 (1.34-2.10)	
0.5	1.60 (1.28-2.00)	1.62 (1.29-2.02)	1.63 (1.30-2.04)	1.65 (1.31-2.06)	1.66 (1.33-2.08)	1.68 (1.34-2.10)
0.6	1.58 (1.26-1.98)	1.60 (1.28-2.00)	1.62 (1.29-2.02)	1.63 (1.30-2.04)	1.65 (1.31-2.06)	1.66 (1.33-2.08)
0.7	1.57 (1.25-1.96)	1.59 (1.26-1.98)	1.60 (1.28-2.00)	1.62 (1.29-2.02)	1.63 (1.30-2.04)	1.65 (1.31-2.06)
0.8	1.56 (1.24-1.94)	1.57 (1.25-1.96)	1.59 (1.27-1.98)	1.60 (1.28-2.00)	1.62 (1.29-2.02)	1.63 (1.30-2.04)
0.9	1.54 (1.23-1.93)	1.56 (1.24-1.95)	1.57 (1.25-1.97)	1.59 (1.27-1.98)	1.60 (1.28-2.00)	1.62 (1.29-2.02)
1	1.53 (1.22-1.91)	1.54 (1.23-1.93)	1.56 (1.24-1.93)	1.57 (1.25-1.97)	1.59 (1.27-1.99)	1.60 (1.28-2.00)

$P_{PsD}$ : Prevalence of unmeasured confounder in patients with psychiatric disorder (PsD)  $P_c$ : Prevalence of unmeasured confounder in controls. Results are the new odds ratio with 95% confidence intervals for PsD. Bold line marks cut-off for no significance for PsD, blanks are where odds ratio for PsD would have increased.

Table 3. Influence of an unmeasured confounder with odds ratio of 2.0 on length of hospital stay > 4 days

$P_{PsD}$	$P_c$					
	0	0.1	0.2	0.3	0.4	0.5
0	1.90 (1.52-2.37)					
0.1	1.73 (1.38-2.15)	1.90 (1.52-2.37)				
0.2	1.58 (1.27-1.98)	1.74 (1.39-2.17)	1.90 (1.52-2.37)			
0.3	1.46 (1.17-1.82)	1.61 (1.29-2.01)	1.75 (1.40-2.19)	1.90 (1.52-2.37)		
0.4	1.36 (1.09-1.69)	1.49 (1.19-1.86)	1.63 (1.30-2.03)	1.76 (1.41-2.20)	1.90 (1.52-2.37)	
0.5	1.27 (1.01-1.58)	1.39 (1.11-1.74)	1.52 (1.22-1.90)	1.65 (1.30-2.05)	1.77 (1.42-2.21)	1.90 (1.52-2.37)
0.6	1.19 (0.95-1.48)	1.31 (1.05-1.63)	1.43 (1.14-1.78)	1.54 (1.24-1.93)	1.66 (1.33-2.07)	1.78 (1.43-2.22)
0.7	1.12 (0.89-1.39)	1.23 (0.98-1.53)	1.34 (1.07-1.67)	1.45 (1.16-1.81)	1.56 (1.25-1.95)	1.68 (1.34-2.09)
0.8	1.06 (0.84-1.32)	1.16 (0.93-1.45)	1.27 (1.01-1.58)	1.37 (1.10-1.71)	1.48 (1.18-1.84)	1.58 (1.27-1.98)
0.9	1.00 (0.80-1.25)	1.10 (0.88-1.37)	1.20 (0.96-1.50)	1.30 (1.04-1.62)	1.40 (1.12-1.75)	1.50 (1.20-1.87)
1	0.95 (0.76-1.19)	0.52 (0.42-1.30)	1.14 (0.91-1.42)	1.24 (0.99-1.54)	1.33 (1.06-1.66)	1.43 (1.14-1.78)

$P_{PsD}$ : Prevalence of unmeasured confounder in patients with psychiatric disorder (PsD)  $P_c$ : Prevalence of unmeasured confounder in controls. Results are the new odds ratio with 95% confidence intervals for PsD. Bold line marks cut-off for no significance for PsD, blanks are where odds ratio for PsD would have increased.

Table 4. Influence of an unmeasured confounder with odds ratio of 2.0 on 90-day surgery-related readmissions

	$P_c$					
$P_{PSD}$	0	0.1	0.2	0.3	0.4	0.5
0	1.68 (1.34-2.10)					
0.1	1.53 (1.22-1.91)	1.68 (1.34-2.10)				
0.2	1.40 (1.12-1.75)	1.54 (1.23-1.93)	1.68 (1.34-2.10)			
0.3	1.29 (1.03-1.62)	1.42 (1.13-1.78)	1.55 (1.24-1.94)	1.68 (1.34-2.10)		
0.4	1.20 (0.96-1.50)	1.32 (1.05-1.65)	1.44 (1.15-1.80)	1.56 (1.24-1.95)	1.68 (1.34-2.10)	
0.5	1.12 (0.89-1.40)	1.23 (0.98-1.54)	1.34 (1.07-1.68)	1.46 (1.16-1.82)	1.57 (1.25-1.96)	1.68 (1.34-2.10)
0.6	1.05 (0.84-1.31)	1.16 (0.92-1.44)	1.58 (1.01-1.58)	1.37 (1.09-1.71)	1.47 (1.17-1.84)	1.58 (1.26-1.97)
0.7	0.99 (0.79-1.24)	1.09 (0.87-1.36)	1.19 (0.95-1.48)	1.28 (1.02-1.61)	1.38 (1.10-1.73)	1.48 (1.18-1.85)
0.8	0.93 (0.74-1.17)	1.03 (0.82-1.28)	1.12 (0.89-1.40)	1.21 (0.97-1.52)	1.31 (1.04-1.63)	1.40 (1.12-1.75)
0.9	0.88 (0.71-1.11)	0.97 (0.78-1.22)	1.06 (0.85-1.33)	1.15 (0.92-1.44)	1.24 (0.99-0.15)	1.33 (1.06-1.66)
1	0.84 (0.67-1.05)	0.92 (0.74-1.16)	1.01 (0.80-1.26)	1.09 (0.87-1.37)	1.18 (0.94-1.47)	1.26 (1.01-1.58)

$P_{PSD}$ : Prevalence of unmeasured confounder in patients with psychiatric disorder (PsD)  $P_c$ : Prevalence of unmeasured confounder in controls. Results are the new odds ratio with 95% confidence intervals for PsD. Bold line marks cut-off for no significance for PsD, blanks are where odds ratio for PsD would have increased.