

## Supplementary Online Content

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**eTable 1.** Comparison of Diagnosis Categories Among Neurological Hospital Encounters

**eTable 2.** Sensitivity Analysis Excluding 39 Patients Who Had Both Telemedicine and In-Person Neurology Appointments

**eTable 3.** Comparison of Hospital Encounter Frequencies and Rates in Matched Telemedicine and In-Person Patient Cohorts

This supplementary material has been provided by the authors to give readers additional information about their work.

eTable 1. Comparison of Diagnosis Categories Among Neurological Hospital Encounters<sup>a</sup>

Neurological Diagnosis Category	Total, N (%)	Telemedicine cohort, N (%)	In-person cohort, N (%)
Seizures and suspected seizures	768 (48.6)	29 (59.2)	739 (48.3)
Developmental delays and behavioral/mental/social disorders	190 (12.0)	7 (14.3)	183 (12.0)
Other low-severity <sup>b</sup>	178 (11.3)	3 (6.1)	175 (11.4)
Disorders affecting the muscle and nerves, including movement disorders	150 (9.5)	5 (10.2)	145 (9.5)
Cerebral degeneration and inflammation, spinal cord inflammation & other brain disorders	121 (7.7)	2 (4.1)	119 (7.8)
Headaches and migraines	99 (6.3)	2 (4.1)	97 (6.3)
Intracranial/cerebral/spinal cord injury or damage	74 (4.7)	1 (2.0)	73 (4.8)
Total	1,580 (100)	49 (100)	1,531 (100)

<sup>a</sup>Overall p=0.60

<sup>b</sup>Including eye, ear, sleep, head & neck, neuroendocrine, metabolic, nutritional, neoplasm, device-related complications and genetic/congenital disorders

eTable 2. Sensitivity Analysis Excluding 39 Patients Who Had Both Telemedicine and In-Person Neurology Appointments

Statistic	Telemedicine (N=339)	In-person (N=3,791)
Hospital encounter rate ratio <sup>a</sup> (95% CI)		
All-cause encounters	0.18 (0.12-0.28)	REF
Neurological encounters	0.22 (0.13-0.37)	REF
Adjusted hospital encounter rate ratio <sup>a,b</sup> (95% CI)		
All-cause encounters	0.42 (0.26-0.68)	REF
Neurological encounters	0.37 (0.21-0.68)	REF

<sup>a</sup>Incident Rate Ratio (IRR) from negative binomial regression with patient's time in the study (years) as an offset

<sup>b</sup>Adjusted for insurance status, median household income, travel time to UCDCH, presence of a complex chronic condition and neurology clinic diagnosis category (similar to Table 4)

eTable 3. Comparison of Hospital Encounter Frequencies and Rates in Matched Telemedicine and In-Person Patient Cohorts

Statistic	Matched factor			
	Time to UCDCH in minutes <sup>a</sup>		Time to Outpatient Neurology Clinic in minutes <sup>b,c</sup>	
	Telemedicine (N=187)	In-person (N=187)	Telemedicine (N=378)	In-person (N=378)
All-cause encounters, N	52	53	68	369
Neurological encounters, N	34	29	47	211
Total person-years in cohort, mean (SD)	744.3 (31.1)	598.2 (37.7)	1,341.8 (42.2)	1,801.2 (51.4)
Hospital encounter rate ratio (95% CI)				
All-cause encounters	0.59 (0.27-1.29)	REF	0.22 (0.13-0.37)	REF
Neurological encounters	0.70 (0.31-1.55)	REF	0.26 (0.14-0.47)	REF
Adjusted hospital encounter rate ratio <sup>d</sup> (95% CI)				
All-cause encounters	0.58 (0.26-1.30)	REF	0.19 (0.04-0.83)	REF
Neurological encounters	0.79 (0.33-1.92)	REF	0.14 (0.02-0.82)	REF

<sup>a</sup>Mean travel time to UCDCH (minutes): telemedicine cohort=153.4 (SD 46.7), in-person cohort=153.4 (SD 47.2)

<sup>b</sup>Mean travel time to neurology clinic (minutes): telemedicine cohort=20.6 (SD 24.4), in-person cohort=23.5 (SD 23.1)

<sup>c</sup>Inpatient admissions only

<sup>d</sup>Adjusted for insurance status, median household income, travel time to UCDCH (for time to neurology clinic-matched sample only), presence of a complex chronic condition and neurology clinic diagnosis category.