

SUPPLEMENTAL TABLES

Table e-1: Demographic data and baseline diagnosis for hospitalization

Baseline data for all patients and patients with seizures		
	All patients (n=118)	Patients with seizures (n=40)
Age, mean ± SD (range)	59.9 ± 18.37 (19-95)	59.5 ± 18.43 (23-88)
Male	62 (52.5%)	20 (50%)
ICU	71 (60.2%)	20 (50%)
ICH	22 (18.6%)	6 (15.0%)
Ischemic stroke	8 (6.8%)	1 (2.5%)
TBI	10 (8.5%)	2 (5.0%)
CNS tumor	14 (11.9%)	6 (15.0%)
CNS infection	8 (6.8%)	2 (5.0%)
Hypoxic-ischemic injury	8 (6.8%)	4 (10.0%)
Seizure disorder or spells	29 (24.6%)	9 (22.5%)
General medical disease	17 (14.4%)	8 (20%)
CNS autoimmune disease	2 (1.7%)	2 (5.0%)

Legend: Abbreviations: ICU = intensive care unit; ICH = intracranial hemorrhage; TBI = traumatic brain injury; CNS = central nervous system.

aValues are the number of patients (percentage patients) unless otherwise indicated.

Table e-2: Time-savings detailed analysis

	Time Saving analysis								
	CSA review Reader A-C	CSA review - detail Reader A Reader B Reader C			Conventional review Reader A-C	Conventional review - detail Reader A Reader B Reader C			Conventional review Reader D and E
Total studies	118	44	37	37	115	64	8	43	118
Total studies with Seizures	40	9	18	13	37	26	4	7	40
Average duration time per cEEG (hours)	17.73 (SD: 4.21)	17.91 (SD: 4.06)	18.02 (SD: 4.78)	17.24 (SD: 3.71)	17.78 (SD: 4.25)	17.74 (SD: 4.46)	17.03 (SD: 3.22)	17.99 (SD: 4.07)	17.73 (SD:4.21)
Mean time to review per cEEG	5.74 (SD:2.91)	6.07 (SD:2.75)	7.15 (SD:2.99)	3.93 (SD:1.91)	28.24 (SD: 13.11)	29.48 (SD: 14.81)	6.99 (SD: 3.28)	30.35 (SD: 6.37)	22.79 (SD:13.64)
Mean time to review per cEEG with seizure	5.06 (SD:2.05)	8.99 (SD:2.94)	9.18 (SD:2.88)	5.06 (SD:2.05)	34.46 (SD: 17.12)	38.23 (SD: 17.16)	8.40 (SD: 3.85)	35.14 (SD: 8.31)	33.53 (SD: 18.51)
Mean time to review per cEEG without seizure	3.32 (SD:1.50)	5.31 (SD:2.13)	5.23 (SD:1.40)	3.32 (SD:1.50)	25.05 (SD: 8.94)	23.50 (SD: 8.94)	5.58 (SD: 1.66)	29.08 (SD: 5.04)	17.28 (SD: 4.04)
Mean time to review per 24h of cEEG	8 (SD: 4.03)	8.36 (SD: 3.90)	9.88 (SD: 3.97)	5.7 (SD: 2.98)	38.75 (SD: 17.13)	40.37 (SD: 18.85)	10.46 (SD: 5.95)	41.6 (SD: 9.39)	31 (SD: 18.09)
Mean time to review per 24h of cEEG with seizure	10.42 (SD: 4.37)	12.02 (SD: 4.09)	11.79 (SD: 4.06)	7.41 (SD: 3.31)	44.58 (SD: 20.31)	48.66 (SD: 19.70))	12.72 (SD: 7.56)	46.96 (SD: 11.70)	44.65 (SD: 26.15)

Legend: Abbreviations: CSA = compressed spectral array, cEEG = continuous EEG.

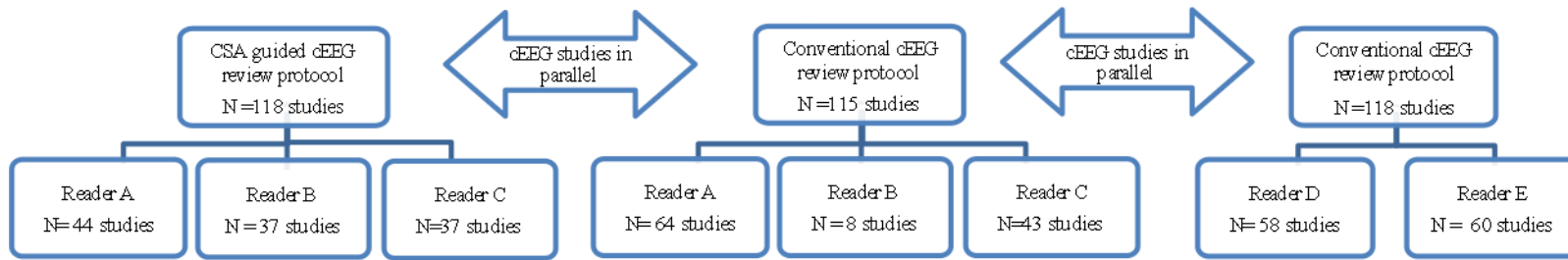
*Time in minutes.

Table e-3: Sensitivity analysis for seizures and other abnormal patterns in the CSA review group.

Sensitivity analysis for seizures and other abnormal patterns						
	CSA review – detail			Conventional review – detail		
	Reader A	Reader B	Reader C	Reader A	Reader B	Reader C
Total studies	44	37	37	64	8	43
Total studies with Seizures	9	18	13	26	4	7
Total patients with Seizures Identified	9/9 (100%)	18/18 (100%)	13/13 (100%)	26/26 (100%)	4/4 (100%)	7/7 (100%)
Total seizures identified / total seizures	244/268 (91%)	536/622 (86%)	268/311 (86%)	742/743 (99%)	146/149 (97%)	259/259 (100%)
PDs	21/21 (100%)	12/12 (100%)	10/10 (100%)	21/21 (100%)	1/1 (100%)	16/16 (100%)
RDA	12/12 (100%)	8/8 (100%)	14/15 (93.3%)	19/19 (100%)	3/4 (75%)	8/8 (100%)
FS	31/32 (96.8%)	22/22 (100%)	23/23 (100%)	31/38 (81%)	5/5 (100%)	23/24 (95%)
GS	39/39 (100%)	33/33 (100%)	28/28 (100%)	54/54 (100%)	6/6 (100%)	30/30 (100%)
ED	28/29 (96.5%)	11/19 (57.8%)	22/22 (100%)	21/22 (95%)	5/6 (83%)	22/22 (100%)

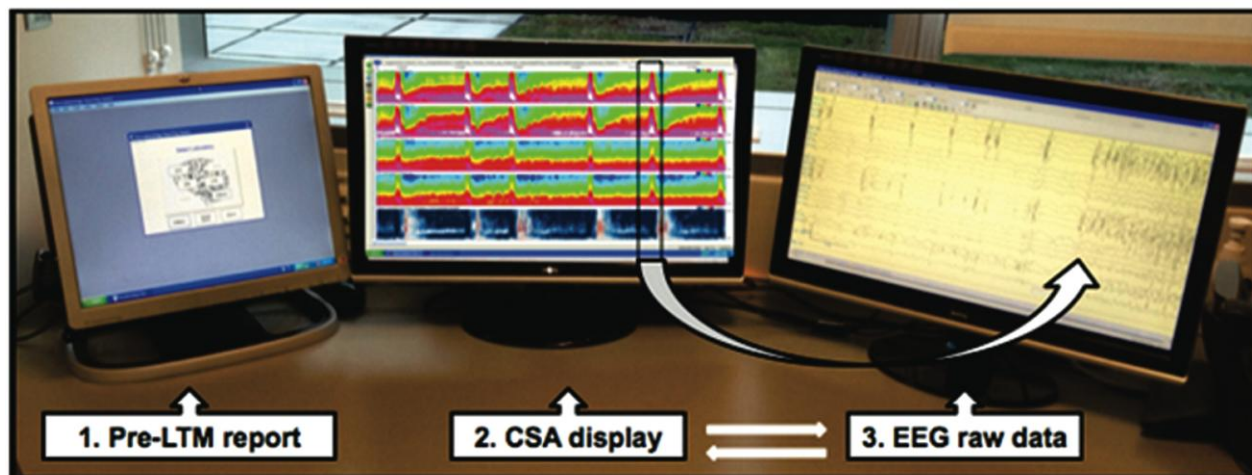
Legend: Abbreviations: Compressed spectral array (CSA), periodic epileptiform discharges (PDs), epileptiform discharges (EDs), focal slowing (FS), generalized slowing (GS) and rhythmic delta activity (RDA).

Figure e-1: Study design. Abbreviations: CSA = compressed spectral array, cEEG = Continuous EEG.



Abbreviations: CSA = compressed spectral array, cEEG = Continuous EEG.

Figure e-2: cEEG CSA guided review workstation.



Legend: At each cEEG CSA guided review workstation, readers were provided three computer screens where CSA displays and EEG raw data could be reviewed simultaneously on separate monitors. 1. Pre-LTM report: cEEG file analysis began with reviewing the reported findings from the first 30 minutes of monitoring (the “pre-LTM” period of recording). 2. CSA display: The second screen shows CSA displays used to guide subsequent review of the raw data. 3. EEG raw data: Clicking anywhere within the CSA display automatically displayed a standard 10-second view of the corresponding segment of EEG for detailed review on the third monitor. *Abbreviations: CSA = compressed spectral array, pre-LTM report = Standardized report of the first 30 minutes of EEG monitoring.*