ACNS Standardized Critical Care EEG Terminology 2021: Reference Chart

A. EEG Background									
Symmetry	Background EEG frequency	PDR	Continuity	Reactivity	State Changes	Cyclic Alternating Pattern of Encephalopathy	Voltage	AP Gradient	Breach effect
Symmetric	Beta	Present Specify frequency	Continuous: <1% periods of suppression (<10 µV) or	Reactive	Present with normal stage N2 sleep transients	(CAPE) Present	High ≥150 μV	Present	Present
Mild asymmetry <50% Voltage	Alpha	Absent	attenuation (≥10µV but <50% of background voltage)	Unreactive	Present but with abnormal stage N2 sleep transients	Absent	Normal ≥20 to <150 μV	Absent	Absent
OR 0.5-1 Hz Frequency Marked asymmetry	Theta	Unclear	Nearly continuous: 1-9% periods of suppression attenuation	SIRPIDs only	Present but without stage N2 sleep transients	Unknown/unclear	Low 10 to <20 μV	Reverse	Unclear
≥50% Voltage OR >1 Hz Frequency	Delta		Discontinuous: 10-49% periods of suppression or attenuation	Unclear	Absent		Suppressed <10 μV		
Localization Bursts (G/ L/ UI/ Mf)	BI/ supp	f Burst- pression or attenuation	Burst-suppression or Burst-attenuation:	Unknown					
Highly Epilepting Bursts (Presert Absent)	rorm	specify if:	50-99% periods of suppression or attenuation Suppression:						
Identical Bursts (Present or Absent)			>99% periods of suppression or attenuation						

B. Sporadic Epileptiform Discharges

Prevalence Abundant ≥1/10s Frequent ≥1/min but <1/10s Occasional ≥1/h but <1/min Rare <1/h

C. Rhythmic and Periodic Patterns (RPPs)

PD Periodic Dis	
RDA Rhythmic D	
SW Spike and W OR Polyspike an OR Sharp and V	

Main term 1

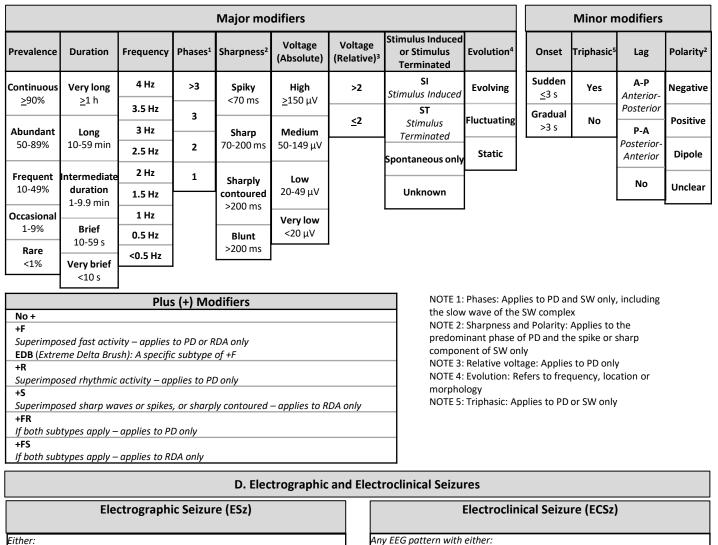
- Optional: Specify symmetric or asymmetric

- Optional: Specify lobe(s) most involved or hemispheric

Mf *Multifocal*

PD Periodic Discharges
RDA Rhythmic Delta Activity
SW Spike and Wave OR Polyspike and Wave OR Sharp and Wave

Main term 2



A) Epileptiform discharges averaging >2.5 Hz for ≥10 s (>25 discharges in 10

- s), OR B) Any pattern with definite evolution and lasting ≥10 s
- Electrographic Status Epilepticus (ESE)
- An electrographic seizure for either:

seizures in the same patient

- A) ≥10 continuous minutes, OR B) A total duration of \geq 20% of any 60-minute period of recording.

- E. Brief Potentially Ictal Rhythmic Discharges (BIRDs)
- Focal (including L, BI, UI or Mf) or generalized rhythmic activity >4 Hz (at least 5 waves at a regular rate) lasting ≥0.5 to <10 s, not consistent with a known
- normal pattern or benign variant, not part of burst-suppression or burstattenuation, without definite clinical correlate, and that has at least one of A, B or C below: Definite BIRDs feature either: A. Evolution ("evolving BIRDs") OR

B. Similar morphology and location as interictal epileptiform discharges or

Possible BIRDs are C. Sharply contoured but without (a) or (b) above

- **Electroclinical Status Epilepticus (ECSE)**
- An electroclinical seizure for either
- A) ≥10 continuous minutes, OR
- A total duration of ≥20% of any 60-minute period of recording, OR C) ≥5 continuous minutes if the seizure is convulsive (i.e., with bilateral tonic-clonic motor activity).
- Possible ECSE: An RPP that qualifies for the IIC (below) that is present for ≥10

medication

continuous minutes or for a total duration of 20% of any 60-minute period of recording, which shows EEG improvement with a parenteral anti-seizure

medication BUT without clinical improvement.

- F. Ictal-Interictal Continuum (IIC)

- 1. Any PD or SW pattern that averages >1.0 Hz but <2.5 Hz over 10 s (>10 but
- 25 discharges in 10 s); OR

A) Definite clinical correlate time-locked to the pattern (of any duration), OR

B) EEG <u>and</u> clinical improvement with a parenteral (typically IV) anti-seizure

- 2. Any PD or SW pattern that averages >0.5 Hz and <1 Hz over 10 s (>5 and <10 discharges in 10 s), and has a plus modifier or fluctuation; OR
- 3. Any lateralized RDA averaging >1 Hz for at least 10 s (at least 10 waves in 10 s) with a plus modifier or fluctuation;
- 4. Does not qualify as an ESz or ESE.