

Insights from the ACNS Special Series on Point-of-Care EEG

This [five-article series](#) published in the *Journal of Clinical Neurophysiology* by the American Clinical Neurophysiology Society (ACNS) recognizes the value of POC EEG

Rapid-EEG Technologies in Comprehensive Neuromonitoring

Where POC EEG Fits

Authors frame POC EEG as a complementary technology:

- **The Problem:** Access to timely EEG remains a challenge.
- **The Solution:** POC EEG serves as a "**complementary triage tool**" that integrates into existing workflows to provide answers in minutes, not hours.
- **Clinical Goal:** Use POC EEG as a bridge to determine which patients require long-term monitoring and which can be cleared sooner.

[Kalkach-Aparicio, M., et al. \(2026\) J Clin Neurophysiol. 43\(3\): 189-190](#)

Hardware Technology for Point-of-Care EEG: A Comprehensive Review

Why Design Matters

Dr. Herman (author of the 2015 EEG Consensus Statement) highlights what experts value in hardware:

- **Superior Signal & Safety:** The review notes that **disposable, wet electrodes** provide the most reliable signal while mitigating infection risks.
- **Rapid Configuration:** Experts recognize the massive clinical advantage of a **5–10 minute setup** over the traditional 50–100 minute lead times.
- **Efficiency:** The ACNS recognizes that "limited montage" systems provide the essential data needed for urgent bedside decisions.

[Herman, S.T. \(2026\) J Clin Neurophysiol. 43\(3\):191-203](#)

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Rapid-EEG Software Architecture's Clinical Impact: Advantages and Limitations

The Power of AI & Software

In the ICU and ED, seconds count. The review provides background on latest machine learning and AI models for EEG interpretation and describes how AI-trained software may transform bedside care. The article is filled with great insights but it has some limitations. Here are a few highlights / points of clarification:

- Ceribell is already following most of the **transparency principles** proposed by the authors.
- Ceribell alerts for status epilepticus based on **both 2012 NCS guidelines and the 2021 ACNS definitions**, with an alert at $\geq 90\%$ 5-minute seizure burden for continuous suspected seizures, and another at ≥ 10 minutes of continuous activity or ≥ 12 of 60 minutes for ESE - with the latter criterion being optional.
- The **most advanced learning models** mentioned in the review are like the type being used in Clarity®!
- Since EEG interpretation is based on pattern recognition and prone to **inter-rater variability**, the authors suggest AI could be helpful in reducing this variability.

Fisch, U., Lee, J. (2026) J Clin Neurophysiol. 43(3):204-210

Rapid EEG in Specific Clinical Situation

Key Clinical Indications

- **Unexplained AMS:** Rule out or detect non-convulsive seizures in minutes
- **Post-Ictal Monitoring:** Monitor patients who fail to return to baseline after a seizure
- **Cardiac Arrest:** Assess hypoxic brain injury and subclinical seizures bedside
- **Stroke:** Screen for underlying seizure activity that mimics worsening stroke symptoms
- **Status Epilepticus:** Rapidly monitor the effectiveness of anti-seizure medications

Authors discuss **five case studies** that illustrate both the utility and limitations of POC EEG, three of these studies were with Ceribell, including the only one showing utility of AI seizure detection.

Patedakis Litvinov, B., et al. (2026) J Clin Neurophysiol. 43(3):211-221

Rapid EEG Monitoring in Clinical Practice

Proven Clinical Utility

Out of 25 peer-reviewed papers on POC EEG, **14 were based on Ceribell**. Results from a survey of 20 centers affiliated with the Critical Care EEG Monitoring Research Consortium, 10 of which reported using rapid/POC EEG in their practice.

The Bottom Line: POC EEG improves diagnostic accuracy and confidence, dramatically improving access to brain monitoring when integrated thoughtfully

Benefit Reported by Users	Impact
Earlier Diagnosis	80% of users reported faster diagnosis and treatment decisions
Faster Therapy	70% reported quicker initiation of appropriate medication
Improved Triage	80% felt it streamlined patient flow in diverse clinical settings
Low Cost	The majority of users perceive a single rapid session as low-cost

Gururangan, K., et al. (2026) J Clin Neurophysiol. 43(3):222-227