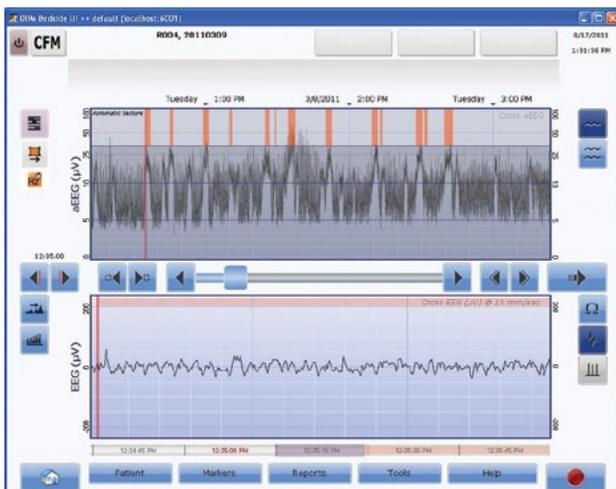




Automatic marking of possible seizure activity on OBM



RecogniZe the problem

FACT: Neonatal seizures are usually clinically subtle, inconspicuous and difficult to recognize from the normal behaviors of the inter-ictal periods or physiological phenomena¹, making accurate recognition and treatment challenging for clinicians in the busy NICU environment.

FACT: Seizures are more common in the neonatal period than in any other time in life – as high as 57.5/1000 in < 1500g and 2.8/1000 in 2500-3999g.²

FACT: With moderate-to-severe hypoxic-ischemic encephalopathy (HIE), the incidence of seizures is > 50%.³

FACT: Term infants with seizures have very poor outcomes, with a 20% fatality rate in the neonatal period. Survivors have a 28% - 35% risk for severe neurodevelopmental disability and a 20% - 50% risk for epilepsy.⁴

RecogniZe the hospital challenge

FACT: neurological resources to identify at-risk infants, increasing the potential for poor outcomes.

FACT: Conventional EEG (cEEG) using greater than 10 electrodes and concurrent video recording is the gold standard for bedside monitoring. However, cEEG is labor-intensive to both set up and interpret, and interpretation is rarely available in real time.⁴

FACT: Unidentified and untreated neonatal seizures can lead to long-term impairment or death.¹

RecogniZe the solution

The Olympic Brainz Monitor's RecogniZe option assists clinicians in identifying possible seizure activity:

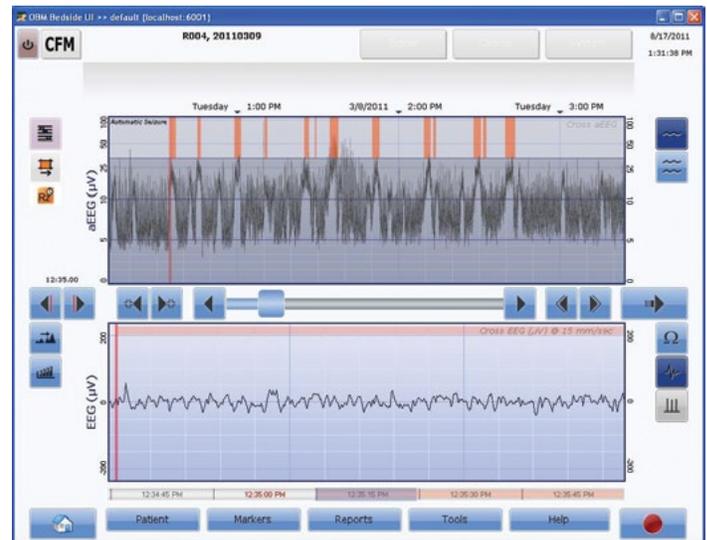
- Developed for the NICU for ease of use by NICU staff
- Helps ease identification and validation of suspected seizure activity in the raw EEG signal
- Helps identify when to bring in neurology

Monitoring for seizures with limited-channel amplitude-integrated EEG (aEEG) can be accurately interpreted. It also compares favorably with cEEG, and aligns with a general trend toward reduced seizure burden.⁴

It has been shown that the anatomical regions conventionally used for aEEG electrode placement yield a high sensitivity (78%) for electrical seizure detection.⁵

References:

- 1 Panayiotopoulos CP. The Epilepsies: Seizures, Syndromes and Management. Oxfordshire (UK): Bladon Medical Publishing; 2005.
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- 3 Gluckman PD, Wyatt JS, Azzopardi D, Ballard R, Adwards AD, Ferriero DM, Polin RA, Robertson CM, Thoresen M, Whitelaw A, Gunn AJ. Selective head cooling with mild systemic hypothermia after neonatal encephalopathy: multicentre randomized trial. The Lancet. 2005;365:663-70.
- 4 Lawrence R, Mathur A, Nguyen The Tich S, Zempel J, Inder T. The Journal of Pediatrics. 2009;154(6):835-841.e1.
- 5 Shellhaas RA, Soaita AI, Clancy RR. Sensitivity of Amplitude-Integrated Electroencephalography for Neonatal Seizure Detection. Pediatrics. 2007;120:770-777.



A trend is growing in many health care facilities to adopt the CFM Olympic Brainz Monitor with the sole intention of improving their NICU staff's ability to identify sub clinical seizures.

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opportunities, and more!
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