

Within These Walls: Thinking Outside the Box to Develop an Epilepsy Monitoring Unit

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Published In/Presented At

Tavianini, H., Hinnershitz, J. S. (2010, March). *Within These Walls: Thinking Outside the Box to Develop an Epilepsy Monitoring Unit*. Poster presented at: The American Association of Neuroscience Nursing 42nd Annual Educational Meeting, Baltimore, MD.

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Within These Walls:

Thinking Outside the Box to Develop an Epilepsy Monitoring Unit

7A/Neuroscience Medical-Surgical Unit and Neuroscience Intensive Care Unit

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Abstract:

A needs assessment for our community and surrounding areas related to neurosciences identified an opportunity to enhance the care provided for our epilepsy patient population. Specifically, our academic Magnet hospital identified the need to include video-electroencephalography (VEEG) in the comprehensive evaluation of patients with epilepsy. VEEG can be used to differentiate between seizures and pseudo-seizures and design the best possible treatment plan. As a new program, initial patient volume did not support an expansion project. Our challenge was to develop an Epilepsy Monitoring Unit (EMU) within the walls of the existing neuroscience and neuroscience ICU units. A multidisciplinary steering committee was developed to oversee the project. Work groups were established to assure the development of staff education, admission criteria, practice guidelines, electronic physician order sets, and information technology. Learners will gain valuable knowledge of strategies to implement a new program within the financial constraints of these economic times.

Objectives:

- Describe key components for the development of a successful EMU.
- Identify barriers for implementation of an EMU program.
- Discuss the implementation strategies utilized to ensure a comprehensive neuroscience program.

Rationale for Utilization of VEEG:

- Pre surgical assessment
- Diagnostic
- Sleep disorder

References:

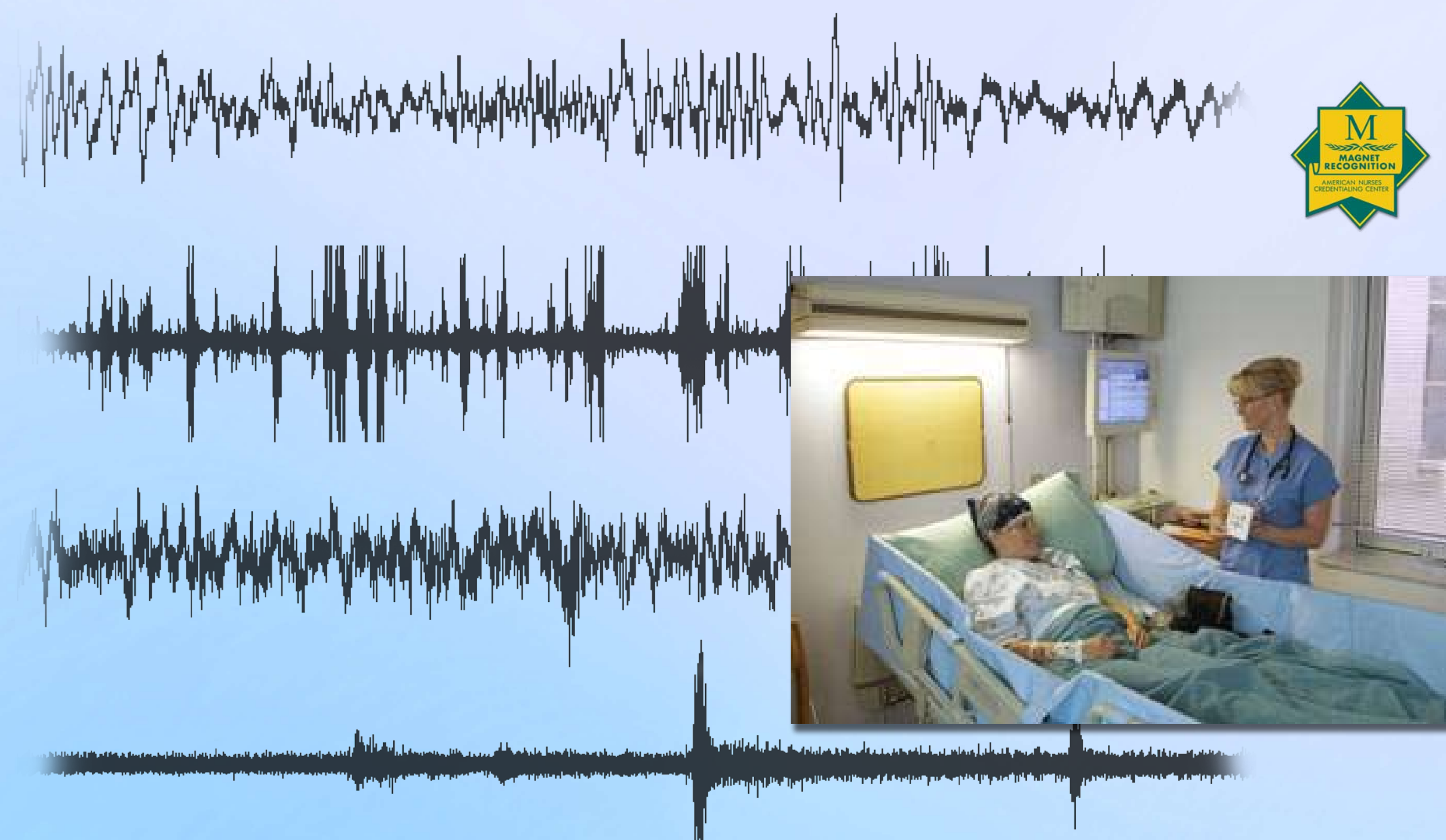
1. Cole, D., & Cole, A. (2007). Treatment of acute seizures and status epilepticus. *Journal of Intensive Care Medicine*, 22(6), 319-347.
2. Jenessen, S., Gracely, E.J., & Sperling, M.R. (2006). How long do most seizures last? A Systemic comparison recorded in the epilepsy monitoring unit. *Epilepsia*, 47(9), 1503 -2006.
3. Murthy, J.M., & Naryanan, T. (2004). Continuous EEG monitoring in the evaluation of Non-convulsive seizures and status epilepticus. *Neurol Indi*, 52, 430-435.
4. Perazella, M. (2008). Diagnosis and acute management of seizures in adults. *Hospital Physician*, 48, 37-42.
5. Perkins, A. M., & Buchhalter, J.R., (2007). Optimizing care in the pediatric epilepsy monitoring unit. *The Journal of Neuroscience Nursing*, 38(6), 416-434.

Key Components

- Continuous monitoring
 - Brain wave activity
 - Movement assessment to assist diagnosis and identify seizure focus
 - Patient supervision and safety
- Effect of medication
 - Adjustment of medication in real time
 - Decrease dose - medication holiday
 - Increase dose - achieve therapeutic range
 - New medication - improve control

Barriers

- No space available
 - Designate beds on medical-surgical Neuroscience Unit and Neuroscience Intensive Care Unit
- Physician scheduling availability to read EEG recordings
- Closing beds for equipment installation
- Need for remote access capability to trace EEG
- Patient privacy
 - Develop consent for audio, video, and EEG
 - Post signage on patient door
- Limited awareness of new program
 - Notify referring physicians
- Logistics related to transferring patients from outside institutions



Implementation Strategies

- Develop strategic initiative to include:
 - Equipment
 - Remote access
 - Reading rooms
 - Acquisition stations
 - Nurse stations
 - Hardwired cameras
 - Identification of required personnel
- Development of order set
 - Elective vs. status epilepticus
 - Medications
- Plan for staff education
 - Nurses
 - Electrodes
 - Equipment usage
 - Seizure identification
 - EEG technicians
 - Equipment utilization/management
 - Physicians
 - Continuing monitoring capability
 - Education of physician order set
 - Ability to access data remotely
- Nursing Care
 - Mobility
 - Safety precautions
 - Patient privacy
 - Notification parameters
 - Seizure frequency
 - Seizure > 3 minutes
 - Seizure - no recovery
- When to worry, when to call criteria
 - Unrelenting seizure activity
 - High usage/dose medications
 - Change in level of consciousness
 - Compromised airway
- Laboratory/diagnostics
 - Drug level parameters
 - CT/MRA/MRI

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