Simulating Status Epilepticus Management for Junior Neurology Trainees

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**Title:** Simulating Status Epilepticus Management for Junior Neurology Trainees

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**Purpose/Methods**

Status Epilepticus (SE) represents a potentially fatal neurologic emergency. We aimed to create an educational simulation of SE for 9 PGY2 neurology residents. Scenarios included a patient with SE requiring adequate benzodiazepine dosing and another with seizures requiring IV anticonvulsant therapy. Subjects were dichotomized to groups who did and did not feel confident in clinical skills around SE. Knowledge was assessed with a multiple choice quiz. Confidence groups were analyzed with Fisher’s exact test. Quiz scores means were assessed with paired t-test.

**Results**

There was a trend towards significance in the proportion of residents expressing confidence in their ability to initiate SE management (p=0.08). The number of residents expressing confidence in their ability to recognize status increased from 3 to 6, but was not statistically significant (p=0.35). On the second survey 8 of 8 total respondents were overall satisfied with the activity. Mean quiz scores were significantly different between pre- and post-simulation assessment with a pre-simulation mean of 4.78 +/- 1.92 and post-simulation mean of 7.22 +/- 1.56, (t= -3.90, p=0.05).

**Conclusion**

This pilot study of a small number of residents demonstrates simulated SE management may increase the subjective confidence and knowledge of neurology trainees. This study was not
controlled and the influence of the simulation on residents’ score cannot be distinguished from other SE education content in the curriculum. The number of subjects is small, making highly powered statistical analysis challenging. The number of statistically significant findings with these numbers suggests that the findings are robust.