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Simulation of Status Epilepticus is Effective Teaching for Junior Neurology Residents

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Purpose:

Status Epilepticus (SE) represents a potentially fatal neurologic emergency. At Jefferson, acute management of SE falls to the inpatient neurologist, requiring early competency.

Methods:

During a 2 week educational "bootcamp", 9 PGY2 residents participated in a 2 hour simulation of acute SE with two clinical scenarios. Scenarios included a patient with SE requiring adequate benzodiazepine dosing and another with seizures requiring IV anticonvulsant therapy. Prior to and following the simulation, residents took a survey to gauge their knowledge and confidence in managing SE.

Results and Conclusions:

There was an increase in the number of residents expressing confidence in their ability to order the appropriate tests to evaluate SE, initiate second-line therapy, know adverse effects of anticonvulsants, and overall independently manage SE (all $p<0.05$). 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. This study demonstrates simulated SE management may increase subjective confidence and knowledge of neurology trainees. The number of statistically significant findings suggests that the findings are robust.

Neurologic SE represents an emergency that may need to be managed by non-neurologists in hospital settings without inpatient neurology coverage. This simulation could be adapted to medical trainees in whom competence in SE management is of high yield.