

BACKGROUND

The International League Against Epilepsy (ILAE) and the American Epilepsy Society (AES) have standard recommendations for the time of treatment of prolonged seizures and the correct dosing of medications to use in cases of convulsive status epilepticus. Despite these guidelines there are deviations and delays in treatment initiation in clinical practice. There is paucity of research investigating delays in initiating home antiseizure medications (ASMs) in individuals with epilepsy admitted to the hospital. Based on anecdotal situations, we hypothesized that there is a delay in ordering and/or administering home ASMs in the hospital setting.

OBJECTIVES

To determine if there is a delay in ordering and resuming home ASMs when a patient is admitted to the University of Kentucky Chandler Medical Center (UKMC).

METHODS

Retrospective review of the electronic medical records (EMR) of epilepsy patients on ASMs either admitted to the General Neurology inpatient service or for whom primary teams consulted the Neurology service. One month data was collected and reviewed. The patients included in the study were limited to those previously diagnosed with epilepsy and prescribed ASMs. EMR was reviewed for demographics, time of arrival to the emergency triage, home ASMs, time of home ASMs order and administration, as well as time of intravenous ASMs administration when indicated, and time of Neurology consult order. The primary objective was calculated by finding the mean time from arrival to triage to time medication was scanned into the medication administration record (MAR).

RESULTS

Thirty one patients fit the inclusion criteria over the time frame of one month. Ten of these patients were admitted to the General Neurology team and the remaining 18 patients were followed by the Neurology Consult team after a formal consultation was requested by the admitting primary services. Three patients were excluded due to ASMs not being given at the time of statistical analysis. One patient did not receive their home ASM due to lack of intravenous (IV) or oral access, one patient did not receive medication after not being identified prior to expiration, and for the third patient the reason of not receiving home ASMs was unknown.

The mean time from arrival to triage to scanning of medication into MAR for the 28 patients was around 11 hours and 55 minutes. For patients on the General Neurology inpatient service, the mean delay was around 8 hours and 27 minutes while the mean time of delay for patients followed by the Neurology Consult team was around 13 hours and 50 minutes.

A second average was calculated by using the time of arrival to triage area and time first ASM was scanned into the MAR, excluding benzodiazepines and anesthetics. This was used to find time of arrival to IV load of ASMs. Twelve patients met these criteria. The average for all these patients was around 47.5 minutes. The mean time from arrival to triage to first IV load of ASM scanned into the MAR for the inpatient General Neurology team was 35.25 minutes (4 patients) and 53.625 minutes for the Neurology Consult team (8 patients).

RESULTS cont.

Excluding the patients that received an IV load of ASMs, a third mean was calculated using time of arrival to triage area and time first ASM was scanned into the MAR. The mean time for the 6 patients admitted to neurology inpatient service was 330.5 minutes (around 5.5 hours). The mean time for the 10 patients followed by the Neurology Consult service was around 863 minutes (around 14.3 hours).

CONCLUSIONS

Our study found significant delays in initiation of home ASMs in epilepsy patients admitted to the UKMC. This preliminary study confirmed our initial hypothesis. After engaging pharmacists involved with the care of epilepsy patients, we will be collecting data from a larger database over the same time period and perform similar statistical analysis. For this quality improvement project, in consultation with our pharmacists, we plan to test an intervention that would include the Information Technology department. We will evaluate timing of initiation of home ASMs after a Best Practice Alert (BPA) providers placing admission orders for epilepsy patient taking ASMs.

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	Time of Admission to 1 st ASM maintenance medication excluding IV load	Time of Admission to 1st ASM including IV loads, excluding benzos/opiates	Time to first ASM in patients that did not receive IV load
All	28 patients 11 hours, 55 mins.	12 patients 47.5 min.	16 patients About 10h, 47 min
General inpatient team	10 patients 8h, 27 min.	4 patients 35.25 min.	6 patients 5 , 30 min
General Consult team	18 minutes 13h, 50 min.	8 patients 53.625 min.	10 patients About 14h, 18 min