

Medication Safety Series: MSS14

Antiepileptic Drugs (AEDs) – for the treatment of epilepsy

Categories of AEDs:

Category 1 – phenytoin, carbamazepine, phenobarbital and primidone

- Patient **MUST** be maintained on the same brand or generic product. Endorse the inpatient prescription chart with the brand name or manufacturer (generics). Use patient's own medicines (PODs) where available.

Category 2 – valproate, lamotrigine, perampanel, retigabine, rufinamide, clobazam, clonazepam, oxcarbazepine, eslicarbazepine, zonisamide, topiramate

- Patient **SHOULD** be maintained on the same brand or generic product. Endorse the inpatient prescription chart with the brand name or manufacturer (generics). Use patient's own medicines (PODs) where available.

Category 3 – levetiracetam, lacosamide, tiagabine, gabapentin, pregabalin, ethosuximide, brivaracetam, vigabatrin

- It is usually unnecessary to be maintained on the same brand or generic product (but patient may prefer to do so)

Prescriber

- **On admission:** * Confirm name, form, dose & indication of AED
- Check category of AEDs (above) to determine the need to maintain continuity of product supply. For category 1 & 2 AEDs, confirm the brand or manufacturer (if generic) taken and add to prescription chart; if the brand/manufacturer cannot be confirmed or supplied before the next dose is due, ask nursing staff to use PODs (including compliance aids) until confirmed.
- * Check adherence, seizure (or symptom) control, side-effects, or signs of toxicity particularly bone health and neuropsychiatric toxicity
- Follow the guidance in appendix 4 of "[Standards for Use of 'As required' and Rescue Medication](#)" on prescription and supply/access to rescue medication for seizures.
- * In patients of childbearing potential - check if contraception is used and ensure this is prescribed where appropriate. For **valproate** – confirm that the Pregnancy Prevention Programme is in place and a risk acknowledgement form has been completed within last 12 months (see [MSS13](#))
- **On discharge** (for category 1 & 2 AEDs & category 3 if patient preference): Ensure correct brand or generic product is prescribed/supplied

* also applies to the use of AEDs for other indications, e.g. bipolar disorder, neuropathic pain & anxiety

Pharmacy Team

- Ensure all prescriber actions are completed
- Endorse all AEDs prescribed for epilepsy as "**critical medicine**" & monitor to ensure doses are not omitted - report omitted doses on Datix
- Ensure patient understands the importance of maintaining the supply of same brand or generic product.
- * Check for interactions, particularly if AED or interacting medicine is initiated on admission:
 - medicines that may lower the seizure threshold, e.g. antidepressants, tramadol.
 - * medicines that reduce or increase AED plasma levels or their effects.
 - * medicines affected by the AED (levels or effects).

* also applies to the use of AEDs for other indications, e.g. bipolar disorder, neuropathic pain & anxiety

Nursing Staff

- AEDs for epilepsy are "**Critical medicines**" - ensure all doses are administered as prescribed.
- Ensure supplies are available / accessed out of hours

Therapeutic Drug Monitoring (checking plasma levels)

Routine monitoring is **not recommended** ([NICE CG137](#)).

Checking plasma levels is useful to:

- Confirm non-adherence or suspected toxicity
- Adjust dose of phenytoin
- Manage pharmacokinetic interactions
- Assess specific clinical situations, e.g. status epilepticus, organ failure

Other monitoring requirements with AEDs – see [Trust Psychotropic Medication Monitoring Guidance](#)



NEVER events:

- **NEVER** change the prescribed brand of **phenytoin, carbamazepine, phenobarbital, or primidone**
- Do not initiate **VALPROATE** in persons of childbearing potential unless a Pregnancy Prevention Programme is in place – see [MSS13](#)

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