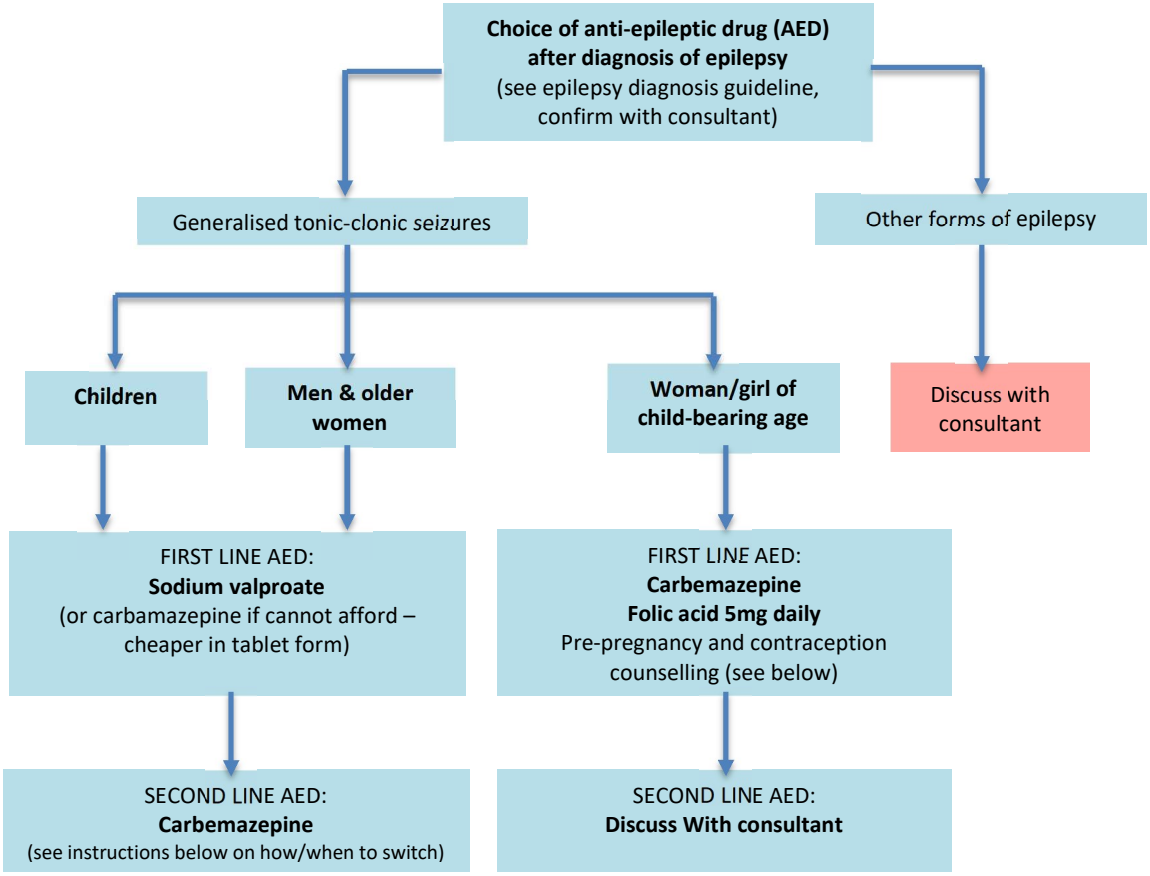
Epilepsy - Management

Key Facts:

- Epilepsy is a chronic non-communicable disease of the brain that affects people of all ages
- Epilepsy is defined as having **two or more** unprovoked seizures. One seizure does not signify epilepsy (up to 10% of people worldwide have one seizure during their lifetime)
- Nearly 80% of people with epilepsy live in low- and middle-income countries
- 75% of people can live seizure free if well diagnosed and treated



PRESCRIBING INFORMATION

Sodium Valproate

1 month-11 years: Initially 5-7.5mg/kg twice daily; increase by 2.5-5mg/kg/dose every 2 weeks; usual maintenance – 12.5-15mg/kg twice daily (maximum dose 60mg/kg/day)
Adults and children >12 years: Initially 600mg daily in 2 divided doses, increase gradually (in steps of 150-300mg) every 2 weeks, usual dose 1-2 g daily

Side effects: learning & behavioural problems, abdominal pain, weight gain, thrombocytopenia, hepatic disorders, suicidal behaviours
Contraindications: risk of liver disease, pregnancy

Carbamazepine

1 month – 11 years: Initially 2.5mg/kg twice daily (or 5mg/kg at night); increase in steps of 2.5-5mg/kg every 2 weeks as required; usual maintenance 5mg/kg 2-3 times a day (maximum dose up to 20mg/kg/day)
Adults and children >12 years: Initially 100-200mg 1-2 times daily, increased gradually every 2 weeks to usual dose of 400mg-600mg twice daily (maximum dose 2g daily);
Elderly - reduce initial dose

Side effects: dizziness, drowsiness, dry mouth, abdominal discomfort, weight gain, headache, thrombocytopenia

Consultant Review:

- To confirm a diagnosis of epilepsy
- If NOT generalized tonic-clonic seizures
- If an infant/child is taking phenobarbital and there is no clear plan for stopping
- If seizures are associated with developmental or neurological problems
- If seizures not controlled at maximum tolerated dose
- If considering changing or stopping medication
- If significant side effects of medication
- If a woman is pregnant or desiring pregnancy

Follow up appointments – at each review check and record carefully:

- **Seizure control** – seizure frequency, timing and duration of any seizure, any different types of seizure, any injuries as a result of seizures; record date of last seizure
- **Medication** – compliance, supply, side effects; taking any new medication which may interact? Check dose and need to titrate medication up to therapeutic/target dose
- **Mood** - anti-epileptic drugs can increase risk of depression as can epilepsy itself
- **Work/productivity** - employment, school, development, behaviour
- **Women/girls of child-bearing age** – make sure she is aware of the need to plan pregnancies; is she taking folic acid 5mg once daily, using contraception if in a relationship?
- **Education** (reinforce at every review, see next page)
- **Check driving status**
- **Follow up** – once stable can be 3-monthly; more frequently while titrating medication

Poor seizure control / changing AEDs

If first-line AED is not controlling seizures:

- Check compliance. Any other medication being taken which may interfere? Alcohol?
- Check diagnosis is correct
- Ensure maximum tolerated dose has been tried
- If a single drug at maximum tolerated dose is not controlling seizures then add the second-line drug (do not stop or reduce first-line drug yet)
- Increase second drug to therapeutic levels, then slowly reduce and stop first drug
- If seizures not controlled on second-line drug, discuss with consultant

Stopping AEDs

- Consider stopping AED if you think it is not a diagnosis of epilepsy, especially in women of child-bearing age.
- In infants taking phenobarbital following neonatal seizures, check notes carefully to make sure that there is a plan for stopping medication. If not, then speak to consultant.
- If seizure free for >2 years, can consider stopping AED. Discuss carefully with patient, balance risks and benefits; main risk is having another seizure. Check with consultant.
- Do not stop AED suddenly (may trigger a seizure) – must reduce slowly

AEDs in women and girls of childbearing age

Pre-pregnancy counselling

- All women with epilepsy (whether planning a pregnancy or not) should take folic acid 5mg daily to reduce the risk of NTDs in case they do get pregnant
- The vast majority of women with epilepsy will have uneventful pregnancies and give birth to healthy children
- Risk of congenital malformations:
  - The *safest AEDs are levetiracetam (keppra) and lamotrigine* (2-3% as for general population) *but these are expensive*
  - Carbemazepine carries a slightly higher risk (4-5% risk), especially at doses >400mg/day but is affordable to most
  - Sodium valproate is the least safe and so should not be started in women unless there is no alternative (can discuss carefully with woman if already taking and keen to continue, ensure using effective contraception)
- The most important factor is seizure control
- Pregnancy planning is important to ensure the best control possible before pregnant, to check AED choice and that folic acid is being taken
- If pregnancy is planned, then after discussion the woman *may* want to change to the lowest risk AED such as levetiracetam *before pregnancy*, but she needs to consider the cost and be able to afford it throughout pregnancy

Contraception – advise to those not planning to get pregnant

If taking CARBEMAZEPINE - Safe: *Progesterone injection, IUD*; Caution: *COCP use double dose*; Do NOT use: *POP, Progestogen implant*

If taking SODIUM VALPROATE - All forms of contraception are safe

Pregnancy

- If already pregnant but seizures are well-controlled on current AED, **do not** switch drugs (even if taking sodium valproate) as changing at this stage is not likely to prevent malformations, but it will increase the risk of uncontrolled seizures
- Ensure she is taking folic acid 5mg daily

Breast feeding - Women should be encouraged to breast feed

References:

2019 Clinical Guide Primary Care International *(adapted for this context and location. PCI have not been involved in, nor hold responsibility for any adaptations. Original can be found at:* https://www.ncd-training.org/open-source-field-guide/)

UpToDate accessed April 2022

MHRA/CHM advice: Antiepileptic drugs in pregnancy: updated advice following comprehensive safety review (January 2021)
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/950066/AED-PAR-PDF-FINAL-Jan21.pdf

Consultation with Dr Vinodhini Clarke, visiting paediatrician, March 2022