**Antiepileptic drug monotherapy: a network meta-analysis of 10 AEDs**

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**Background**

Current NICE guidelines for adults and children recommend carbamazepine or lamotrigine as first-line treatment for partial onset seizures and valproate for generalised onset seizures; however a range of other anti-epileptic drug treatments are available, and evidence is needed regarding their comparative effectiveness in order to inform treatment choices.

**Objectives**

To compare the clinical effectiveness of 10 antiepileptic drugs (carbamazepine, phenytoin, valproate, phenobarbitone, oxcarbazepine, lamotrigine, gabapentin, topiramate, levetiracetam, zonisamide) currently used as monotherapy in children and adults with partial onset seizures or generalised tonic-clonic seizures with or without other generalised seizure types.

**Methods**

We performed an individual participant data network meta-analysis of randomised monotherapy trials published up to July 2016. Outcomes were time to 12 month remission and time to treatment failure. We included data from 77 trials, 18045 participants.

**Key results**

Results support current NICE guidance that carbamazepine and lamotrigine are suitable first-line treatments for individuals with partial onset seizures and demonstrates that levetiracetam may be suitable alternative. Results also support the use of valproate as the first-line treatment for individuals with generalised tonic-clonic seizures (with or without other generalised seizure types) and also demonstrates that lamotrigine and levetiracetam would be suitable alternatives, particularly for those of child bearing potential.