GP First Seizure Referral Pathway: Adults

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Establish likelihood of seizure

Unlikely → **Continue to investigate as appropriate** (Click for more info)

Likely ↓

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Take fully History

If possible, use eyewitness accounts and video footage.

- Any triggers e.g. sleep deprivation, stress, light sensitivity, alcohol use
- Before: subjective symptoms prior (aura) might suggest focal epilepsy
- During: specific features may indicate type of seizure
- After: any residual symptoms? eg drowsiness, headaches, amnesia, or confusion (usually occur only after generalised tonic and/or clonic seizures).Any significant past medical history

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Ask about risk factors for epilepsy (Click for more info)

↓

Physical examination to include:

- Cardiac examination
- Neurological examination
- Mental state examination
- Examination of the oral mucosa to identify lateral tongue bites
- Identification of any injuries sustained during the seizure.

Initial Investigations:

- Full set of observations including blood sugar
- ECG to identify cardiac-related conditions causing seizure mimics
- Consider bloods: FBC, U&E, LFT, Glucose, Calcium

Do not delay referral while waiting for test results

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Any RED FLAGS?

↓

Refer to ED

↓

Consider differential Diagnoses (Click for more info)

↓

Presumed first seizure

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Referral to URGENT Neurology Clinic

- To be seen within2/52
- Referral to be made by GP via eRS at the time of seeing patient
- Advise patient to bring witness to clinic appointment, if possible

Counsel Patient

Stop driving and inform DVLA

Avoid swimming and bath with someone else in thehouse/door open

Avoid working with heavy machinery or at heights or swimming

Provide ICB advice sheet and signpost to websites for further information about lifestyle factors that may lower the seizure threshold e.g sleep deprivation.

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Any red flags?

- GCS persistently <15
- Focal Neurological signs/deficit
- Sudden onset headache
- Head injury
- Signs of Meningitis or encephalitis
- Signs of raised intra-cranial pressure
- Headache associated with seizures
- Pregnancy/post-partum, features suggestive of Pregnancy induced Hypertension
- History of malignancy
- Patients on anti-coagulants
- Chronic alcoholic
- Prolonged seizure

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Alternative Diagnoses

‘Blackouts’ that are not seizures, that require secondary care assessment, should be referred to cardiology, who run the syncope and TLoC services.

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Consider likelihood of epileptic seizure

- **People who present with one or more of the following features are strongly suggestive of epileptic seizures:**
- A bitten tongue
- Head-turning to 1 side during TLoC
- No memory of abnormal behaviour that was witnessed before, during or after TLoC by someone else
- Unusual posturing — prolonged limb-jerking (note that brief seizure-like activity can often occur during uncomplicated faints)
- confusion following the event
- prodromal déjà vu, or jamais vu

Consider that the episode may not be related to epilepsy if any of the following features are present:

- prodromal symptoms that on other occasions have been abolished by sitting or lying down
- Sweating before the episode
- Prolonged standing that appeared to precipitate the TLoC
- Pallor during the episode.

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Features suggestive of specific types of seizure

- **Short-lived (less than 1 minute),abrupt, generalised muscle stiffening (may cause a fall) with rapid recovery –** suggestive of tonic seizure
- Generalised stiffening and subsequent rhythmic jerking of the limbs, urinary incontinence, tongue biting – suggestive of a generalised tonic-clonic seizure.
- **Behavioural arrest –** indicative of absence seizure
- Sudden onset of loss of muscle tone- Suggestive of atonic seizure
- **Brief, 'shock-like' involuntary single or multiple jerks –** suggestive of myoclonic seizure.

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Risk factors for predisposition to epilepsy

- Premature birth.
- Complicated febrile seizures.
- A genetic condition that is known to be associated with epilepsy, such as tuberous sclerosis or neurofibromatosis.
- Brain development malformations – usually associated with epilepsy developing before adulthood.
- A family history of epilepsy or neurologic illness.
- Head trauma, infections (for examples meningitis encephalitis), or tumours – can occur at any age.
- Comorbid conditions such as cerebrovascular disease or stroke - more common in older people.
- Dementia and neurodegenerative disorders (people with Alzheimer's disease are up to ten times more likely to develop epilepsy than the general population).

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Conditions which may present with similar features to epilepsy include:

- Vasovagal syncope.
- Cardiac arrhythmias.
- Panic attacks with hyperventilation.
- Non-epileptic attack disorders (psychogenic non-epileptic seizures, dissociative seizures, orpseudoseizures).
- Transient ischaemic attack.
- Migraine.
- Medication, alcohol, or drug intoxication.
- Sleep disorders.
- Movement disorders.
- Hypoglycaemia and metabolic disorders.
- Transient global amnesia.
- Delirium or dementia — altered awareness may be mistaken for seizure activity.

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Patient to be referred to urgent neurology clinic (to be seen within 2/52)

Referral to be made at the time by GP seeing the patient

Referral criteria for first seizure:

- Any first seizure in adult >16 years old
- Not known epileptic

Urgent referral with the following information:

- Clinical notes
- Eyewitness account (if possible)
- Results of any available investigations

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Resources for Patients

Direct patient to **https://www.epilepsy.org.uk/info** for further information

Provide Patient with **ICB advice sheet,** to be found on landing page