



Statement in response to the publication of The National Confidential Enquiry into Patient Outcome and Death: 'Disordered Activity?' in December 2022 [1].

# Recommendations for patients presenting to the Emergency Department with Seizures:

## 23/05/2023

### **First Seizure or New Seizure type in a patient already known to have Epilepsy:**

- Venous/arterial blood gas including BM / Glucose
- Urinalysis
- 12 Lead ECG
- Pregnancy test (12-55year old females, usually by urinary  $\beta$ hCG)
- Blood tests: FBC, U&E, Ca, Mg, LFTs, Glu, CRP

### **Indications for CT brain scan in the Emergency Department (ED) for patients with an apparently unprovoked First Seizure:**

- New focal neurological deficit
- Persistent altered mental state
- Prolonged headache or fever
- Recent head trauma (consider need to image the cervical spine)
- History of immunosuppression, cancer, HIV or suspected HIV
- Anticoagulant use
- Previous stroke or neurological condition making assessment of deviation from baseline uncertain
- New seizure in patients over 65 years old

Consider CT imaging for the first presentation of a seizure in services where the wait for assessment in the First Seizure Clinic is likely to be prolonged

### **Patients with known Epilepsy presenting to the ED with Seizure(s):**

The local epilepsy team, as well as the GP should be informed when a patient with epilepsy presents to the Emergency Department (ED) with seizures. If EDs are unable to distinguish which patients presenting with seizures do and do not have a formal diagnosis of epilepsy then it is acceptable to inform the local epilepsy team of all patients presenting with seizures.

- BM
- Urinalysis
- 12-lead ECG
- Pregnancy test (if indicated)
- Blood tests: FBC, U&E, LFTs, Glu, CRP
- 'Save Serum' for consideration of anti-seizure medication levels by local epilepsy team.

Arrangements should be in place to notify the local epilepsy team of the availability of this sample for testing.

Where anti-seizure medication levels are not required or requested for immediate management decisions in the ED, the responsibility for requesting and following-up of anti-seizure medication levels will be the responsibility of the local epilepsy team.

Where the patient is not cared for by the local epilepsy team, the local epilepsy team will be responsible for liaising with the patient's usual epilepsy team.

### **CT brain scan in Emergency Department patients with a pre-existing diagnosis of Epilepsy**

In accordance with NICE guidance "Do not carry out a CT scan for people with established epilepsy presenting at an emergency department after a typical seizure, unless there are other concerns" such as:

- New focal neurological deficit
- Persistent altered mental state beyond what is usual for the patient in the post-ictal phase
- Prolonged headache or fever
- Recent significant head trauma
- History of immunosuppression, cancer, HIV or suspected HIV

The threshold for considering CT brain imaging in a patient on anticoagulants should be lower, however seizures in a patient with known epilepsy and who also happens to be taking anticoagulants should not automatically trigger a CT brain scan.

## References

1. National Confidential Enquiry into Patient Outcome and Death: 'Disordered Activity ?' 2022. London. <https://www.ncepod.org.uk/2022epilepsy.html>