

BSCN/ANS Safety Guidelines for Video EEG Telemetry investigation

Video EEG telemetry is widely performed in the UK to help diagnose paroxysmal attacks and to plan surgery in patients with intractable epilepsy. It is performed in both adults and children. An in patient stay is required and anticonvulsant medication is often reduced or stopped to promote the occurrence of seizures. Serious untoward incidents may occur during seizures including injury and death. A recent ANS/BSCN survey showed that there is concern amongst over half of video telemetry units about the level of patient surveillance. A national service evaluation has shown that half of all seizures occurring in VT units across the country are not attended to by a healthcare professional and only a quarter are attended to within an appropriate time of half a minute. Although there are existing American standards for Video EEG telemetry monitoring they do not specifically address the question of levels of patient surveillance. The proposed standards below hope to address this issue and improve patient safety within VT units.

Standard 1: All VT units have 24 hour surveillance by healthcare professionals (HCP).

Guideline: Direct observation of the patient may improve nurse attendance but other methods of observation such as the use of video monitors and nurse alarms are acceptable

Standard 2: The level of HCP surveillance is similar throughout each 24 hour monitoring period (as adverse events occur at a similar frequency during the day and night)

Standard 3: The Healthcare professionals are dedicated to the VT unit and are not expected to perform other duties, even if telemetry beds are situated on a general ward

Guideline: The suggested HCP:Patient ratio for a video telemetry unit is not less than 1:4

Standard 4: The patient's heart rate is clearly displayed to the monitoring HCP (usually by ECG or alternatively by pulse oximetry allowing prompt intervention during instances of serious ictal cardiac arrhythmias)

Standard 5: HCPs are trained to recognise seizures and major disturbances of cardiac rhythms

Standard 6: VT studies are reviewed by Neurophysiology staff within 24 hours to reduce consequences of unnoticed seizures

Standard 7: Accompanying relatives are encouraged to alert HCPs to all seizures occurring in the VT unit

Standard 8: A risk assessment for each patient is performed on admission to determine the most appropriate positioning of furniture and bed, bathroom layout, the use of cot sides, floor padding etc to minimise physical injury during a seizure

Standard 9: A clear plan is made before admission for anticonvulsant withdrawal

Standard 10: Facilities for emergency treatment of status epilepticus including availability of oxygen and access to ITU beds are available

Standards/guidelines 1 – 7 based on results from ANS/BSCN survey and service evaluation 2011/12.

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References:

The safety of UK video telemetry units: results of a national service evaluation Kandler R, Lai M, Ponnusamy A, Bland J, Pang C *Seizure* 2013;22;872–876

Safety of video-telemetry units: a national survey Charlton G, Lai M, Kandler R, Ponnusamy A, Bland J, Pang C *Journal of the Association of Neurophysiological Scientists* 2013;6;64–69