LRI Children's Hospital

Seizure Management

Staff relevant to:	This guideline is for all nursing staff working within the Children's Hospital.
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Written by: Reviewed by:	B. Waldron R. Cawthorn
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1. Introduction and Who Guideline applies to

To provide guidance on the management of seizures in children and young people. Maintaining the safety of the individual, providing appropriate management and support to family members/carers.

Not all seizures are epileptic in nature, but require similar/the same management.

This guideline is for all nursing staff working within the Children's Hospital. **It is not applicable to the Neonatal Unit.**

Related Documents

Status Epilepticus UHL Childrens Medical Guideline Ref: C39/2006
Febrile Convulsion UHL Childrens Medical Guideline Ref: C42/2006

Hypoglycaemia - in Children NOT Diagnosed with Diabetes UHL Childrens Hospital Guideline Ref: C19/2017

Afebrile Seizure - First UHL Childrens Guideline D1/2019

This guideline needs to be used in conjunction with relevant infection control and consent policies to ensure the child receives safe care and children and families are able to understand the reasons for care to facilitate co-operation.

2. Main Guideline

Seizures may occur in the context of

- fever (febrile convulsions)
- trauma (head injury)
- intracranial infection or inflammation (meningitis, encephalitis)
- intoxication
- withdrawal of medication/drugs
- oxygen deprivation
- Stroke
- Genetic conditions
- Structural changes in the brain
- Immune
- Metabolic
- unknown

Not all seizures are epileptic.

> **"Epilepsy is a common neurological disorder characterized by recurring seizures."** (NICE 2012)

Epilepsy is defined as:

1. At least two unprovoked (or reflex) seizures occurring more than 24 hours apart.

2. One unprovoked (or reflex) seizures and a probability of further seizures similar to the general re-occurrence risk (at least 60%) after two unprovoked seizures, occur over the next 10 years.

3. Diagnosis of an epilepsy syndrome. (ILAE, 2014)

Seizures are classified by onset into focal, generalised, and focal with secondary generalisation (combined generalised and focal epilepsy, {ILAE, 2017: I. Scheffer et al., Epilepsia 58, 4, 512-521}, and unknown.

Focal seizures originate in one part (hemisphere) of the brain effecting one side of the body.
Consciousness is not usually impaired.

Generalised seizures involve both hemispheres of the brain with loss of awareness and/or consciousness affecting both sides of the body.

> NHS UK Conditions Epilepsy Symptoms 2020:
> (accessed 5/8/2022).

Focal seizures (only part of the brain involved):

- **Simple focal:**

A 'funny feeling', strange smell, "pins and needles" jerking of one limb, or down one side of the body.
Consciousness is not impaired.

- **Complex focal seizure:**

May be similar to above but consciousness is impaired, may be abnormal movements, plucking at clothes, rubbing hands, lip smacking.

Generalised seizure types include:

- **Tonic-clonic:**

The body will stiffen, the child may cry out and then fall, rhythmical jerking will occur.

- **Tonic:**

The muscles stiffen without rhythmical jerking, the child may fall backwards.

- **Atonic (drop attack)**

- Complete muscle tone loss, the child drops to the floor, can sustain nasty injuries to the face.

- **Myoclonic:**

Single or multiple involuntary jerks of mainly the upper body, head may drop and arms go up.

- **Absence:**

Brief interruptions of consciousness. Child may look blank, stare, sometimes eyelid fluttering and/or lip smacking, and/or swallowing. Usually lasts a few seconds.

Focal seizures with Secondary generalisation

Resources:

- Working oxygen and suction
- Seizure chart
- Prescription chart and appropriate medication

	2. Management of a child presenting with a seizure as an in-patient WITH NO KNOWN HISTORY OF PREVIOUS SEIZURES.
2.1	Provide first aid: Assess safety of child - Environment, hazards, protect from injury or harm, do not restrict their movements or restrain them, do not put anything in their mouth. Assess ABC - Airway, Breathing, Circulation. Don't forget Glucose - Call for help - The child may have an unstable airway Manage as a seriously ill child- refer to Status Epilepticus UHL Childrens Hospital Guideline (Ref: C39/2006) Also consider the Febrile convulsions UHL Childrens Hospital Guideline (Ref: C42/2006) Monitor and record vital signs- • Heart rate • Respiratory rate • Temperature • Capillary Glucose when safe to do so and/or appropriate Make a note of the time and duration of seizure When seizure is over, place the child in the recovery position. Stay with them until help arrives and they recover. Document seizure and seek further medical assessment if not already initiated.
	3. MANAGEMENT OF SEIZURES IN A CHILD KNOWN TO BE AT RISK OF SEIZURES.
3.1	**Management of focal or absence seizures:** Remove child from any hazards, do not restrict their movements but guide them away from danger to avoid injury. Note time of onset of seizure and if it lasts for more than 10 minutes, report to medical staff and give prescribed rescue medication. Stay with child until seizure stops. Ensure nature and duration of seizure is accurately documented once it has stopped.
3.2	**When admitting a child with a history of seizures , document the following:** • Seizure type(s) and description • Any possible triggers

	• Any warning or aura • Time that seizures usually occur e.g. morning, late at night • Behavior during seizure • Usual duration • What happens afterwards • Interventions needed/Rescue medication • Do you think this was an epileptic seizure? • Can it be classified into an epilepsy syndrome? • Does the child have any co-morbidities? Share information about medication with medical staff/prescriber. Where appropriate inform Named Consultant/Neurology Team of Admission (0116 258 5564)
3.3	**Management of Generalised Tonic Clonic Febrile or Afebrile seizures:** **Assess** • Safety, environment. • Remove hazards. • DO NOT RESTRICT MOVEMENTS OF THE CHILD. • Call for help-EMERGENCY BUZZER **Cushion** • Protect the head with a pillow. **Time** • Note onset of seizure (mentally) If the seizure lasts more than 5 minutes administer prescribed rescue medication Midazolam (e.g. Buccolam), Paraldehyde or Diazepam, then inform medical staff if not in attendance. **For children without 'prescribed rescue medication' seek urgent medical advice/intervention (if uncertain call 2222).** Assess the child's Airway, Breathing, and Circulation. • Turn the head to one side to aid drainage of saliva or oral secretions. In trauma, ensure the neck has been cleared prior to turning the child's head. Use suction to remove vomit or secretions from the cheeks. • Give oxygen if breathing slows or child appears cyanosed. Once the seizure stops- • Place child in recovery position • Observe the child • Monitor Temperature, Heart rate, Respiratory rate, Capillary glucose • Attend to hygiene needs • Complete documentation in medical records- seizure charts and medical notes.

3.4	Remove excessive clothing if the child is febrile maintaining privacy and dignity.

3. Education and Training

None

4. Monitoring Compliance

None identified at present

5. Supporting Documents and Key References

Scottish Intercollegiate Guidelines Network 2005 Diagnosis and management of epilepsies in children and young people. A national guideline.

NICE (2012): Nice Guidelines (CG 137) 'Epilepsies: Diagnosis and management'. updated February 2016. access at https//:www.nice.org.uk/guidance/cg137

International League Against Epilepsy (ILAE 2017) Position statement I. Scheffer et al. Epilepsia 58, 4, 512-521
'Definition of Epilepsy' 2014. access at https//:www.ilae.org

Epilepsy Action, 2014: https//:www.epilepsy.org.uk accessed 25/5/16).

NHS UK Condition Epilepsy Symptoms website accessed 5/8/22

UHL Children's Hospital. Status epilepticus guideline (Ref: C39/2006)

UHL Children's hospital. Febrile Convulsion guideline (Ref: C42/2006)

6. Key Words

Epilepsy, seizure

The Trust recognises the diversity of the local community it serves. Our aim therefore is to provide a safe environment free from discrimination and treat all individuals fairly with dignity and appropriately according to their needs.
As part of its development, this policy and its impact on equality have been reviewed and no detriment was identified.

CONTACT AND REVIEW DETAILS	
Guideline Lead (Name and Title) Richard Cawthorn **Nurse Specialist**	**Executive Lead** Chief Nurse
Details of Changes made during review: **Added -** Genetic conditions, Structural changes in the brain, Immune, Metabolic, unknown and Not all seizures are epileptic to conditions to consider. Added to considerations section 2.3 – Do you think this was an epileptic seizure? Can it be classified into an epilepsy syndrome? Does the child have any co-morbidities?	