

STATUS EPILEPTICUS

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Guideline History		
Date	Comments	Approved By
21/02/2022	Reviewed in departmental meeting	Paediatric team

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1.

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Guidelines for the management of convulsive status epilepticus in children 0-18 years

Guideline to be used where appropriate in conjunction with the Ashford and St Peter's phenytoin infusion guideline 2016

Indication for use: Status Epilepticus in Children aged 0-17 years

Definition of Status Epilepticus:

Generalised convulsive status is defined as a generalised convulsion lasting 30 minutes or longer, or repeated tonic-clonic convulsions over a 30 minute period WITHOUT recovery of consciousness between each convulsion.

Any child who presents with a tonic-clonic convulsion lasting more than 5 minutes should be managed in the same way as a child in established status.

Cautions: Lorazepam, midazolam and phenytoin are controlled drugs

Author	Dr Kate Irwin, Paediatric Consultant
Ratified by	Paediatric team
Date ratified	February 2022
Next review	February 2027

CONVULSIVE STATUS EPILEPTICUS 0 – 18 YEARS

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Generalised convulsive status is defined as a generalised convulsion lasting 30 minutes or longer, or repeated tonic-clonic convulsions over a 30 minute period WITHOUT recovery of consciousness between each convulsion.

Any child who present with a tonic-clonic convulsion lasting more than 5 minutes should be managed in the same way as a child in established status as per the following table:

TIME	MANAGEMENT	FURTHER ACTIONS	WHEN SEIZURE TERMINATES
0 mins 1 st step	Check ABC High flow O2 if available Blood glucose	Confirm clinically that it is an epileptic seizure	
5 mins 2 nd step	Buccal midazolam 2.5mg <1 yr 5mg 1-5 yrs 7.5mg 5-9 yrs 10mg >10 yrs OR Lorazepam 0.1mg/kg if IV access	Midazolam may be given by parents, carers, school or ambulance in the community. Be aware that rectal diazepam may have been given in lieu of buccal Midazolam in some cases.	CHECK ECG Discuss brain imaging with senior if focal If afebrile refer to first seizure clinic If known to have epilepsy please inform their epilepsy consultant If febrile look for focus of infection;

	<p>Check blood gas and electrolytes, calcium, magnesium, CRP, ammonia, toxicology.</p> <p>Keep re-assessing ABC</p>		<p>discuss need for LP with senior in <1 yr</p> <p>Start treatment for infection as required.</p>
<p>15 mins</p> <p>3rd step</p>	<p>Lorazepam 0.1mg/kg IV or IO</p>	<p>Call for senior help</p> <p>Re-confirm it is an epileptic seizure</p> <p>Start to prepare Phenytoin for next step. Please note we give Phenytoin diluted.</p>	<p>As above</p>
<p>25 mins</p> <p>4th step</p>	<p>Phenytoin 20mg/kg by slow intravenous infusion via syringe driver over 20 mins with cardiac monitoring. Give DILUTED; see separate Phenytoin guidelines.</p> <p>OR</p> <p>Levetiracetam IV 40mg/kg (Maximum dose – 3g) given over 5 minutes</p>	<p>Paraldehyde 0.8mls/kg (we have the ready diluted form) may be given PR after the start of Phenytoin infusion, under direction of senior staff.</p> <p>Inform senior anaesthetic team.</p> <p>Inform STRS.</p>	<p>As above.</p> <p>If Afebrile or Febrile refer to 1st seizure clinic.</p>

45 mins	Whichever agent was not given in the 4 th step	Ensure senior anaesthetic team is in attendance	
5 th step	OR Phenobarbitone IV 15mg/kg over 5 mins with full respiratory monitoring		
60 mins	Rapid sequence induction of anaesthesia using Sodium Thiopentone 4mg/kg IV	Transfer to paediatric intensive care via STRS	
Final step			

If a patient is known to have epilepsy please check anti-convulsant levels where appropriate.

If a patient is having a cluster of seizures but recovering consciousness between seizures it may be necessary to give benzodiazepines as per the above table – always discuss with a senior colleague. The use of Phenytoin in the treatment of a cluster of seizures WITH recovery of consciousness can also be considered if IV Lorazepam has been ineffective in terminating the cluster – always discuss with a senior colleague.

The treatment of Non-convulsive status is less urgent than for convulsive status. The diagnosis can be difficult and, where possible, it should be clarified by urgent EEG monitoring. If NCS is confirmed then the intravenous benzodiazepine protocol above can be followed. Where possible, a repeat EEG after the administration of IV benzodiazepines is very useful. Always discuss with a senior colleague.

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2. Supporting References

NICE Guidance – Epilepsies: diagnosis and management; Appendix F Protocols for treating convulsive status epilepticus in children.

South Thames Retrieval Service Paediatric Critical Care – Status epilepticus guideline Aug 2021;

Levetiracetam vs Phenytoin for second line treatment of paediatric convulsive status epilepticus; Lyttle et al – The Lancet Volume 393, issue 10186, p2125-2134 May 2019

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2. Guideline Governance

a. Scope

This guideline is relevant to all staff caring for all children from 0-18 years old across the emergency department, inpatient ward and outpatient department.

b. Purpose

- i. This guideline aims to facilitate a common approach to the management of children. At times deviation from the guideline may be necessary, this should be documented and is the responsibility of the attending consultant.
- ii. This guideline is subject to regular review to ensure ongoing evidence based practice.

c. Duties and Responsibilities

All healthcare professionals responsible for the care of all children 0-18years should be aware of practice according to this guideline.

d. Approval and Ratification

This guideline will be approved and ratified by the Paediatric Guidelines Group.

e. Dissemination and Implementation

- i. This guideline will be uploaded to the trust intranet 'Paediatric Guidelines' page and thus available for common use.
- ii. This guideline will be shared as part of ongoing education within the Paediatric Department for both medical and nursing staff.
- iii. All members of staff are invited to attend and give comments on the guideline as part of the ratification process.

f. Review and Revision Arrangements

- a. This policy will be reviewed on a 3 yearly basis by the appropriate persons.
- b. If new information comes to light prior to the review date, an earlier review will be prompted.
- c. Amendments to the document shall be clearly marked on the document control sheet and the updated version uploaded to the intranet. Minor amendments will be ratified through the Paediatric Guidelines Group. A minor amendment would consist of no major change in process, and includes but is not limited to, amendments to documents within the appendices.

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g. Equality Impact Assessment

<p>Background</p> <ul style="list-style-type: none"> Who was involved in the Equality Impact Assessment
<p>Author and the supervising consultants.</p>
<p>Methodology</p> <ul style="list-style-type: none"> A brief account of how the likely effects of the policy was assessed (to include race and ethnic origin, disability, gender, culture, religion or belief, sexual orientation, age) The data sources and any other information used The consultation that was carried out (who, why and how?)
<p>All groups of staff and patients were taken into consideration and there is no bias towards or against any particular group.</p>
<p>Key Findings</p> <ul style="list-style-type: none"> Describe the results of the assessment Identify if there is adverse or a potentially adverse impacts for any equalities groups
<p>There is no evidence of discrimination.</p>
<p>Conclusion</p> <ul style="list-style-type: none"> Provide a summary of the overall conclusions
<p>There is no evidence of discrimination.</p>
<p>Recommendations</p> <ul style="list-style-type: none"> State recommended changes to the proposed policy as a result of the impact assessment Where it has not been possible to amend the policy, provide the detail of any actions that have been identified Describe the plans for reviewing the assessment
<p>This guideline is appropriate for use.</p>

h. Document Checklist

To be completed (electronically) and attached to any document which guides practice when submitted to the appropriate committee for approval or ratification.

Title of the document:

Policy (document) Author:

Executive Director: N/A

		Yes/No/ Unsure/NA	<u>Comments</u>
<u>1.</u>	Title		
	Is the title clear and unambiguous?		
	Is it clear whether the document is a guideline, policy, protocol or standard?		
<u>2.</u>	Scope/Purpose		
	Is the target population clear and unambiguous?		
	Is the purpose of the document clear?		
	Are the intended outcomes described?		
	Are the statements clear and unambiguous?		
<u>3.</u>	Development Process		
	Is there evidence of engagement with stakeholders and users?		
	Who was engaged in a review of the document (list committees/ individuals)?		
	Has the policy template been followed (i.e. is the format correct)?		
<u>4.</u>	Evidence Base		
	Is the type of evidence to support the document identified explicitly?		

		Yes/No/ Unsure/NA	Comments
	Are local/organisational supporting documents referenced?		
5.	Approval		
	Does the document identify which committee/group will approve/ratify it?		
	If appropriate, have the joint human resources/staff side committee (or equivalent) approved the document?		
6.	Dissemination and Implementation		
	Is there an outline/plan to identify how this will be done?		
	Does the plan include the necessary training/support to ensure compliance?		
7.	Process for Monitoring Compliance		
	Are there measurable standards or KPIs to support monitoring compliance of the document?		
8.	Review Date		
	Is the review date identified and is this acceptable?		
9.	Overall Responsibility for the Document		
	Is it clear who will be responsible for coordinating the dissemination, implementation and review of the documentation?		
10.	Equality Impact Assessment (EIA)		
	Has a suitable EIA been completed?		

Committee Approval (Paediatric Guidelines Group)

If the committee is happy to approve this document, please complete the section below, date it and return it to the Policy (document) Owner

Name of Chair		Date	
Ratification by Management Executive (if appropriate)			
If the Management Executive is happy to ratify this document, please complete the date of ratification below and advise the Policy (document) Owner			
Date: n/a			