

The Management and Referral Process for Children Presenting with a First Seizure

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Approval Committee(s) name For the latest version only. E.g. Drugs & Therapeutics Committee, Care Group Risk & Governance Committee, Infection Prevention & Control Committee.	Please list ALL Committees that have ratified this document.	Approval date
	CHIME / CHGRC	
How will the document be disseminated? E.g. department/ward based education, training, email, team briefings.	Intranet	
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References Not required when references included in document annex.	See reference section	

Guidelines Checklist before submission to Governance
For all guidelines (new or due for review)

☒ Principal Author and Secondary Author – **mandatory**

Primary Author: Dr Dennis Grigoratos

Secondary Author: Dr Richard Rosch

☒ Any drugs-related information included? N

a. Pharmacist: _____

b. Senior Nurse/Matrons/Ward Managers

Name: _____

☐ ED/Acute medical pathway included? Y

c. Name of ED Liaison Clinician ___ Dr Lalarukh Asim (DH) & Dr Qadir Adelasoye (PRUH)_____

2. Specialities/staff groups affected/Stakeholders

☒ Senior Nurses/Matrons/Ward Managers _____

☒ ACP _____

☒ Consultants _____

☐ Additional staff: PDNs, CNS, Admin _____

3. Additional Committees/Stakeholders?

☐ Drugs and Therapeutics Committee _____

☐ Infection Prevention and Control Committee _____

☐ Safeguarding _____

☐ Maternity _____

☐ Bereavement _____

☐ Other Committees/Authors not listed _____

***please include the lead names and the review dates**

As principal author, I confirm that this is ready for ratification and review for Governance.

Name, signature, title – Dr Dionysios Grigoratos, Consultant Paediatrician

***Any guideline that needs more discussion will need to be discussed in a meeting outside Governance and to be set up by the Primary authors.**

The Management and Referral Process for Children Presenting with a First Seizure.

Abstract

Background

Epilepsy is a common condition affecting 0.5% of the general population. There are more than 40 different types of epilepsy syndromes and almost a dozen different seizure types. Despite its high prevalence and because of its complexity epilepsy is a condition known for its diagnostic difficulty. The lack of a definitive diagnostic test often leads to misdiagnosis. It has been found that 20-40% of children referred with a diagnosis of epilepsy to a specialist service are misdiagnosed. Because timely and accurate diagnosis of epilepsy is imperative for the correct management and the improvement of the prognosis such misdiagnosis can have significant consequences for the children involved affecting both their health and lifestyle.

In view of the above problem, in February 2013 the National Institute of Clinical Excellence (NICE) introduced a quality standard for the epilepsies in children and young people. The quality standard includes a series of nine quality statements. The first states that "children and young people presenting with a suspected seizure are seen by a specialist in the diagnosis and management of the epilepsies within 2 weeks of presentation".

Aim

The aim of this guideline is to provide a pathway for the management of all children presenting with a suspected first seizure episode and to introduce the process for referring to the newly established First Seizure Clinic at King's College Hospital. This is to facilitate appropriate initial management, reduce misdiagnosis and achieve compliance with Statement 1 of the 2013 NICE Quality Standard–Implementation of this guideline not only aims to improve the diagnosis and classification of children presenting with seizures but also to minimise unnecessary investigations that although informative may be inappropriate or even hinder prompt diagnosis.

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The Management and Referral Process for Children Presenting with a First Seizure.

1. Background

Epilepsy is a common condition affecting 0.5% of the general population. There are more than 40 different types of epilepsy syndromes and almost a dozen different seizure types. Despite its high prevalence and because of its complexity epilepsy is a condition known for its diagnostic difficulty. The lack of a definitive diagnostic test often leads to misdiagnosis. It has been found that 20-40% of children referred with a diagnosis of epilepsy to a specialist service are misdiagnosed. Because timely and accurate diagnosis of epilepsy is imperative for the correct management and the improvement of the prognosis such misdiagnosis can have significant consequences for the children involved affecting both their health and lifestyle.

In view of the above problem, in February 2013 the National Institute of Clinical Excellence (NICE) introduced a quality standard for the epilepsies in children and young people. The quality standard includes a series of nine quality statements. The first states that "children and young people presenting with a suspected seizure are seen by a specialist in the diagnosis and management of the epilepsies within 2 weeks of presentation".

2. Indications

The current guideline applies to all children and young people aged from birth to 16 years presenting with a suspected first seizure.

3. Equipment & Staff Requirements

The current guideline aims to use already existing equipment and staff for its delivery. Initial management of children presenting with a first seizure episode will use the staff and facilities already available at the Paediatric Emergency Department. There is ability to refer internally via our EPIC® Electronic Patient Record system. The Paediatric First Seizure Clinic will use clinic slots in existing General Paediatric & Paediatric Neurology Outpatient Clinics and will be supported existing secretarial support and nurse specialists who are already in post. Additional training to familiarise Paediatric and Emergency Department medical and nursing staff of this new guideline is planned to be delivered as part of the already existing regular teaching and training programme for those specialities.

4. Guideline steps

4.1 Initial management

4.1.1 This guideline covers all children and young people aged from birth to the age of 16 years presenting with a first seizure episode.

4.1.2 As with all children presenting with any severe illness, management should start with an ABC (Airway, Breathing, Circulation) approach as advised by the Advanced Paediatric Life Support (APLS) Guidelines.

4.1.3 Once the child has been stabilised and the seizure has been terminated, further management and follow-up will depend on whether the seizure is deemed to be febrile or afebrile and in the latter case on whether it is epileptic, non-epileptic or of uncertain origin.

4.2 Febrile Seizures

4.2.1 Febrile seizures are paroxysmal events occurring in the context of a pyrexia of above 38°C in children aged between 6 months and 5 years.

4.2.2 The management of febrile seizures includes the identification of the source of pyrexia. In cases where meningitis or sepsis is suspected as the trigger of the seizure or when a focus of infection is not apparent admission and investigations are required.

4.2.3 In cases where first febrile seizures are uncomplicated, lasting less than 15 minutes, non-recurrent within 24 hours, without focal or asymmetrical features, associated with full recovery and with an obvious focus for the pyrexia, the child can be discharged home on the same day with advice. No follow-up is required in these cases. However, note that parental anxiety can be an indication for admission even in these cases.

4.2.4 On occasions where a febrile seizure is associated with atypical features admission and investigations may be required depending on the individual case. These children should be referred for follow up to the Paediatric First Seizure Clinic after discharge.

4.3 Afebrile Seizures

4.3.1 Children presenting with a first afebrile seizure should be initially managed as per APLS guidelines and need a full clinical examination and assessment to identify potential triggers for the seizure.

4.3.2 All children presenting with a first afebrile seizure need to have a series of immediate investigations: ECG to rule out arrhythmias and prolonged QTc, blood glucose, FBC, U&E, LFTs, Bone profile including calcium levels and magnesium.

4.3.3 All children presenting with a first afebrile seizure need to be seen or discussed with a Paediatric Registrar or Paediatric / Emergency Medicine Consultant to determine whether the episode was epileptic or non-epileptic.

4.4 Afebrile Seizures Deemed to be of Epileptic Origin

4.4.1 In cases of first afebrile seizure in a child where the episode is deemed to be of epileptic origin further management and follow up will depend on the age of the child.

4.4.2 If the child is more than two years old, provided that the seizure did not have atypical features and recovery was full, the child can be discharged home. No extra investigations are required in addition to those listed in section 4.3.2 at the initial presentation stage. However, these children should be referred for follow up to the Paediatric First Seizure Clinic after discharge.

4.4.3 If the child is less than two years old and has suffered a first afebrile epileptic seizure it is important to specifically assess for clinical features of infantile spasms. If infantile spasms are diagnosed, the child needs to be admitted, investigated and managed accordingly. Details about the management of infantile spasms are beyond the scope of this guideline and will be guided by a specialist centre.

4.4.4 Even if infantile spasms are not suspected, a child who is less than two years of age with epileptic seizures may still require admission and investigations. A list of investigations that need to be considered is included in Appendix 1. Paediatric Neurology input may also be required in such cases. These children should also be referred for follow up to the Paediatric First Seizure Clinic after discharge.

4.5 Afebrile Seizures Deemed to be of Non-Epileptic Origin

Children who present with a first afebrile seizure and after senior medical review are deemed to have suffered a non-epileptic event need to be managed according to the suspected non-epileptic condition. Examples of such conditions include cardiac syncope, vasovagal episodes, reflex anoxic seizures and dissociative seizures. The management of those and many other similar conditions is beyond the scope of this guideline. Children diagnosed with non-epileptic first afebrile seizures should not be referred to the Paediatric First Seizure Clinic but may require alternative investigations and follow up depending on their diagnosis.

4.6 Afebrile Seizures Deemed to be of Uncertain Origin

In cases where it is unclear whether a first afebrile seizure was epileptic or non-epileptic and after full recovery follow up at the Rapid Access Paediatric Clinic may be appropriate. If **at that** appointment it is concluded that the seizure was epileptic or if uncertainty about the diagnosis persists referral to the Paediatric First Seizure Clinic is appropriate.

4.7 EPIC© Referral Process for the Paediatric First Seizure Clinic

Where an internal referral to the Paediatric first seizure clinic is indicated please complete an order for **Outpatient referral to Paediatric Neurology** and select either DH or PRUH site as highlighted below, also adding all relevant referral details.

Outpatient referral to Paediatric Neurology

Class: Incoming Referral Internal Referral

Referral: ☐ Override Restrictions

To Department Specialty: Paediatric Neurology Paediatric Neurology

To Department:

Priority:

To Location/POS:

Admin category: 1 NHS Patient

Is this referral related to a different diagnosis or problem? ☐ No ☐ Yes

Referral details:

Source of referral: Consultant (non-A&E) Allied Health Professional Other Community Service

Additional Order Details

ID	Department	Centre	Specialty
20202073	PRUH PAED NEUROLOGY - EPILEPSY		Paediatric Neurology
20202129	PRUH PAED NEUROLOGY - SPECIALIST		Paediatric Neurology
20201218	DH PAED NEUROLOGY - EPILEPSY		Paediatric Neurology
20201128	DH PAED NEUROLOGY - GENERAL		Paediatric Neurology
20201526	DH PAED NEUROLOGY - SPECIALIST		Paediatric Neurology
10203129	ELCH PAED NEURO - MOVEMENT DISORDER		Paediatric Neurology
10203130	ELCH PAED NEUROLOGY - EPILEPSY		Paediatric Neurology
10203042	ELCH PAED NEUROLOGY - GENERAL		Paediatric Neurology
10203131	ELCH PAED NEUROLOGY - NEUROMUSCULAR		Paediatric Neurology
10203132	ELCH PAED NEUROLOGY - SPECIALIST		Paediatric Neurology

Next Required

4.8 Visual Representation of the Management and Referral Pathway for Children Presenting with a First Seizure

4.8.1 This is included in Appendix 1 for easy reference.

The Management and Referral Process for Children Presenting with a First Seizure.

5. Appendix 1

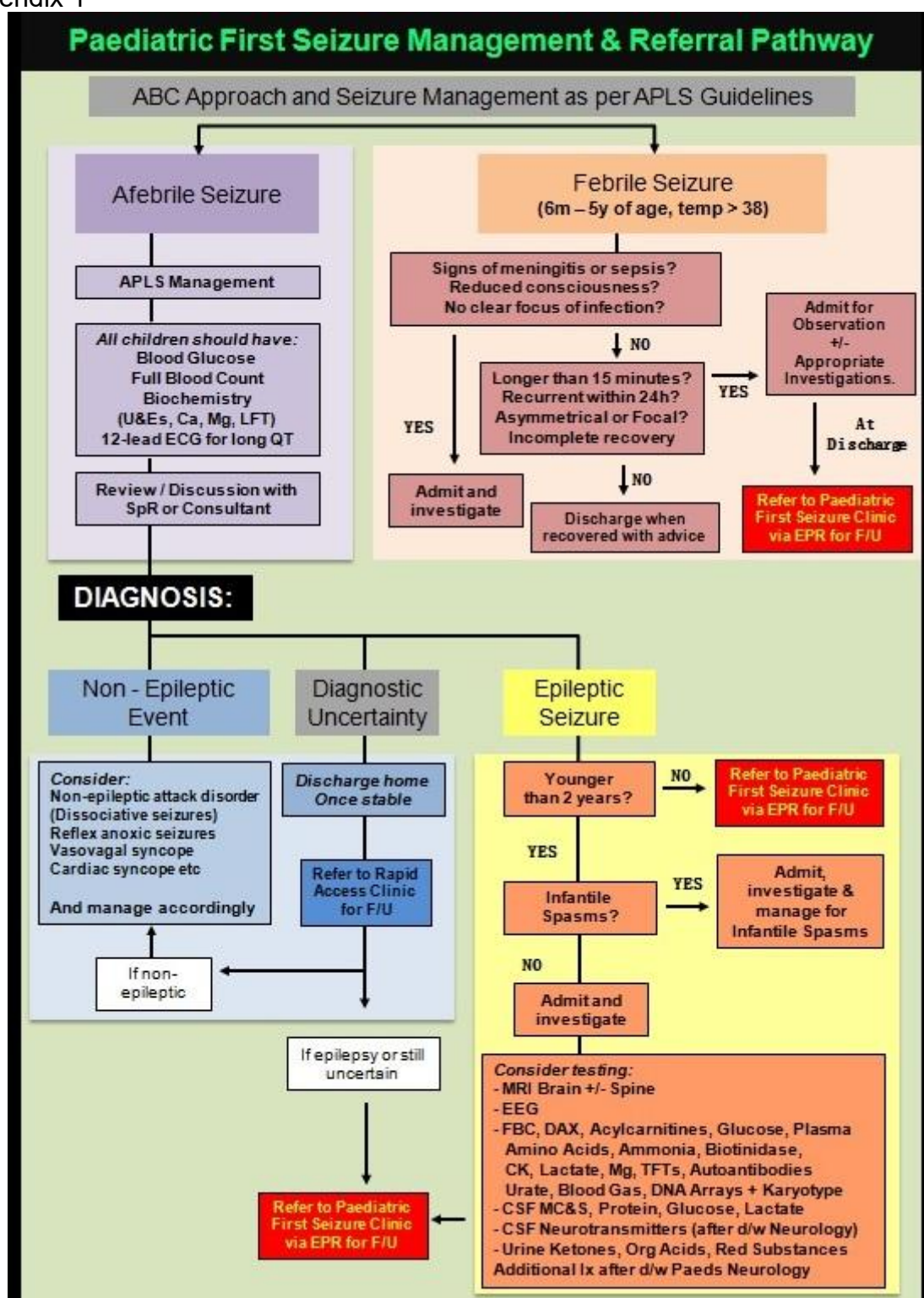


Fig 1. Visual Representation of the Management and Referral Pathway
for Children Presenting with a First Seizure.

The Management and Referral Process for Children Presenting with a First Seizure.

6. References

- NICE quality standard 27: Quality standard for the epilepsies in children and young people (NICE QS27 2013)
- NICE clinical guideline 137: The epilepsies: the diagnosis and management of the epilepsies in adults and children in primary and secondary care (Jan 2012 last modified: Jan 2015)
- South East Thames Paediatric Epilepsy Group Epilepsy Guideline 2013