Ashford and St. Peter's Hospitals NHS
NHS Trust

WOMEN'S HEALTH AND PAEDIATRICS
PAEDIATRIC DEPT

Syncope in Childhood

Amendments			
Date	Page(s)	Comments	Approved by
January 2011	New Guideline		
March 2018		Whole document review – no changes	Paediatric Guideline Group

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In Consultation with:

Ratified by: Paediatric Guidelines Group

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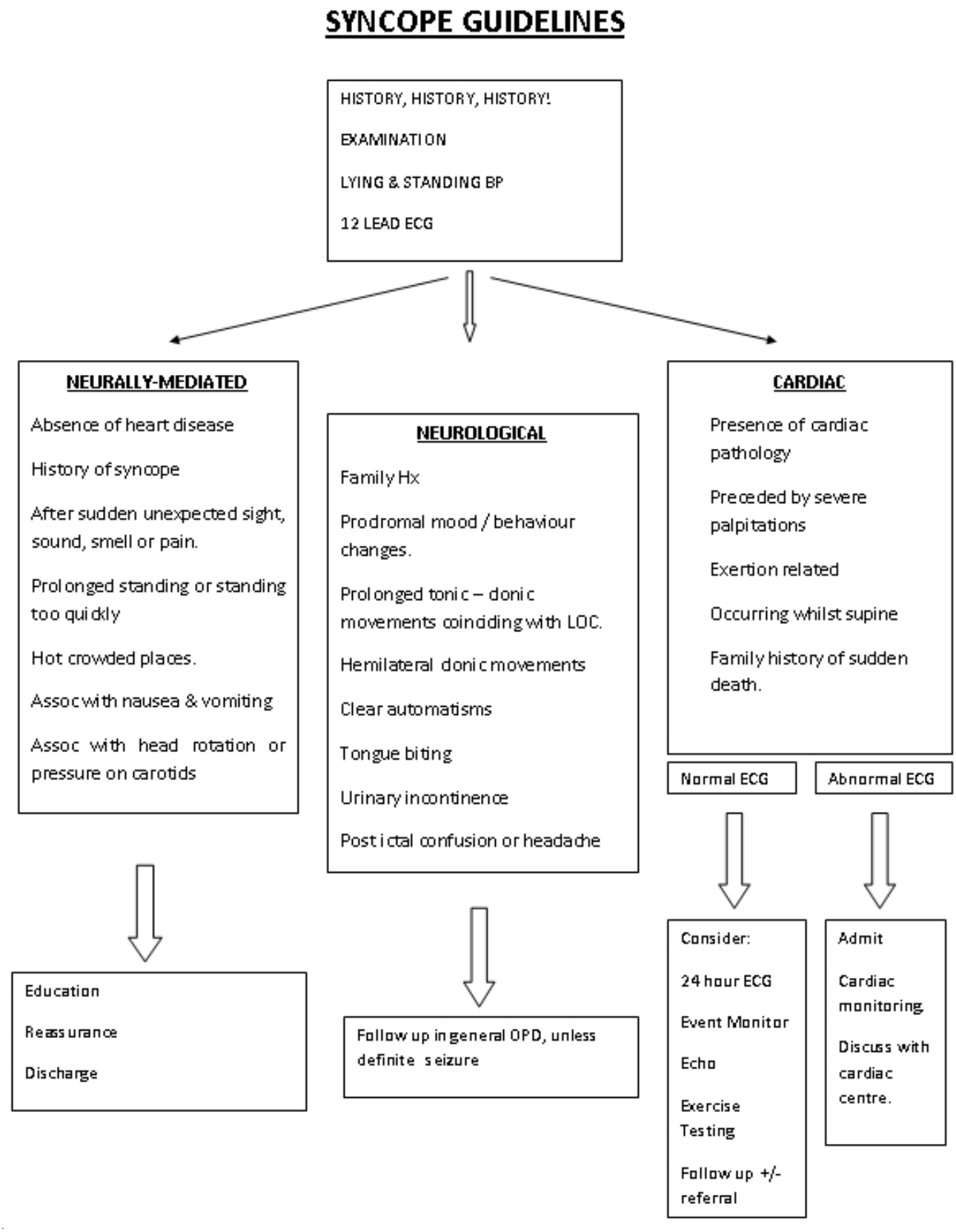
Next Review Date: March 2021

Target Audience: Doctors, nurses and support staff working in Paediatrics

Impact Assessment Carried Out By:

Comment on this document to: Dr Alison Groves, Consultant Paediatrician

Syncope Guideline



Definition

- Transient, self-limited loss of consciousness (TLOC), usually leading to falling.
- Onset is relatively rapid.
- Recovery is spontaneous, complete and usually prompt.
- Underlying mechanism is a transient global cerebral hypo-perfusion

Causes of TLOC

1. Neurally-mediated
2. Cardiac
3. Neurological
4. Syncope like episodes.

Neurally Mediated

Reflex Syncope
- Vasovagal
- Situational (BO, PU, coughing, swallowing, post exercise)
- Infantile reflex syncopal attacks (reflex anoxic seizures) – brief unpleasant stimulus, caused by vagus mediated cardiac inhibition. ('*Pallid spell'*)
- Apnoeic hypoxic TLOC (breath holding episodes) – expiratory cessation during crying ('*Cyanid spell'*)

Carotid sinus pressure

Orthostatic Syncope commoner in adults

- Primary / Secondary autonomic failure
- Volume depletion
- Drug and alcohol related

Cardiac

- Arrhythmias:-
  - Tachycardia – supraventricular usually slower onset of shock, ventricular.
  - Bradycardia - sinus node dysfunction, AV conduction disorder.
- Structural cardiopulmonary disease

  In infants duct dependent or LVOT.

  Older occlusion of shunts or other sudden haemodynamic changes- rare now

Neurological

- Migranous episodes
- Epilepsy

Syncope like episodes
- Falls
- Drop attacks
- Psychogenic pseudo-syncope

Initial Assessment

1. History:
   - Is LOC attributable to syncope?
   - Is PMH or FH of structural heart disease, arrhythmias or HOCM present or absent?
   - Any important clinical features in history to suggest diagnosis?
2. Physical examination.
   - Standing & Lying BP Systolic > 20mm Hg difference.
3. Investigations- Standard 12 lead ECG.

1. History

A detailed account of the event must be obtained from the patient, including the following:

- Precipitant factors
- Activity the patient was involved in before the event
- Position the patient was in when the event occurred

The following questions should be asked:

- Was loss of consciousness complete?
- Was loss of consciousness with **rapid onset and short duration**?
- Was **recovery spontaneous, complete, and without sequelae**?
- Was postural tone lost?

If the answers are positive, syncope is highly likely; if 1 or more are negative, other forms of loss of consciousness should be considered. Pre-syncopal symptoms reported may include the following:

- Prior faintness, dizziness, or light-headedness (70% of cases of true syncope)
- Prior vertigo, weakness, diaphoresis, epigastric discomfort, nausea, blurred or faded vision, pallor, or paraesthesias
- ***Red flag symptom***s: Exertional onset, chest pain, dyspnoea, low back pain, palpitations, severe headache, focal neurologic deficits, diplopia, ataxia, or dysarthria

Other information that should be obtained includes the following:

- Detailed account of the event from any available witnesses (eg, whether patient experienced post-event confusion)
- Patient's medication history
- Patient's personal or familial medical history of cardiac disease

2. Physical examination is required, with particular attention to the following:

- Analysis of vital signs
- Measurement of the glucose level by BM
- Detailed cardiopulmonary examination
- Detailed neurologic examination
- Assessment for signs of trauma
- Bedside examinations to help elucidate the origin of syncope (eg, Hallpike manoeuvre)

Signs & Symptoms Suggestive of '*Neurally–mediated' Syncope*

- Absence of heart disease
- History of definite syncope
- After sudden unexpected sight, sound, smell or pain.
- Prolonged standing or standing too quickly
- Hot crowded places.
- Assoc with nausea & vomiting and visual changes- curtain/spots
- Assoc with head rotation or pressure on carotids

Signs & Symptoms Suggestive of Cardiac Syncope

- Presence of cardiac pathology
- Preceded by severe palpitations
- Exertion related
- Occurring whilst supine

- Family history of sudden death
- Abnormal ECG
- NB Auditory induced syncope has been linked with cardiac causes

Signs & Symptoms suggestive of neurological cause

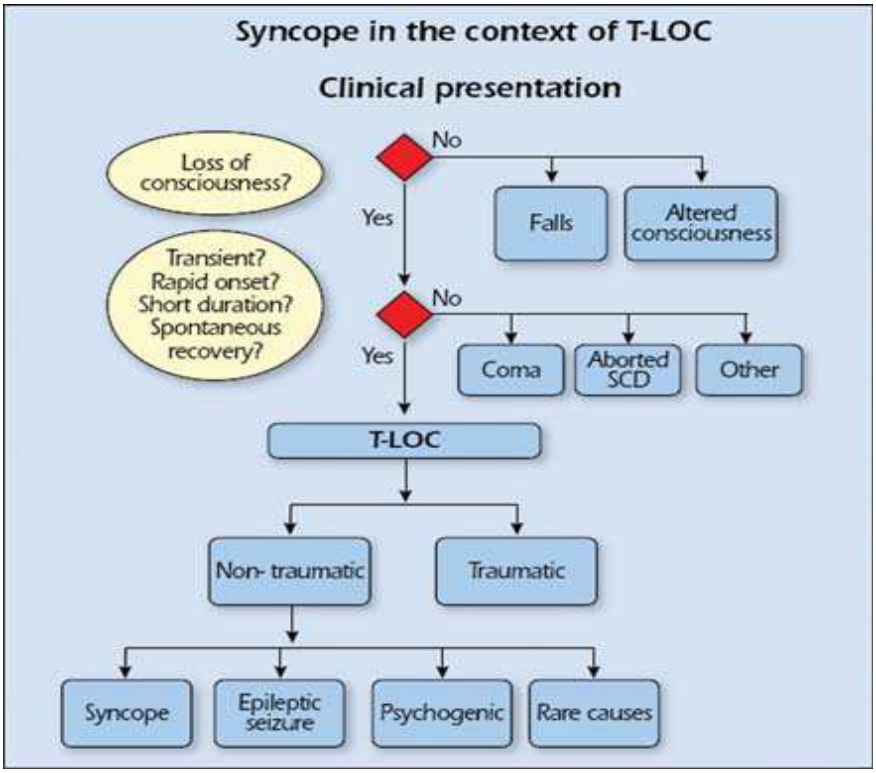
Epilepsy
- Family History
- Prodromal mood / behaviour changes
- Clear automatisms.
- Prolonged tonic – Clonic movements coinciding with LOC/ Hemi-lateral Clonic movements
- Post-ictal confusion, altered consciousness or headache- for prolonged periods
- 'Urinary incontinence'

Migraine
- Aura- Visual symptoms
- Longer period of nausea
- Headache- unilateral
- Photophobia/ Phonophobia
- Improvement of symptoms with sleep/ vomiting

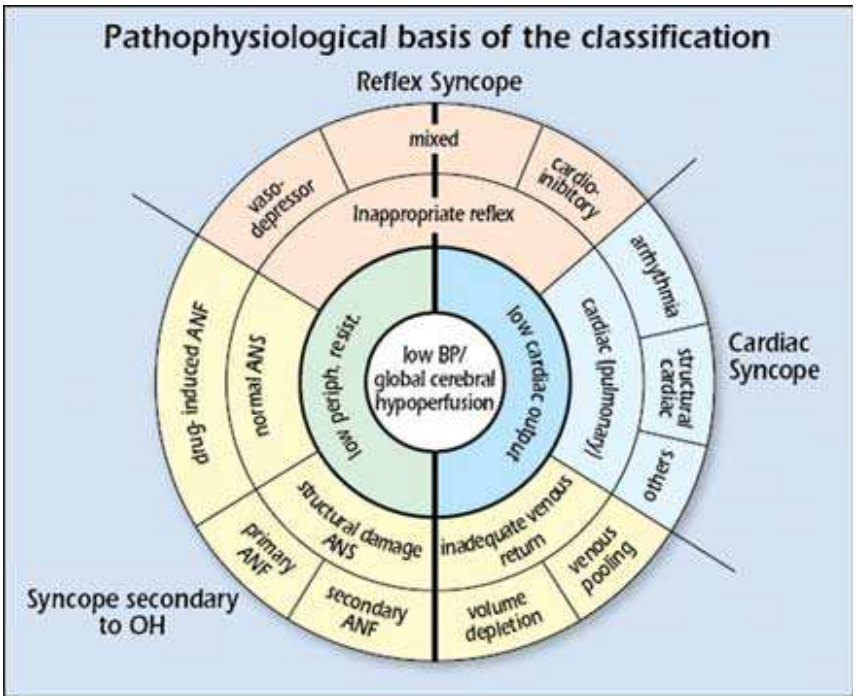
3. Investigations & Treatment
- Reflex syncope –
  - Education and Reassurance.

- Cardiac Syncope –
  - ECG monitoring
  - After discussion with consultant
    - Echo
    - Exercise Testing

- Neurological –
  - Consider referral-if in doubt refer to general OPD of attending consultant
  - No referral to *first fit clinic* without discussion
    - An EEG may be ordered while awaiting an appointment



*SCD: Sudden Cardiac death



Pathophysiological basis of the classification

ANF ¼ autonomic nervous failure;
ANS ¼ autonomic nervous system
BP ¼ blood pressure; low peripheral resistance
¼ low peripheral resistance
OH ¼ orthostatic hypotension

For further reading:

http://www.escardio.org/guidelines-surveys/esc-guidelines/guidelinesdocuments/guidelines-syncope-ft.pdf