



**Inclusion Criteria**

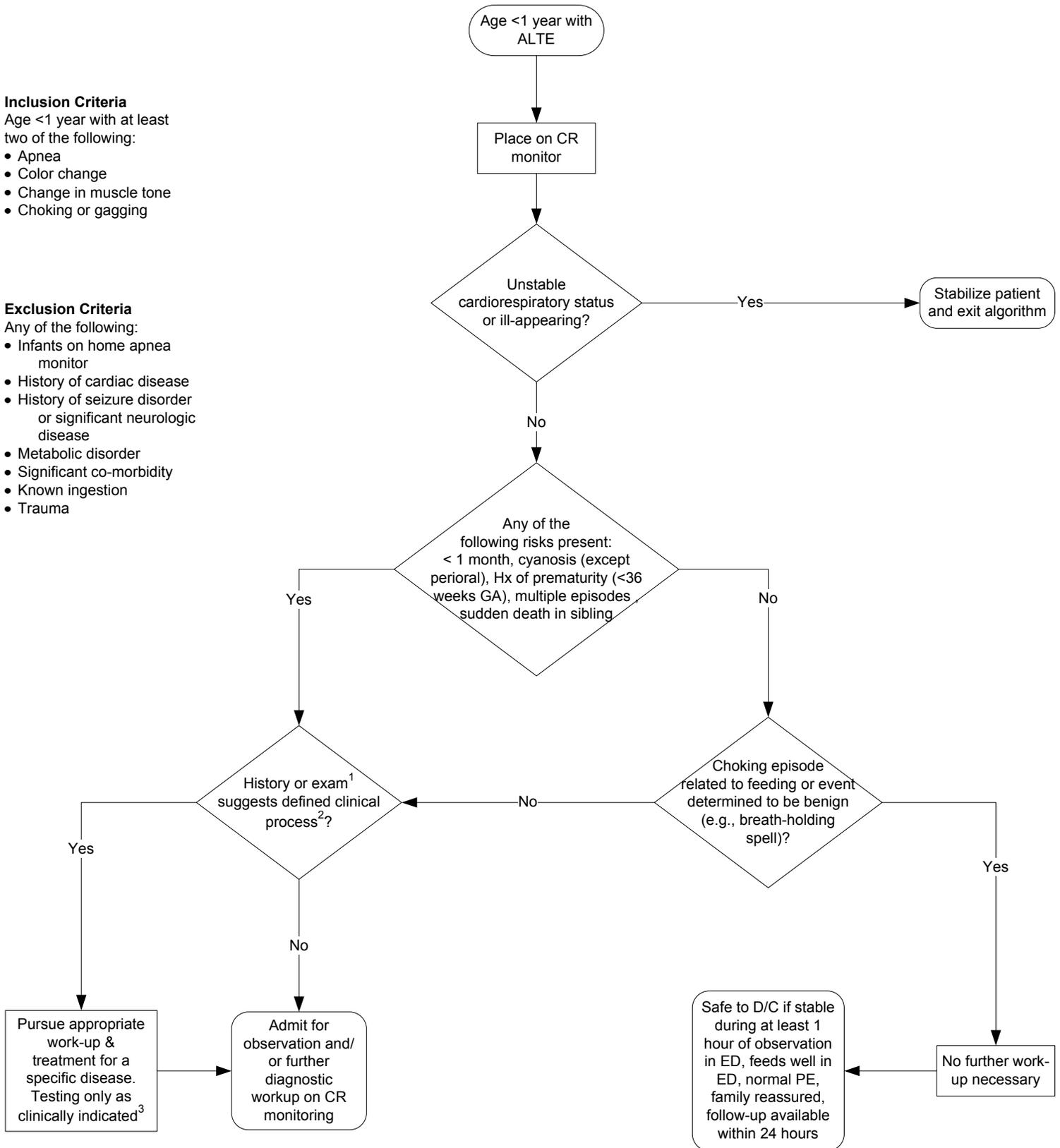
Age <1 year with at least two of the following:

- Apnea
- Color change
- Change in muscle tone
- Choking or gagging

**Exclusion Criteria**

Any of the following:

- Infants on home apnea monitor
- History of cardiac disease
- History of seizure disorder or significant neurologic disease
- Metabolic disorder
- Significant co-morbidity
- Known ingestion
- Trauma



## **ALTE EBG Annotation**

### **1. In addition to general Hx and PE:**

#### **HPI**

- Time and duration of event
- Infant awake or asleep
- Position of infant
- Activity at time of event: feeding, coughing, gagging, choking, vomiting
- Time of last feeding
- Color change: cyanotic, pallid, gray, red
- Tone: limp, rigid, or tonic/clonic
- Eyes: open, closed, staring, rolled
- Any resuscitative measures

#### **PMHx**

- Prenatal and birth Hx
- Prior episodes
- GERD
- Developmental delay

#### **Medication**

- OTC medication

#### **Family Hx**

- SIDS, unexpected sudden death
- Significant medical problem (seizures, metabolic, cardiac)
- Epilepsy

#### **Social Hx**

- Caretaker
- Medication in home

#### **Areas of focus for the PE:**

General Appearance: Features suggestive of a genetic or metabolic syndrome

Head: Evidence of trauma, fontanel size and fullness

TM: Hemotympanum

Eyes: Pupil reactivity. If suspected non-accidental trauma, consider fundoscopic exam as part of the evaluation.

Nasopharynx: Congestion, presence of milk or blood

Lungs: Work of breathing, abnormal lung sounds

Heart: Rate, rhythm, murmur, capillary refill, quality of pulses

Abdomen: Signs of acute abdomen

Musculoskeletal system: Signs of trauma

Skin: Bruising, sign of trauma, rash

Neurologic: Tone, movement, reflexes present and symmetric

### **2. Defined Clinical Process**

**Respiratory:** Consider RSV or pertussis if cough is paroxysmal (> 10 in a row). Risk of apnea in infants with RSV if age < 1 mo, premature & < 48 wks postconceptional

age, witnessed apnea. Consider pertussis if cough is paroxysmal and persistent (> 10 days).

**Neuro:** Consider seizure if episode consists of unresponsiveness and change in muscle tone

**Metabolic:** Hx of FTT, hepatomegaly, developmental delay, seizures, family hx of SIDS

**Cardiac:** Diaphoresis with feedings, FTT

**Ingestion:** Use of OTC medication, possibility of ingesting adult medication

**Non-accidental trauma:** Recurrent ALTE, previous infant death while in the care of same person, especially if the child and caregiver are unrelated, previous unexplained deaths or simultaneous symptoms in siblings, or discovery of blood in the infant's mouth or nose, or frenulum tear in association with ALTE

**GI:** GERD if emesis or regurgitation occurs at the time of ALTE, episode occurs while infant awake or supine, obstructive apnea due to milk

### **3. Testing only as clinically indicated:**

- Respiratory:

- RSV - Test for RSV if high risk for apnea (age < 1 month, premature & < 48 wks postconceptional age, witnessed apnea)
- Pertussis - Test for pertussis if paroxysmal and persistent cough, CBC to check absolute lymphocyte count (>10K may suggest pertussis)
- CXR

- Seizure: D-stick, chem-10, toxicology screen, consult neurology, consider imaging if focal exam

- Cardiac: CXR, EKG, 4-extremity BP, abnormal when lower extremity SBPs at least 10 mmHg below upper extremity SBPs

- Infectious: age-dependent serious bacterial infection work-up

- Metabolic POCT glucose, chem7, VBG, ammonia

- Non-accidental trauma: consult Child Protection Team, LFTs if there is suspicion for non-accidental trauma

- Ingestion: serum or urine toxicology screen as indicated

#### **Not routinely recommended (unless specific concern)**

- CBC
- Electrolytes, Ca, Mg, Phos
- Sepsis work-up
- CXR, EKG
- IV placement
- Neuroimaging

**Document your decision making if these tests are ordered**