

## DEFINITION

- Spells are an abrupt, brief, transient change in behavior, appearance, or movement
- Most spells also have an abrupt start and an abrupt ending.
- Spells are also called events or attacks.
- This protocol covers spells of unknown cause or etiology
- If the cause is known and diagnosed, or is a specific symptom, see that specific protocol. Here are some examples:
- Mental/behavior spells include confusion (altered mental status), panic attacks, dizzy spells, fainting spells, etc.
- Physical spells include coughing spells, bluish spells (cyanosis), breath-holding spells, asthma attacks, seizures, sleep terrors, etc. See those protocols.

## TRIAGE ASSESSMENT QUESTIONS

### Call EMS 911 Now

Breathing stopped and hasn't returned

*First Aid: Begin mouth-to-mouth breathing.*

Cannot be awakened

*R/O: coma*

Severe difficulty breathing (struggling for each breath, making grunting noises with each breath, unable to speak or cry because of difficulty breathing)

Bluish (or gray) lips or face now

*R/O: cyanosis and need for oxygen*

First seizure continues > 5 minutes

*R/O: drug ingestion, overdose or hypoglycemia. See First Aid advice for active seizure.*

Epileptic seizure continues > 5 minutes (in child with known epilepsy)

*Reason: increased risk of status epilepticus*

Sounds like a life-threatening emergency to the triager

### See More Appropriate Protocol

Baby choked on formula or breastmilk and turned blue or became limp and now normal

*Go to Protocol: Spitting Up (Reflux) (Pediatric)*

Apneic spell suspected (Breathing stopped for over 20 seconds but now it's normal)

*Go to Protocol: Breathing Difficulty (Respiratory Distress) (Pediatric)*

Spell is over but having difficulty breathing

*Go to Protocol: Breathing Difficulty Severe (Pediatric)*

Breath-holding spell and age 6 months and older

*Go to Protocol: Breath-Holding Spell (Pediatric)*

Seizure stopped and fever

*Go to Protocol: Seizure with Fever (Pediatric)*

Seizure stopped and no fever

*Go to Protocol: Seizure without Fever (Pediatric)*

Bluish (or gray) spells (cyanosis)

*Go to Protocol: Bluish Skin or Body Part (Cyanosis)*

Confusion

*Go to Protocol: Confusion - Delirium (Pediatric)*

Night terrors or sleep walking suspected

*Go to Protocol: Sleep Problems - Parasomnias and Nightmares (Pediatric)*

Panic or anxiety attack suspected

*Go to Protocol: Anxiety and Panic Attack (Pediatric)*

Fainting spells

*Go to Protocol: Fainting (Pediatric)*

Dizzy spells

*Go to Protocol: Dizziness (Pediatric)*

Shivering or chills with cold exposure

*Go to Protocol: Frostbite and Cold Exposure (Pediatric)*

Shivering or chills and no cold exposure and sick

*Go to Protocol: Fever - 3 Months or Older (Pediatric). Reason: probably developing a fever*

Newborn with jitteriness during crying

*Go to Protocol: Newborn Reflexes and Behavior (Pediatric)*

Unexplained crying spells and < 3 months old

*Go to Protocol: Crying - Before 3 Months Old (Pediatric)*

Unexplained crying spells and > 3 months old

*Go to Protocol: Crying - 3 Months and Older (Pediatric)*

## **Go to ED Now**

Age < 12 months, and spell of bluish color or going limp, and normal now

*R/O: BRUE*

Confused in talking or behavior now

Altered mental status suspected now (awake but not alert, not focused, slow to respond)

Spell has ended BUT unsteady walking, weakness, vision change or any neuro symptom is present

Breathing stopped for over 20 seconds but now it's normal

*R/O: apneic episode, BRUE*

### **Go to ED/UCC Now (or to Office Now per Practice Policy)**

High risk child (newborn, preterm, lung disease) and spell of unknown cause

Spell of unknown cause present at time of the call and sounds serious

Spell resolved but muscle jerking during spell (Exception: while falling to sleep)

*R/O: seizure*

Spell resolved but cause could be serious

*R/O: head injury, drug ingestion*

Intussusception suspected (attacks of severe abdominal pain/crying suddenly switching to 2- to 10-minute periods of quiet)

Child sounds very sick or weak to triager

*Reason: severe acute illness or serious complication suspected*

### **See in Office Today or Tomorrow**

Age < 12 months, and spell resolved, and cause unknown

*Reason: difficult age to assess*

### **See in Office Within 3 Days**

New-onset brief spell of unknown cause occurs 2 or more times

*Reason: needs an evaluation*

Spells are a recurrent, chronic problem and becoming more frequent

*Reason: needs to be seen to identify cause and reduce triggering events.*

Triager thinks child needs to be seen for non-urgent acute problem

Caller wants child seen for non-urgent problem

### **See in Office Within 2 Weeks**

Spells are a recurrent, chronic problem and cause still unknown

*Reason: needs to be seen to identify cause*

### **Home Care**

Transient spell of unknown cause occurs once

### **Home Care Advice**

## Transient Spell of Unknown Cause

- 1. Reassurance and Education - Transient Spell of Unknown Cause:**
  - Spells are an abrupt, transient change in behavior.
  - Most spells last a few minutes and then your child acts normal.
  - Spells can have many causes, but from what you have told me, your child's spell was not worrisome.
  - If spells become recurrent and we don't know what's causing them, your child will need to be seen for an evaluation.
  - Since your child only acted strange once, we may never know why.
- 2. Common Causes of Spells While Awake:**
  - Dizzy spells occur in just about everyone. Becoming a little dehydrated and then standing too long in one place is the most common trigger.
  - "Deafness spells" are common when children don't want to listen to what parents are telling them. This is also called "parent deafness".
  - Staring spells are common when children are daydreaming, bored or very sleepy. They are common while watching TV. Unlike petit mal seizures, normal staring spells can be interrupted by touch or voice.
- 3. Common Causes of Spells While Asleep:**
  - Strange behaviors that occur only during sleep are almost always normal.
  - "Sleep Starts": When falling asleep, sudden large muscle contractions are common and normal. These muscle jerks occur during normal sleep transitions. A sensation of falling usually occurs with them.
  - When dreaming: Whimpering, crying or twitching of small muscle groups are common. (normal REM behavior).
  - During deep sleep, talking can normally occur.
- 4. Video Clip of Spell - Essential for Diagnosis:**
  - If spells recur, film a video of a few and bring it to your PCP.
  - After viewing the video, your PCP will probably be able to tell you what the spells are.
  - If not, they may refer you to a neurologist or for tests.
  - If you can't make a video, keep a spell diary. Include the date, time, place, what your child was doing at the time, how long the spell lasted, etc.
- 5. Call Back If:**
  - An unexplained spell occurs again
  - Explained spells become frequent or interfere with normal activities
  - You have other questions or concerns

## FIRST AID

### First Aid Advice for Active Seizures

Protect Your Child's Airway:

- If anything is visible in the mouth, clear it with a finger to prevent choking.
- If breathing becomes noisy or the lips become bluish, bring the jaw forward by pulling from behind the corner of the jaw bone on each side (Reason: this will automatically bring the tongue forward and open the airway.)
- If he vomits, place him on his side or abdomen (facedown) to help drain secretions. If available, use a suction bulb to help clear the mouth.

Don't Try to Force Anything into Your Child's Mouth:

- This is unnecessary and can cut the mouth, injure a tooth, cause vomiting, or result in a serious bite of your finger. Also, bites of the tongue are rare and harmless.
- Don't try to resuscitate your child just because breathing stops momentarily for 5 to 10 seconds. Instead, try to clear the airway. Breathing never looks normal during the seizure, but it's adequate if the color is not bluish.

## BACKGROUND INFORMATION

### Types of Spells

- Unexplained spells are more common in nonverbal children.
- The following conditions should be considered when a parent calls about a "spell".
- Most of these have separate triage protocols.

### Fainting Protocol

- A brief loss of consciousness and falling down
- Not stiffening or jerking during (unlike a seizure)
- No confusion afterwards duration usually < 1 minute
- Children continue to breathe during a fainting episode
- Causes include vasovagal syncope, orthostatic syncope, hyperventilation

### Seizure Protocols

- **Seizure With Fever** Protocol
- **Seizure Without Fever** Protocol
- Loss of consciousness and falling down
- The eyes stare or roll upward. Eyes do not close during a seizure.
- The body stiffens, and the arms and legs jerk
- Duration: Usually 1 to 2 minutes. Rarely, a seizure lasts 10 minutes.
- Breathing does not stop during a seizure. Most children breathe adequately.

### Breath-Holding Spell Protocol

- Preceded by triggering event (anger or fear) - unlike a seizure
- Child holds breath and becomes bluish or pale (unlike seizure)
- Then passes out for < 1 minute (may briefly stiffen)
- Normal breathing and color returns spontaneously
- Age 6 months to 4 years

### Apnea Spell (See Breathing Difficulty, Severe Protocol)

- Breathing stops > 20 seconds and now breathing normally
- Becomes bluish and limp during episode
- Total duration: usually < 1 minute (may need resuscitation)
- Age: birth to 6 months (occasionally to 12 months)
- R/O normal periodic breathing: breathing pauses < 20 seconds and then normal

### Brief Resolved Unexplained Events (BRUE)

- BRUE is a 2016 term that replaces the term Acute Life Threatening Events (ALTE).
- After a negative workup, it was always difficult to explain to the parents that their child had a benign "life-threatening event". BRUE works much better.
- Definition: sudden onset of a brief, resolved event that remains unexplained after a careful

evaluation. These brief events are usually very frightening to the observer.

- Age range: birth to 1 year.
  - Symptoms during a BRUE include one or more of the following: absent breathing (apnea) or irregular breathing, color change (cyanosis or pallor), marked change in muscle tone (usually floppy) and altered level of responsiveness.
  - BRUE often presents with a history of over 20 seconds of not breathing (apneic attack). Choking or gagging may be associated.
  - Higher risk group: preterm, age less than 2 months and spells lasting more than 1 minute
  - Most common organic causes: GERD 30%, lung disease (e.g., RSV) 10% and seizures 10%
  - Not related to SIDS
  - Triager role: All infants with a suspected BRUE need to be referred to an ED now for an evaluation.
- Source: Pediatric 2016; 137 (5): 40-43. BRUE: AAP Clinical Practice Guideline.

### **Confusion Protocol**

- Confused thinking, talking and behavior
- Hasn't passed out (no fainting, seizure or head trauma)
- Disoriented to person, place and time
- Duration: variable
- Also includes Night Terrors

### **Crying Episodes - Unexplained Protocols**

- Crying Baby < 3 mo. (Colic)
- Crying Child > 3 mo. (Irritability, fussiness)
- From 1 to 5 years, many crying spells are temper tantrums
- Child may scream and cry to the point of becoming irrational and confused

### **Shivering, Shaking or Trembling (No protocol)**

- Shivering (fine muscle contractions) is used to produce body heat.
- Shivering follows cold exposure or precedes fevers.
- Shivering is also call "the chills". Severe shaking chills are called rigors. It is often seen with sepsis.
- Trembling or shaking is seen in some young infants with crying (e.g. excessive startle reflex). Normal trembling stops during sucking. For Newborns, see Newborn Reflexes and Behavior protocol.
- Trembling is seen in some children with anxiety or fear. Not true muscle jerks as seen with seizures.

### **Normal Sleep Behavior (No protocol)**

- Myoclonic jerks: large muscle contractions when falling asleep or during sleep.
- Dreaming (REM) behavior: whimpering, crying or twitching of small muscle groups.
- Night terrors (deep sleep behavior): onset 1 to 2 hours after going to sleep, acts confused and frightened, lasts 10 to 20 minutes, then returns to restful sleep.
- Normal sleep behavior: During sleep, children are normally limp if they are moved or picked up. Parents who are concerned that their child is limp during sleep should be reassured, if the child is breathing and has normal color (not cyanotic).

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