Brief Resolved Unexplained Event (BRUE) Care Guideline for Lower-Risk Infants
Emergency Department and Outpatient Care

**Inclusion Criteria**
- Infants < 12 months old with a brief resolved event and currently well appearing

**Exclusion Criteria**
- > 12 months, temp > 38.5°C or <36.0°C
- Presence of known medical condition or illness
- Ongoing symptoms or ill appearing

---

**Not a BRUE. Out of guideline scope; manage as appropriate for symptom, condition or diagnosis**

---

**Explanation for event identified and/or patient has significant additional symptoms which influence management?**

---

**Diagnosis of BRUE is made**

---

**Obtain BRUE focused H&P**

---

**Did the event include 1 or more of the following?**
- Cyanosis or pallor
- Absent, decreased or irregular breathing
- Marked change in tone
- Altered level of responsiveness

---

**Did patient meet ALL Lower Risk criteria?**
- Age > 60 days
- Born ≥ 32 wks gestation and corrected gestational age ≥ 45 wks
- No CPR by trained medical provider
- Event lasted < 1 minute
- First event

---

**Lower Risk Patient**
- Monitor patient on continuous pulse oximetry and serial observations for 1-4 hours
- Provide caregiver education about BRUEs
- Provide resources for caregiver CPR training
- May obtain 12-lead EKG, pertussis PCR
- Do not obtain screening labs or imaging unless specific indication identified

---

**Discharge Home – PCP Follow-up in 48 hours**

---

**Meets discharge criteria?**

---

**Out of guideline scope – consider inpatient admission or transfer to ED**

---

**Discharge Criteria**
- O2 saturation consistently ≥93%
- No event observed or reported
- 12 lead EKG normal if obtained
- Adequate home situation and PCP follow up

---

Updated on October 18, 2017
Patient factors that determine a lower risk:

- Age > 60 days
- Prematurity: GA > 32 weeks and postconceptional age > 45 weeks
- First BRUE (no previous BRUE ever and not occurring in clusters)
- Duration of event < 1 minute
- No CPR required by trained medical provider
- No concerning historical features
- No concerning physical examination findings

Higher risk: concerns identified from history or PE (e.g. FH of sudden cardiac death or subtle, non-diagnostic social, feeding or respiratory problems).

Infants who have experienced a BRUE who do not qualify as lower risk are, by definition, at higher risk.


**Should**
- Educate about BRUE, Offer resources for CPR training

**May**
- Obtain pertussis testing and 12 lead ECG
- Briefly monitor patients (1-4 hours) with continuous SPO2 and serial observations

**Should Not**
- Obtain WBC, BC, or CSF analysis/culture, CMP, ABG/CBG, ammonia, UOA, Plasma AA/acylcarnitine, CXR, EEG, GERD studies, or evaluation of anemia
- Initiate home cardio-respiratory monitoring
- Prescribe acid suppression therapy or anti-epileptic medication

**Need Not**
- Obtain VRP, UA, BG, HCO3, or Lactic Acid
- Neuroimaging
- Admit the patient to the hospital solely for cardiorespiratory monitoring

Consider inpatient admission with one or more of the following:

- Episode requiring intense stimulation (resuscitation)
- Physical exam identifies abnormality requiring inpatient care (hypoxemia, infection)
- History of multiple BRUEs (more than one in the past 24 hours)
- Age - <= 30 days
- Preterm birth <37 weeks GA
- Inadequate home environment

(Milliman Inpatient Care Guidelines, 20th Edition)
Brief Resolved Unexplained Event

References


Children's Hospital of Philadelphia. (2017). Pathway for Evaluation of Infants with a BRUE.


Hoki, R., Bonkowsky, J. L., Minich, L. L., Srivastava, R., & Pinto, N. M. (2012). Cardiac testing and outcomes in infants after an apparent life-threatening event. *Archives of Disease in Childhood, 97*(12), 1034-1038. doi:10.1136/archdischild-2012-301668


Nationwide Children's Hospital. (October, 2016). Evidence Based Practice Guideline - BRUE.


