Aim: To reduce variation in management and unnecessary resource utilization for patients with BRUE.

Sudden, brief and now resolved episode of $\geq 1$ of the following:
- Cyanosis or pallor
- Absent, decreased or irregular breathing
- Marked change in tone (hyper- or hypotonia)
- Altered level of responsiveness

Cause apparent (e.g., choking episode/reflux) after detailed history and physical exam? See Table 1 (page 4) for examples

Yes $\rightarrow$ Not a BRUE Manage off-guideline

No $\rightarrow$

HIGH-RISK BRUE See page 2

All low-risk features met?
- Age $> 60$ days
- Gestational age $\geq 32$ weeks and postconceptional age $\geq 45$ weeks
- Occurrence of only 1 BRUE (no prior BRUE ever and not occurring in clusters)
- Duration of BRUE $< 1$ minute
- No CPR by medical provider required
- No concerning historical features (See Note 1)
- Normal physical exam/well-appearing

Yes $\rightarrow$ LOW-RISK BRUE See page 2

No $\rightarrow$

NOTE 1
Young infants with a temperature $< 36.0$ or $\geq 38.0$ should be evaluated per febrile infant guideline.

EXCLUSION CRITERIA
Patients excluded from this guideline:
- Critically ill or episode not resolved
- Complex chronic condition
- Apparent cause to episode (e.g., choked on milk, obvious reflux event, bronchiolitis, periodic breathing)

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HIGH-RISK BRUE

- If seeing patient in outpatient clinic, refer patient to ED or direct admission (612-343-2121)
  - Consider further workup based on H+P, screening tests not guided by H+P are not recommended.
  - Consider head CT if any concern for non-accidental trauma (See Note 3)
  - Consider pertussis testing (if apnea)
  - Consider EKG if cardiac FH

LOW-RISK BRUE

- Barier to outpatient care?
  - High ongoing caregiver anxiety surrounding event? (See Note 2)
  - Social concern?

- Consider 1–4 hr observation in clinic/ED on pulse-oximeter with observed feeding
  - Consider EKG, pertussis testing (if apnea)
  - Educate family (See Notes 2, 4)
  - Consider offering CPR/apnea/reflux class (See Note 2)

Admit to observation/inpatient; consider direct admission 612-343-2121 if seeing patient in clinic and no signs clinical instability or urgent intervention needed:

- Pulse-ox, reflux precautions
- Screen for abuse
- Consider informal/formal feeding evaluation (if history of abnormal feeding)
- Offer/arrange CPR/apnea/reflux training as appropriate (See Note 2)
- Consider further targeted workup guided by H+P if ongoing episodes
- If etiology discovered, manage accordingly off-guideline

DISCHARGE CRITERIA

- No ongoing episodes
- Feeding well
- Baseline mental status
- Caregiver comfortable with plan
- Education complete (See Notes 2, 4)
- Close follow-up planned
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NOTE 2
Key points for family education:
• BRUE ≠ Near-miss SIDS
• Approx. 9/10 patients do not have future BRUEs
• Home monitors are not recommended
• Children’s offers weekly classes
  – CPR: 651-220-5279
  – Reflux/apnea: 651-220-6267

NOTE 3
In one study multivariate analysis revealed odds ratio for abusive head trauma were 4.9 with a 911 call (P = .037), 5.3 with vomiting (P = .024) and 11.9 with irritability (P = .0197). Clinicians should have a high index of suspicion for abuse and evaluate for bruising, torn frenulum, inconsistent event description, Munchhausen syndrome by proxy and a family history of abuse.

NOTE 4
GER is suspected in approx. 50% of BRUE cases, but causality is difficult to prove. No studies have assessed if GER medications are useful. Recommend educating families on side effects of medications and desire to avoid in children.

Reflux precautions may include:
• Assess for overfeeding
• Burp during feeding
• Hold upright after feeding
• Consider elevating HOB
• Consider Danny sling
• Reflux/apnea class: See Note 2
• Avoid smoke exposure
**TABLE 1**

Examples of additional H+P features to assess
(See AAP guideline Tieder et. al 2016 for more details)

<table>
<thead>
<tr>
<th>Event</th>
<th>Exam</th>
<th>Past history</th>
<th>Family history</th>
<th>Social history</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duration + location</td>
<td>Engages with caregiver?</td>
<td>History of bruising?</td>
<td>BRUE/ALTE/SIDS in family member?</td>
<td>Recent stressors?</td>
</tr>
<tr>
<td>Is the story consistent and plausible?</td>
<td>Tone and strength?</td>
<td>History of reflux?</td>
<td>Long QT syndrome or other arrhythmia?</td>
<td>Support system and access to resources?</td>
</tr>
<tr>
<td>Interventions? (back blows, CPR, 911?)</td>
<td>Fontanelle soft?</td>
<td>Previous BRUE or concerning movements?</td>
<td>Genetic/neurologic diseases?</td>
<td>Previous CPS/law enforcement involvement?</td>
</tr>
<tr>
<td>Recent illness or changes? Use of OTC medications?</td>
<td>Cardiac and lung sounds?</td>
<td>Development and growth normal?</td>
<td>Substance abuse or mental illness?</td>
<td>Exposure to infectious diseases (e.g., pertussis)?</td>
</tr>
</tbody>
</table>
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**REFERENCES**