

Acute Submersion Injury Pathway ED Management

Sept 2024



INCLUSION CRITERIA

Any child who had/had respiratory impairment (including but not limited to) difficulty breathing, sustained/prolonged cough, grunting or color change in association with a submersion event

MONITORING

- Cardiac & Respiratory Monitoring
- Continuous Pulse Ox Monitoring

EXCLUSION CRITERIA

- Altered Level of Consciousness
- Hemodynamically Unstable
- Intubated

CONTINUE MONITORING FOR 6HRS AFTER EVENT

- Cardiac
- Resp Status
- O₂ Saturations
- **SW consult (if indicated)**

Normal Respiratory Exam?¹

If at any time, during observation, there is deterioration in respiratory exam or need for oxygen

Respiratory Support, As Appropriate, To Keep Pulse Ox ≥ 94%

Reassess 6hrs after EVENT

Normal Respiratory Exam?¹

Obtain Chest x-ray & Blood Gas²

Evidence indicates that for a child with a normal respiratory exam a routine chest x-ray is NOT indicated

Antibiotics are NOT indicated within the first 24-48 hours unless submersion occurred in sewer water, grossly muddy water, or stagnant lake water.

Patient Meets Discharge Criteria?

Admit Per Admit Criteria⁴

- Oxygen Therapy To Keep O₂ Sats ≥ 94%
- Obtain Blood Gas² (if Not Already Obtained)

YES

Discharge Home³
Provide "Near Drowning" teaching sheet

Key Goals DECREASE:

- # of Chest X-rays
- Use of Antibiotics
- # of Blood Gases

for patients discharged from the ED

¹ABNORMAL RESPIRATORY EXAM

- Rales/Crackles On Auscultation In Some Or All Fields
- Hypoxia With Pulse Ox < 94% On RA
- AND/OR**
- Signs/Symptoms Respiratory Distress

²BLOOD GAS

- Indications:
 - Abnormal Resp Exam
 - Abnormal Chest -X-Ray
 - CBG okay (VBG if obtaining other labs)

³DISCHARGE CRITERIA

- Normal Respiratory Exam
- O₂ Sats ≥ 94% On RA
- Normal Chest X-Ray (if Obtained)
- Social Work Consult Completed (if Indicated)

⁴ADMIT CRITERIA

- Abnormal Resp Exam &/or Abnormal Chest X-Ray**
- PICU Admit Criteria**
- NIPPV (HFNC/BIPAP)
 - Intubation
 - PCO₂ >50
- Gen Admit Criteria**
- Low Flow Oxygen Or Venti Mask ≤ 45% Needed To Keep O₂ Sats ≥ 94%