

**Pediatric Appendicitis Pathway in the Emergency Department**

The following information is intended as a guideline for the acute management of children with suspected appendicitis. Management of your patient may require a more individualized approach.

Child >2 years old presenting with suspected appendicitis

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**Pediatric Appendicitis Score**

|   |   |
|---|---|
| Tenderness over right iliac fossa           | 2 |
| RLQ pain with cough, percussion, or hopping | 2 |
| Anorexia                                    | 1 |
| Fever ( $\geq 100.4$ F or $\geq 38.0$ C)    | 1 |
| Nausea/emesis                               | 1 |
| Leukocytosis (WBC > 10,000)                 | 1 |
| Neutrophil predominance (ANC > 7,500)       | 1 |
| Migration of pain to RLQ                    | 1 |

**Pediatric Appendicitis Score**  
(See chart to the right)

**Dispo options:**

- Discharge home with PCP f/u
- Admit to gen peds with alternative dx or for serial exams

Peds Appy Score <4

Peds Appy Score  $\geq 4$

US Abdomen Limited- Appendicitis +  
Pediatric Surgery Consult

**LOW RISK (NPV 95-100%)<sup>1-3</sup>**

**MODERATE RISK**

**HIGH RISK (PPV 91-97%)<sup>1-3</sup>**

WBC <9k + <65% neutrophils plus any of the following imaging outcomes:

- Appendix not visualized
- Appendix not visualized + fluid present in RLQ or pelvis
- Normal appendix with no primary or secondary signs

Consider additional imaging (CT vs MRI) or

Admit to surgical service for serial exams

- NPO
- Only Tylenol for pain
- NO ANTIBIOTICS

WBC >9k + >65% neutrophils plus any of the following imaging outcomes:

- Appendix visualized with primary signs of appendicitis
- Secondary signs present +/- visualized appendix +/- primary signs of appendicitis

**Dispo options:**

- Discharge home with PCP f/u
- Admit to gen peds with alternative dx or for serial exams

No Appendicitis

Yes Appendicitis

No Signs of Perforation

Yes Signs of Perforation

Start antibiotics (see Box 1) with anticipation of OR in AM:

- NPO
- D5NS with 20 KCL @ maintenance
- Analgesia

Note: If treatment antibiotics given within 60 minutes of OR, do not need periop dose

Early Appendectomy if no abscess

If abscess present consider early appendectomy or percutaneous drainage

**Non-op management of abscess**

- Consider additional imaging if abscess is unclear
- Start antibiotics (see Box 2) with anticipation of IR vs. OR in AM:

  - NPO
  - D5 NS with 20KCL @ maintenance
  - Analgesia
  - IR consult

**Surgical disposition for simple appendicitis**

- Same day discharge-- can leave from PACU (or in the AM if done at night)
- No abx
- F/u 2-3 weeks

**Surgical disposition for perforated appendicitis (hole in appendix, fecolith outside the lumen, diffuse fibrinopurulent exudate)**

- Clears post-op-- avoid/remove early NGT, foley, TPN, PICC
- Continue abx post-op (7 days total combination of IV and PO)
- Anticipate 3-7 day stay post-op (5-7 days if non-op management)
- Early ambulation
- If no improvement consider imaging on POD#7 (avoid imaging early)
- Home when tol reg diet, passing gas/bowel movement, ambulating, off IV pain meds, and afebrile x 24 hours

**Non-perforated Antibiotic Selection**

Search in Epic Order Sets:  
"Pediatric Appendicitis Antibiotic Panel"

**Standard Antibiotic Regimen**

Ceftriaxone 50 mg/kg IV q24 hours (max 2000 mg) PLUS  
Metronidazole 30 mg/kg IV q24 hours (max 1500 mg)  
Periop (single dose): cefazolin 30 mg/kg, max 2000 mg

**If severe Penicillin allergy (history of anaphylaxis or hives)**

Ciprofloxacin 10 mg/kg IV q12 hours (max 400 mg) PLUS  
Metronidazole 30 mg/kg IV q24 hours (max 1500 mg)  
Periop antibiotic if allergic to penicillin: None

**BOX 1**

DISCONTINUE ABX POST-OP

**Perforated Antibiotic Selection--  
7 days total from source control**

**Standard Antibiotic Regimen**

Ceftriaxone 50 mg/kg IV q24 hours (max 2000 mg) PLUS  
Metronidazole 30 mg/kg IV q24 hours (max 1500 mg)  
Periop (single dose): cefazolin 30 mg/kg, max 2000 mg

**If severe Penicillin allergy (history of anaphylaxis or hives)**

Ciprofloxacin 10 mg/kg IV q12 hours (max 400 mg) PLUS  
Metronidazole 30 mg/kg IV q24 hours (max 1500 mg)  
Periop if allergic to penicillin: None

**Transition to oral abx at discharge for 7 days total:**

Augmentin 45 mg/kg PO BID (max 875 mg/dose)--  
dosed using amox component

**If severe Penicillin allergy**

Ciprofloxacin 15 mg/kg PO BID (max dose 500 mg/dose) PLUS  
Metronidazole 10 mg/kg PO TID (max 500 mg/dose)

**BOX 2**

**References:**

- Anandalar SP, Callahan MK, Bacjur RG et al. J Am Coll Surg. 2015
- Duggan EM, Marshall AP, Weaver KL, et al. Pediatr Surg Int. 2016
- Gee K, Ngo S, Burkhalter L. J Ped Surg. 2018