Deep Neck Space Infections Pathway
ED/IP Management

July 2026

Children's Healthcare of Atlanta

Patient meets Inclusion/Exclusion Criteria[1,2]

- Obtain IV access
- Obtain initial labs and imaging[3]
- NPO in ED
- Control pain and nausea

Avoid Ketorolac if surgery anitcipated

Imaging concerning for DNSI[4]

No →
- Consider alternate diagnoses
- Consult ENT if clinical concern for DNSI persists

Yes →

Non-toxic
- Handling secretions
- Hemodynamically stable

→ Start mild/moderate illness IV Antibiotics*

→ **Admit to PHM**
- If stable, consult ENT the morning after patient is admitted (7a-5p)
- Continue Inpatient IV Antibiotics
- Pain control
- IVF maintenance
- Diet as tolerated

→ Persistent symptoms after 24-48hrs antibiotic treatment

Yes →
- NPO
- CT[5] order after discussion with ENT

No →

Continue course of antibiotics and assess for discharge[6]

Ill-appearing
- Concern for airway compromise
- Unstable vital signs

→
- Notify PICU and secure bed
- Consult ENT
- Obtain CT neck with contrast (if stable)[5]
- Start severe illness IV Antibiotics*
- ***Avoid Ketorolac if surgery anticipated***

→ **Admit to PICU**
- NPO
- IVF maintenance
- Pain control
- Continue PICU IV Antibiotics
- Coordinate care with ENT

[1]Inclusion Criteria

- **Deep space neck infections (DSNI): includes retropharyngeal and parapharyngeal infections** (cervical lymphadenitis/abscess are not considered deep infections)
- Patient ≥12 months
- Symptoms may include:
  - Fever
  - Decreased neck range of motion

  Less common symptoms:
  - Change in voice
  - Difficulty swallowing or dysphagia
  - Drooling

[2]Exclusion Criteria

- Compromised airway
- Immunocompromised
- Prior neck or airway surgery
- Patient appears septic/in shock
- Head/neck/airway trauma

[3]Initial Labs and Imaging

Labs
- BMP
- CRP
- CBC with differential
- Blood culture if patient ≤2 years old and/ severe illness

Imaging
- Soft tissue neck plain film

[4]Diagnostic Results Concerning for DSNI

- Elevated WBC
- Elevated CRP

[5]CT Imaging

- Consult ENT prior to obtaining CT neck with contrast
- Sedation
  - Avoid sedation for imaging; instead consider:
    - Child Life consult
    - Sweeties/pacifier if age appropriate
    - Pain/anxiety medications

*If sedation needed: consult ENT and Anesthesia for airway evaluation/management

[6] Discharge Criteria from Inpatient

- Decision based upon discussion between ENT and Gen Peds
- Well-appearing, vital signs stable
- Labs/fever curve improving
- Tolerating PO medication and diet
- Discharge home with PO Antibiotics

See page 2 for antibiotic dosing and frequency recommendations

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Medication Table for Antibiotics to Manage Deep Neck Space Infections in Emergency Department, General Peds floor Inpatient, and PICU

Indication	Drug	Dose & Frequency	Targeted Pathogens
Mild-Moderate illness:	Ampicillin/Sulbactam	50mg/kg/dose IV Q6H Max dose 2000mg	*S.pyogenes* MSSA *H.influenzae* oral anaerobic flora
	OR		
	Amoxicillin/clavulanate (Augmentin 400/5) *use only if IV access is not available and patient improving	45 mg/kg/day (max 875-125) BID	
Mild-Moderate illness with allergy or risk factors[1] for MRSA	Clindamycin	13mg/kg/dose PO/IV Q8H Max dose 600mg	
Severe illness:	Ampicillin/Sulbactam **PLUS** Vancomycin	50mg/kg/dose IV Q6H Max dose: 2000mg Vancomycin with Pharmacokinetic Consult[2]	*S.pyogenes* MSSA *H.influenzae* oral anaerobic flora MRSA
Severe illness with allergy:	CeftTRIAXone **PLUS** Vancomycin **PLUS** MetroNIDAZOLE	50mg/kg/dose IV Q24H Max dose: 2000mg Vancomycin with Pharmacokinetic Consult[2] 10mg/kg/dose IV Q8H Max dose: 500mg	*S.pyogenes* MSSA *H.influenzae* MRSA oral anaerobic flora
Outpatient/Discharge	Amoxicillin/Clavulanate (Augmentin 400/5)	45 mg/kg/day (max 875-125) BID	*S.pyogenes* MSSA *H.influenzae* Oral anaerobic flora
Outpatient/Discharge with allergy or *risk factors for MRSA	Clindamycin	10mg/kg/dose PO TID Max dose 600mg	

[1]Risk Factors for MRSA
- Failure to improve after 72 hours of initiation of beta lactam antibiotics
- History of MRSA colonization

[2]See Pharmacokinetic Policy for dosing recommendations