Primary Objective
Develop a pharyngitis pathway to guide providers at Children’s Physicians on best practice recommendations in the treatment of confirmed positive Group A Streptococcal (GAS) infections and management of symptoms without giving antibiotics in confirmed negative streptococcal infections.

RECOMMENDATIONS

CLINICAL MANAGEMENT

Clinical assessment:
• Sore throat (ST) or pain with swallowing
• Associated features in history suggestive of Group A Streptococcus (GAS) pharyngitis:
  o Sudden onset of sore throat o Age 5-15 years (GAS pharyngitis peaks at age 7-8)
  o Fever
  o Headache o Nausea, vomiting, abdominal pain
  o Winter and early spring presentation
  o Household or close contact exposure to documented GAS pharyngitis
• Associated features in physical exam suggestive of GAS pharyngitis in the absence of other signs of URI:
  o Tonsillopharyngeal erythema (± exudate)
  o Patchy tonsillopharyngeal exudates o Tender cervical lymphadenopathy
  o Uvular edema
  o Palatine petechiae o Scarlatiniform rash
• Associated features not suggestive of GAS pharyngitis:
  o Absence of fever
  o Rhinorrhea
  o Conjunctivitis
  o Cough
  o Hoarseness

Updated 02/28/20
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ALTERNATIVE DIAGNOSES TO CONSIDER:

- If the patient has a ST or pain with swallowing without associated features in H&P suggestive of GAS pharyngitis, consider:
  - viral etiologies
  - gonococcal or chlamydia pharyngitis in sexually active patients
- If the patient is toxic appearing, has airway compromise or respiratory distress consider:
  - Epiglottitis
  - Retropharyngeal abscess
  - Peritonsillar abscess
  - Foreign body
  - Croup
  - Diphtheria

Laboratory Studies:

- For patients not treated with antibiotics in the past 4 weeks for GAS pharyngitis: A rapid GAS antigen detection test (refer to policy PC 37 for specimen collection procedure), followed by a throat culture (for patients that test negative for GAS by rapid antigen detection only) should be ordered.
- If the patient has been treated for GAS pharyngitis in the past 4 weeks
  - evaluate any issues with treatment adherence
  - order a throat culture.

ANTIBIOTIC THERAPY¹:

Amoxicillin:

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50 mg/kg/dose (max: 1000-1200 mg/day) PO once daily x 10 days
If concurrent Otitis Media consider high dose Amoxicillin: 90 mg/kg/day divided PO BID x 10 days

**Penicillin V:**
- (< 27 kg) 250 mg PO 2-3 times/day x 10 days
- (≥ 27 kg) 500 mg PO BID x 10 days
- 250 mg PO QID x 10 days

**Benzathine Penicillin G (Bicillin LA):**
- (< 27 kg) 600,000 units IM once
- (> 27 kg) 1.2 million units IM once
- (may substitute CR Bicillin 900,000 units/300,000 units IM once for most children, but the efficacy for heavier patients has not been demonstrated)

**Penicillin allergy-non-anaphylactic**
**Cephalexin:**
- Adult: 500 mg PO BID x 10 days
- Child: 30-50 mg/kg/day divided PO BiD x 10 days

**Penicillin allergy-anaphylactic**
**Clindamycin:**
- 30 mg/kg/day (max 900 mg/day) divided PO TID x 10 days
- Azithromycin: Adult: 500 mg PO every day x 5 days
- Child 12 mg/kg/day PO every day x 5 days

- Pencillin V is the drug of choice for treatment of GAS pharyngitis--a clinical GAS isolate resistant to penicillin or a cephalosporin never has been documented.
- Be aware of increasing macrolide resistance (up to 20%) in GAS infections.
- The use of penicillin and narrowest spectrum cephalosporin (cephalexin) decreases the potentiation of antibiotic resistance and risk of Clostridium difficile colitis.

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ADDITIONAL INSTRUCTIONS:
For patients that test positive for GAS, child must be on antibiotics for ≥ 24 hours and be fever free before returning to school.

KEY POINTS TO CONSIDER:
• Patients should only be prescribed an antibiotic if they test positive for GAS pharyngitis by rapid GAS antigen detection or by throat culture.
• Patients who test negative for GAS pharyngitis should only receive supportive care and an alternative diagnosis should be considered for ST or pain with swallowing.
• Recovery of GAS from the pharynx (by rapid test or culture) does not distinguish individuals with true streptococcal infection from streptococcal carriers who have an intercurrent viral pharyngitis 2
• GAS pharyngitis is rare in children < 3 years of age
• 25% of healthy asymptomatic children have (+) throat culture for GAS during school outbreaks of pharyngitis (non-GAS).

RATIONALE
• Safety: This pathway will improve the quality of care patients receive by ensuring antibiotics are only prescribed if testing confirms a bacterial cause of pharyngitis. Appropriate testing and treatment will prevent streptococcus sequelae.
• Quality: Will be improved by instituting consistent terminology, testing, dosing and care between providers.
• Cost: Will be improved by decreasing the cost associated with doing unnecessary testing and prescribing unnecessary antibiotics.
• Delivery:
  • Providing appropriate antibiotic therapy to GAS positive patients should reduce complications

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associated with the infection.

• Not testing suspected negative GAS patients will reduce the amount of time patients need to be in provider clinics and provider contact time.
• Providing appropriate therapy to GAS negative patients will help reduce antibiotic resistance.

• Engagement: Is created and supported by the involvement of a multidisciplinary team in the development and maintenance of the pathway.
• Patient/Family Satisfaction: Shall be improved by providing the highest quality care based on established guidelines and the latest evidence available in the literature.

IMPLEMENTATION ITEMS
Epic Pharyngitis Smart Set which includes: order set, note template, and diagnosis options.

METRICS PLAN
1. ≥ 93% of children who are diagnosed with Group A Streptococcal pharyngitis will have been tested by Rapid (GAS) Antigen Detection Test before antibiotics are prescribed.
2. Pathway compliance with narrow spectrum antibiotics listed on algorithm and built into Epic Smart Set shall be ≥ 90%, monitored monthly.

SUPPORTING DOCUMENTS
Policy PC 37 Specimen Collection: Throat Culture
Pharyngitis Algorithm

TEAM MEMBERS
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EVIDENCE

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