

## Care and Treatment Plan: Pharyngitis – *Adult and Pediatric*

### Definition

A painful condition of the oropharynx with inflammation or infection of the mucus membranes of the pharynx and possibly the palatine tonsils. Commonly referred to as a “sore throat.”

Registered Nurses with **Remote Nursing** and **RN First Call** Certified Practice (RN(C)) designation are authorized to manage, diagnose, and treat adults or children who are **1 year and older** with pharyngitis.

**Note:** In BC, the term pediatrics is often defined as an individual under the age of 19.<sup>1</sup> For the purposes of certified practice DSTs, pediatrics refers to individuals under the age of 19 unless otherwise specified.

**Note:** A *consultation* refers to the RN(C) collaborating with members of the care team, such as a physician, nurse practitioner, or pharmacist, to support decision-making processes related to the diagnosis, treatment, and management of the diseases, disorders, and conditions that the RN(C) are authorized to diagnose, treat, and manage. A *referral* is when an RN(C) refers a patient to a medical care provider for further treatment, care, or management. This occurs when patients are presenting with symptoms outside of what is provided in this document, including symptoms that require urgent referral.

**Note:** If the infection has been determined to be due to chlamydia or gonorrhea, refer to the appropriate STI DST. STI diagnosis and treatment require Certified Practice Designation in Reproductive Health: Sexually Transmitted Infections.

### Management and Intervention

#### Goals of Treatment<sup>2,3</sup>

- Control pain and fever
- Eradicate infection
- Prevent complications
- Prevent the spread of Group A streptococcus
- Antibiotic stewardship

#### Non-pharmacologic Interventions<sup>2–6</sup>

- Increased rest during recovery
- Adequate fluid intake
- Avoidance of irritants, including smoking and passive smoke exposure
- Prioritizing soft and soothing foods may increase comfort and intake
- Warm saltwater gargles
- OTC oral lozenges or sprays for analgesia and comfort
- Humidity treatment, via humidifiers or warm showers

**Note:** Clients may inquire about complementary and alternative medical (CAM) treatments. However, CAM treatments may not be supported by empirical evidence and may cause harm. Client education regarding recommended treatment options is important.<sup>5–7</sup>

#### *Additional pediatric considerations*<sup>3</sup>

- Hard candies are recommended over medicated lozenges due to the lack of potential side effects and cost-effectiveness
- Cold or frozen desserts can be used for soothing, and also benefit hydration
- Avoid oral lozenges/hard candies for children under 5 years of age due to choking risk
- Children under 6 years of age may not be able to gargle effectively

**Note:** Oral lozenges and topical medications to treat sore throat are marketed for children. However, they have an increased risk of allergic reactions due to the ingredient benzocaine and are not recommended.<sup>6</sup>

## Bacterial Pharmacologic Interventions: Adults<sup>2</sup>

**Note:** In both adult and pediatric populations, systemic glucocorticoids are not recommended for treatment of pharyngitis due to the increased risk of adverse events, side effects or interactions, and lack of evidence-based benefits.<sup>2,4</sup>

### To relieve pain and fever:

- Acetaminophen 325mg, 1-2 tabs PO q4-6h PRN<sup>8</sup>
- Ibuprofen 200mg, 1-2 tabs PO q4-6h PRN<sup>9</sup>

### Preferred oral antibiotic selection:<sup>4,10</sup>

Penicillins (preferred due to coverage of Group A Streptococcus, availability, cost and evidence showing a reduction in rates of rheumatic fever.)

- Amoxicillin 1000mg orally daily, or 500mg orally twice daily, for 10 days, **OR**
- Penicillin VK 300mg orally three times daily, or 600mg orally twice daily, for 10 days

### Alternative antibiotic selection for patients WITH penicillin allergy, and NO cephalosporin allergy:<sup>4,10</sup>

- Cefuroxime 500mg orally twice daily for 10 days

### Alternative antibiotic selection for patients with SEVERE penicillin allergy AND cephalosporin allergy:<sup>4</sup>

Macrolides (increased concern about growing rates of resistance, QTc prolongation, medication interactions and cardiovascular effects.)

- Azithromycin 500mg daily for 3 days, **OR**

Lincosamides (increased concern for growing rates of resistance and high side-effect profile)

- Clindamycin 300mg orally three times daily for 10 days

**Note:** Clindamycin can cause *Clostridioides difficile* infection (CDI) with diarrhea, severe abdominal cramps, and blood or mucous in the stool. Do not use if there is a history of gastrointestinal disease. Clients must be advised to seek medical attention immediately if they experience persistent diarrhea, stomach pain or cramping, or notice blood or mucous in the stool during and following treatment with clindamycin.<sup>11</sup>

In case of allergies to the above antibiotics, recurrent infection, or unavailability of the previously listed antibiotics, consult with or refer to a physician or nurse practitioner.

### Pregnant and Breastfeeding Clients

When administering, dispensing, or prescribing a medication to an individual who is pregnant or breastfeeding, RN(C)s are encouraged to consult with interdisciplinary team members such as a pharmacist, physician, or nurse practitioner, as risks and benefits of medication use may vary depending on patient-specific considerations. The considerations noted here are restricted to medications that are directly contraindicated.

- Acetaminophen, Penicillin VK, Cephalexin, Cefuroxime, and Azithromycin may be used as listed above
- Ibuprofen is not recommended for pregnancy, particularly after 20 weeks gestation<sup>9</sup>
- Clindamycin is contraindicated in the first trimester of **pregnancy**<sup>π</sup>

## Bacterial Pharmacological Interventions: Pediatric<sup>π</sup>

**Note:** Weight-based pediatric doses should not exceed recommended adult doses.

<sup>π</sup> Interdisciplinary Consultation

**For all pediatric patients 1 year of age and over, to relieve pain and fever:**

- **Acetaminophen<sup>12</sup>**

Max from all sources: acetaminophen 75mg/kg/day or 4,000mg total in 24 hours - whichever is less

- Oral Acetaminophen: calculate 10-15mg/kg/dose q4-6h PRN
- Rectal Acetaminophen: - calculate 15-20mg/kg/dose q4-6h PRN

- **Ibuprofen<sup>13</sup>**

Max from all sources: ibuprofen 40mg/kg/day or 2,400mg total in 24 hours - whichever is less

- Oral Ibuprofen: calculate 5-10mg/kg/dose q6-8h PRN; max 400mg/dose

**Preferred oral antibiotic selection:**<sup>4,10</sup>

- Amoxicillin 50mg/kg/day daily for 10 days (max 1000mg/day), **OR**
- Penicillin VK (max dose 2000mg/day)
  - Weight  $\leq$  27kg: 300mg orally three times daily for 10 days as tablets or suspension, **OR**
  - Weight  $>$  27kg: 600mg orally three times daily for 10 days as tablets or suspension

**Alternative antibiotic selection for patients with penicillin allergy, AND no cephalosporin allergy:**<sup>4,10</sup>

- Cefuroxime 10-15mg/kg/dose orally twice daily for 10 days (max 500mg/dose)

**Alternative antibiotic selection for patients with SEVERE penicillin allergy AND cephalosporin allergy:**<sup>4,10</sup>

- Macrolides (increased concern about growing rates of resistance, QTc prolongation, medication interactions and cardiovascular effects)
  - Azithromycin 12mg/kg/day once daily for 5 days (max dose 500mg/dose), **OR**
- Lincosamides (increased concern for growing rates of resistance and high side-effect profile)
  - Clindamycin 5-10mg/kg/dose orally q6-8h for 10 days (max 300mg/dose)

In case of allergies to the above antibiotics, recurrent infection, or unavailability of the previously listed antibiotics, consult with or refer to a physician or nurse practitioner.

**Viral Pharmacologic Interventions: Adults<sup>2</sup>**

**To relieve pain and fever:**

- Acetaminophen 325mg, 1-2 tabs PO q4-6h PRN<sup>8</sup>
- Ibuprofen 200mg, 1-2 tabs PO q4-6h PRN<sup>9</sup>

**Viral Pharmacological Interventions: Pediatric**

**Note:** Weight-based pediatric doses should not exceed recommended adult doses.

**For all pediatric patients 1 year of age and over, to relieve pain and fever:**

- **Acetaminophen<sup>12</sup>**

Max from all sources: Acetaminophen 75mg/kg/day or 4,000mg total in 24 hours - whichever is less

- Oral Acetaminophen: calculate 10-15mg/kg/dose q4-6h PRN
- Rectal Acetaminophen: calculate 15-20mg/kg/dose q4-6h PRN

- **Ibuprofen<sup>13</sup>**

Max from all sources: Ibuprofen 40mg/kg/day or 2,400mg total in 24 hours - whichever is less

- Oral Ibuprofen: calculate 5-10 mg/kg/dose q6-8h PRN (max 400 mg/dose)

**Potential Complications**<sup>4,14-16</sup>

**Suppurative Complications (extension of infection beyond the oropharynx):**<sup>14</sup>

- Peritonsillar cellulitis or abscess

- Retropharyngeal abscess
- Epiglottitis
- Otitis media
- Sinusitis
- Mastoiditis
- Meningitis
- Bacteremia (sepsis)
- Necrotizing fasciitis

#### **Non-Suppurative Complications (immunological reactions associated with group A streptococcus):<sup>14</sup>**

- Rheumatic fever and rheumatic heart disease
- Scarlet fever (scarlatina)\*
- Poststreptococcal glomerulonephritis
- Poststreptococcal reactive arthritis
- Streptococcal toxic shock syndrome
- Pediatric autoimmune neuropsychiatric disorder

\*Scarlatina rash is described as "a diffuse erythema that blanches with pressure, with numerous small (1-2 mm) papular elevations, giving a "sandpaper" quality to the skin. It usually starts in the groin and armpits and is accompanied by circumoral pallor and a strawberry tongue."<sup>14</sup>

#### **Client Education/Discharge Information<sup>3,5,6</sup>**

- Course of illness is generally self-limited to 5-7 days for both viral and bacterial pharyngitis, in the absence of GAS
- Sore throat should steadily improve and not worsen after treatment

#### **Additional pediatric considerations:**

- Due to sore throat and other symptoms, children may be at risk of decreased fluid and food intake. Monitoring and encouraging oral intake, and noting output, is recommended to prevent or identify dehydration

#### **Return to Work or School:**

##### **Bacterial:**

Group A streptococcus (GAS) can spread among close contacts, causing outbreaks and recurrent infections in households and other close contacts. Antibiotics eliminate GAS in the oropharynx within 24 hours in 80-90% of cases, while untreated cases can continue to be colonized with GAS for 3-4 weeks. Return to work/school recommendations are as follows:<sup>4</sup>

- Clients with diagnosed Strep A pharyngitis (Strep Throat) should not return to work or school until 24 hours after initiation of antibiotics.

##### **Viral:**

Clients diagnosed with viral pharyngitis can return to work or school when they feel well enough, while handwashing and other infection control considerations should still be observed.

#### **Monitoring and Follow-up<sup>3,5,15</sup>**

- Return to the clinic if not improved after antibiotic treatment in 24-48 hours
- Return to the clinic if worsening pain, or pain that persists for >3 days after treatment (may indicate complications)
- Return to the clinic if unable to maintain hydration or intake (particularly pediatrics)

## Consultation and/or Referral<sup>2,3,5</sup>

If at any point the patient develops difficulty breathing, scarlatina rash, drooling due to inability to swallow, swelling of the neck or tongue, neck stiffness or inability to open the mouth, or underlying chronic illness that impairs the immune system, they should be referred immediately to a nurse practitioner or physician for further assessment and diagnostics.<sup>5</sup>

- RN(C)s should consider consultation or referral when they are unable to meet the BCCNM RN(C) practice standard: *Acting within Autonomous Scope of Practice*
- A consultation with a physician or nurse practitioner is necessary if the condition is recurrent or persistent, or an undiagnosed underlying pathology is suspected
- An immunocompromised client, or an unusual presentation of candidiasis, should be referred promptly to a physician or nurse practitioner

## Documentation

According to agency policy and BCCNM standards.

## References

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