SASKATCHEWAN REGISTERED NURSES' ASSOCIATION

RNs WITH ADDITIONAL AUTHORIZED PRACTICE
CLINICAL DECISION TOOL
DECEMBER 1, 2016

BRONCHITIS ADULT

DEFINITION

Bronchitis is an inflammation of trachea and bronchi (larger airways).

IMMEDIATE CONSULTATION REQUIRED IN THE FOLLOWING SITUATIONS

- Tachypnea
- Dyspnea
- Tachycardia
- Cyanosis
- Declining oxygen saturation
- Change in mental status
- Septic
- Hemoptysis

CAUSES

- Viral infection (90% of cases): influenza A or B, adenovirus, rhinovirus, parainfluenza, coronavirus, *Respiratory syncytial virus* (RSV)
- Bacterial infection (5-10% of cases): *Mycoplasma pneumoniae*, *Chlamydophila pneumoniae*, *Bordetella pertussis, Streptococcus pneumoniae* (in those with underlying lung disease)

PREDISPOSING AND RISK FACTORS

- Chronic sinusitis
- Bronchiectasis
- Immunosuppression
- Smoking
- Secondhand smoke
- Air pollutants
- Alcoholism
- Gastroesophageal reflux disease (GERD)

HISTORY

- Recent infection of upper respiratory tract
- General malaise
- Fever (an unusual finding that may suggest pneumonia or influenza)
- Cough persisting greater than 5 days; initially dry, later productive
- Muscular aching in the chest wall or discomfort with coughing

- Wheezing may be present

PHYSICAL FINDINGS

The presentation of acute bronchitis and pneumonia are often similar. In general, clients with pneumonia are more acutely ill. Bronchitis involves the larger airways whereas pneumonia involves the smaller airways and air sacs.

- Temperature may be mildly to moderately elevated
- Heart rate may be mildly elevated if febrile
- Respiratory rate may be slightly elevated
- Spasmodic cough
- Rhinitis may be present
- Expiratory phase of respirations may be slightly prolonged
- Wheezing (scattered, low pitched) may be present
- Rhonchi that clears with cough

DIFFERENTIAL DIAGNOSIS

- Influenza
- Acute sinusitis
- Pneumonia
- Acute exacerbation of chronic bronchitis
- Asthma
- Allergies
- GERD
- Inhaled or aspirated chemical irritants
- Tuberculosis (TB) or lung cancer (if recurrent)
- Pertussis

COMPLICATIONS

- Pneumonia
- Post bronchitis cough

INVESTIGATIONS AND DIAGNOSTIC TESTS

- Diagnostic tests not routinely recommended
- Nasopharyngeal swabs during influenza season as directed by the Medical Health Officer

MAKING THE DIAGNOSIS

- Term "acute bronchitis" usually indicates an acute respiratory tract infection in which cough (with or without phlegm) is a predominant feature.
- No clear diagnostic criteria have been established.
- Cough in absence of fever, tachycardia, and tachypnea suggests bronchitis instead of pneumonia, except in elderly clients.
- Clients given diagnosis of acute bronchitis or upper respiratory tract infection have considerable overlap in symptoms and signs.
- Sputum colour may not be associated with bacterial infection in clients with acute cough and no underlying chronic lung disease.

MANAGEMENT AND INTERVENTIONS

Goals of Treatment

- Relieve symptoms
- Rule out pneumonia

Appropriate Consultation

- Consultation is not necessary if the client is otherwise healthy.

Non-Pharmacological Interventions

- Increased rest (especially if febrile)
- Adequate hydration: 6-8 glasses of fluid per day
- Increased humidity in the environment
- Avoidance of pulmonary irritants (e.g., stop or decrease smoking, use of perfumes)

Pharmacological Interventions

- Antibiotics are rarely necessary

For fever and/or pain:

- Acetaminophen (Tylenol) 325-650 mg orally q4h prn (maximum dose 4 g per day)
- Clients who have been unwell for more than 10-14 days and have purulent sputum or those with underlying health concerns (e.g., asthma) may require a

course of antibiotics. Consult a physician/RN(NP) when pertussis is suspected.
- If bronchospasm is significant, short-acting ß2-agonist bronchodilators can be used until acute symptoms resolve.
- Salbutamol (Ventolin), 1 or 2 puffs by metered-dose inhalation via spacer q4h prn

Client and Caregiver Education
- Recommend proper handwashing to prevent spread of infection throughout a household.
- Inform client that cough commonly lasts 1-3 weeks and may persist even longer in 50% of clients.
- Inform client that routine antibiotic treatment is not necessary or recommended.
- Counsel client/caregiver about the appropriate use of medications (dose, frequency, compliance, etc.).

Monitoring and Follow Up
- Arrange for follow-up in 5-7 days.
- If symptoms such as fever, chest pain, productive cough, shortness of breath worsen, instruct client to return to clinic.

Referral
- A referral is usually not necessary. Refer if the client does not respond to initial treatment; if the condition is complicated by other comorbid risk factors; or if the cough lasts longer than 4 weeks.
- Consult a physician/RN(NP) for any client in whom diagnosis is in doubt; appears seriously ill; who has pre-existing lung disease (such as asthma or cystic fibrosis); has significant risk factors for other etiologies (such as lung cancer or TB); and/or any complicating features.

DOCUMENTATION
- As per employer policy

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