

CRP – Croup

CRP-AP ANATOMY AND PHYSIOLOGY

OUTCOME: The patient/family will understand anatomy/physiology as it relates to croup.

STANDARDS:

1. Discuss the anatomy/physiology of the airway.
2. Discuss changes to the anatomy/physiology as a result of croup and how this results in the symptoms seen in croup.

CRP-C COMPLICATIONS

OUTCOME: The patient/family will understand the common and important complications associated with croup.

STANDARDS:

1. Discuss that complications occur in a minority of patients and include otitis media or pneumonia. The most serious complication is worsening airway obstruction which may lead to respiratory failure.
2. Review with the patient/family the signs of complications, e.g., rapid breathing, nasal flaring, retractions, stridor at rest; bluish color on the patient's lips or face; drooling, trouble swallowing; prolonged fever; dehydration, pulling at ears.
3. Discuss that croup can be a serious, life-threatening disease especially for young children and that serious complications should prompt immediate intervention (go to ER or clinic as appropriate). **Refer to CRP-FU.**

CRP-DP DISEASE PROCESS

OUTCOME: The patient will understand the etiology and pathophysiology of croup.

STANDARDS:

1. Review the anatomy and physiology of the throat and lungs as indicated.
2. Explain that croup is a swelling of the upper airway in the area commonly called the windpipe (trachea), and voice box (larynx) and sometimes the bronchial tree. The medical term for croup is laryngotracheobronchitis.
3. Explain that *most* children with croup have a virus. Several types of viruses may cause this infection but the most common cause is a virus called parainfluenza. Croup-like symptoms can also be caused by allergies, trauma, reflux, anomalies of the airway, or foreign bodies in the airway. In rare instances *H flu* may be the cause of croup-like symptoms.

4. Explain that croup most often occurs in children between 6 months and 3 years of age during the cold season. Croup may begin suddenly and is generally worse at night. Viral croup usually goes away in 3 to 7 days.
5. Discuss that the recognizable barking cough and noisy breathing (stridor) is caused by the swelling in the upper airway. The cough may be bad enough to cause gagging or vomiting. Patients may also have a runny nose, hoarse voice, and/or fever. The worst of the illness lasts 2–3 days. Be alert for signs of complications. **Refer to CRP-C.**

CRP-EQ EQUIPMENT

OUTCOME: The patient/family will understand and demonstrate (when appropriate) the proper use and care of equipment.

STANDARDS:

1. Discuss the following as appropriate regarding the prescribed equipment:
 - a. Indication for the equipment
 - b. Benefits of using the equipment
 - c. Types and features of the equipment
 - d. Proper function of the equipment
 - e. Signs of equipment malfunction and proper action in case of malfunction
 - f. Infection control principles, including proper disposal of associated medical supplies
 - g. The importance of not tampering with any medical device
2. Demonstrate the safe and proper use, care and cleaning of the equipment as appropriate. Participate in a return demonstration as appropriate.
3. For inpatients, explain that the various alarms are to alert the medical personnel of the patient's status and/or the function of the equipment.

CRP-FU FOLLOW-UP

OUTCOME: The patient/family will understand the importance of follow-up in the treatment of croup.

STANDARDS:

1. Discuss the importance of follow-up care.
2. Discuss the procedure for obtaining follow-up appointments and that follow-up appointments should be kept.
3. Emphasize that full participation of the treatment plan is the responsibility of the patient/family.

4. Review the signs/symptoms (drooling, extremely ill appearance, altered level of consciousness, blue color, or extreme difficulty breathing) that require immediate attention and return to the clinic or emergency room.

CRP-HM HOME MANAGEMENT

OUTCOME: The patient/family will understand the home management of croup.

STANDARDS:

1. Discuss how to care for the child at home and the importance of following the home management plan. Explain that home management of croup focuses on the relief of symptoms.
2. Explain that crying and anxiousness make croup worse by causing additional tightness around the windpipe. Parents should remain calm, which will help the child to stay calm. Cuddle and comfort the child.
3. Explain that the child will usually sit in a position that makes breathing easy. Do not force the child to lie down if the child wants to sit up.
4. Discuss the use of non-pharmacologic therapies that may be useful in symptom relief:
 - a. Providing a warm or cool humidifier (don't use a hot vaporizer)
 - b. Providing a "Foggy bathroom treatment" (mist up the bathroom with hot shower steam, and have the child sit outside of the shower in the bathroom for up to 20 minutes while cuddling or reading to the child).
 - c. Taking the child into the cool outside air for about 15 minutes.
 - d. Drinking warm, clear liquids may loosen mucus and ease breathing (may not be appropriate for young infants).
5. Emphasize the importance of a smoke free environment, because smoke can make croup worse.
6. Discuss that it may be appropriate for the parent to sleep in the same room with the child until the symptoms become less severe.

CRP-L LITERATURE

OUTCOME: The patient/family will receive literature about croup.

STANDARDS:

1. Provide the patient/family with literature on croup.
2. Discuss the content of the literature.

CRP-M MEDICATIONS

OUTCOME: The patient/family will understand the purpose, proper use, and expected outcomes of prescribed drug therapy.

STANDARDS:

1. Describe the name, strength, purpose, dosing directions, and storage of the medication.
2. Discuss the risks, benefits, and common or important side effects of the medication and follow up as appropriate.
3. Discuss any significant drug/drug, drug/food, and alcohol interactions, as appropriate.
4. Discuss the importance of keeping a list of all current prescriptions and over-the-counter medicines, vitamins, herbs, traditional remedies, and supplements. Encourage the patient to bring this list and pill bottles to appointments for medication reconciliation.

CRP-SHS SECOND-HAND SMOKE

OUTCOME: The patient/family will understand the adverse health consequences associated with exposure to second-hand tobacco smoke and the methods for limiting exposure of nonsmokers to tobacco smoke.

STANDARDS:

1. Define “passive smoking” ways in which exposure occurs, e.g., smoldering cigarette, cigar, or pipe, smoke that is exhaled from active smoker, smoke residue on clothing, upholstery, carpets or walls.
2. Discuss harmful substances in smoke, e.g., nicotine, benzene, carbon monoxide, many other carcinogens (cancer causing substances). Explain the increased risk of illness in the croup patient when exposed to cigarette smoke either directly or via second-hand smoke.
3. Explain that cigarette smoke gets trapped in carpets, upholstery, and clothing and still increases the risk of illness even if the patient is not in the room at the time that the smoking occurs.
4. Discuss factors that increase level of exposure to second-hand smoke and preventive methods for minimizing this exposure.
5. Encourage smoking cessation or at least never smoking in the home or car. **Refer to TO-QT.**