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Asthma Care Path

Screening and Diagnosis

Definition – Asthma is characterized by chronic airway inflammation. It is defined by the history of respiratory symptoms such as wheeze, shortness of breath, chest tightness and cough that vary over time and in intensity, together with variable expiratory airflow limitation. Making the diagnosis of asthma is based on identifying both a characteristic pattern or respiratory symptoms such as:

- Wheezing
- Shortness of breath (dyspnea)
- Chest tightness of cough
- Variable expiratory airflow limitation

The pattern of symptoms is important, as respiratory symptoms may be due to acute or chronic conditions other than asthma. Many patients (25-30%) with a diagnosis of asthma in primary care cannot be confirmed as having asthma.

Treatment

Physical Exam and Medical History Confirms Suspected Diagnosis of Asthma? (Yes)	*Physical Exam and Medical History Confirms Suspected Diagnosis of Asthma? (No)*
Exams to perform: ➢ Begin PFT's at age 6 to 7 ➢ Perform Spirometry/Peak Expiratory Flow (PEF) with reversibility test ➢ Mild Exacerbation-PEF>70%. No limitations with activity ➢ Moderate Exacerbation-PEF 40-70%. Some dyspnea with activity ➢ Severe Exacerbation-PEF<40%. Dyspnea occurs at rest ➢ At least once during diagnostic process when Forced Expiratory Volume in 1 second (FEV1) is low, confirm that FEV1/Forced Vital Capacity (FVC) ratio is reduced (normally >.75-.80 in adults, ≥.80in children)	**Consider alternative diagnosis and/or referral to a specialist**

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Once Asthma is Diagnosed:

Patient not on long term control:

- Initiate therapy based on severity classification at diagnosis
- Adjust therapy based on asthma control
- Manage Triggers – Most patients with ongoing asthma should have allergy testing
- Long-term goal is to achieve good symptom control
- Minimize future risk of exacerbations
- Assess control and adjust therapy as needed. Depending on severity, assess asthma control in 2-6 weeks after medication is initiated or stepped up. If no clear benefit is observed in 4 to 6 weeks, consider adjusting therapy or alternative diagnosis.
- Effective asthma management requires a partnership between the patient (or the parent/caregiver) and their health care providers.

Patient Engagement:

- Educate patient and family – All patients with Asthma should receive education and a written asthma action plan

Management of Asthma Exacerbation in Primary Care

After appropriate assessment for Asthma exacerbation is identified; then severity is measured and treatment is pursued.

Mild-Moderate

- Patient able to speak in phrases, not agitated, and not using accessory muscles of respiration.
- Heart rate 100-120 and O2 saturation is 90-95%
- PEF >50%

The treatment recommended is short acting beta agonist with 4-10 puffs by metered-dose inhaler (MDI) + spacer repeated every 20 minutes for 1 hour. Steroid use with Prednisone 1mg/kg max 50 mg in adults and 1-2 mg/kg in children, max of 40 mg. Supplemental oxygen to maintain oxygen saturation of 93-95%. Children oxygen saturation 94-98%.

Severe

- Speech is limited to words.
- Breathing rate is >30 bpm
- Using accessory muscles of respiration
- Oxygen saturation is <90% on room air
- PEF < or equal to predicted best

Initiate short acting bronchodilator and transfer to acute care.

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Specialist Consult

When to Refer:

- Patient has had a life-threatening asthma exacerbation
- Patient is not meeting the goals of asthma therapy after 3-6 months of treatment. An earlier referral or consultation is appropriate if the physician concludes that the patient is unresponsive to therapy
- Signs and symptoms are atypical, or there are problems in differential diagnosis
- Other conditions complicate asthma or its diagnosis, e.g. sinusitis, nasal polyps, Allergic bronchopulmonary aspergillosis (ABPA), severe rhinitis, vocal cord dysfunction (VCD), gastroesophageal reflux disease (GERD), chronic obstructive pulmonary disease (COPD)
- Additional diagnostic testing is indicated (e.g. allergy skin testing, rhinoscopy, complete pulmonary function studies, provocative challenge, bronchoscopy)
- Patient requires additional education and guidance on complications of therapy, problems with adherence, or allergen avoidance
- Patient is being considered for immunotherapy
- Patient requires step 4 care or higher (step 3 for children 0-4 years of age).
- Consider referral if patient requires step 3 care (step 2 for children 0-4 years of age) (See age specific stepwise charts)
- Patient has required more than two bursts of oral corticosteroids in 1 year or has an exacerbation requiring hospitalization
- Patient requires confirmation of a history that suggests that an occupational or environmental inhalant or ingested substance is provoking or contributing to asthma

Depending on the complexities of diagnosis, treatment, or the intervention required in the work environment, it may be appropriate in some cases for the specialist to manage the patient over a period of time or to co-manage with the primary care provider (PCP)

References:

1. Global Initiative for Asthma - Global Initiative for Asthma. (2020, September 30). Retrieved October 10, 2020, from https://ginasthma.org/

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