

ASTHMA

“What Keeps the Wheeze Away”

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MPHCA Annual Conference

June 2016

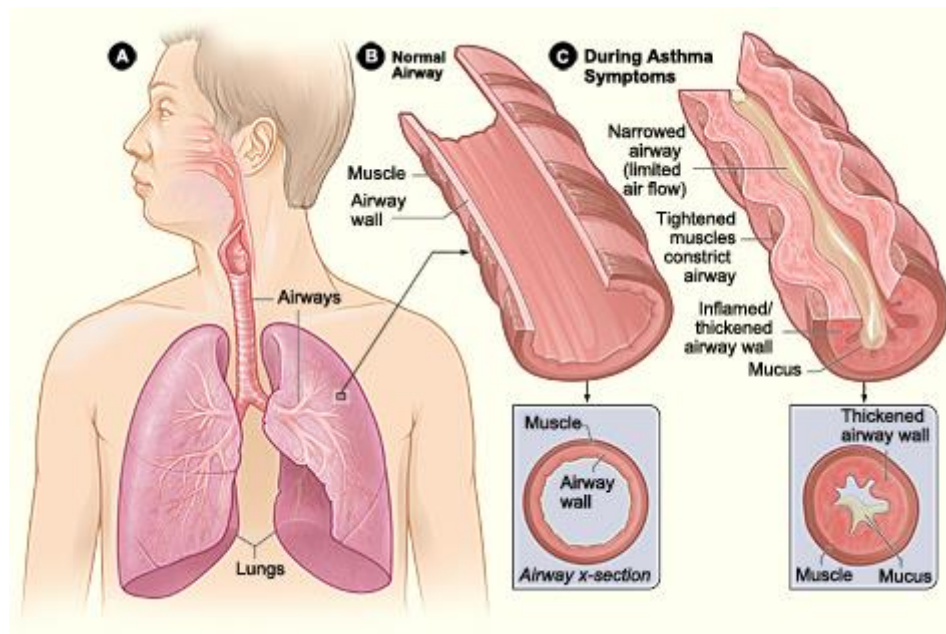
ASTHMA

Objectives

- Understand the effects of Asthma on the Pediatric population
- Understand the effects of Asthma on the Adult population
- Understand the classifications for Asthma
- Understand treatment regimens for Asthma

ASTHMA What is it?

- Chronic (long-term) lung disease
- Inflames and Narrows the airways
- Causes recurring periods of wheezing, cough, chest tightness, shortness of breath
 - Cough frequently reported “Worse at Night” or “Early in the Morning”



ASTHMA

- Asthma has no cure
- The cause of Asthma is unknown
 - Key factors:
 - Inherited tendencies to develop allergies known as atopy
 - Parents have asthma
 - Certain respiratory infections
 - Contact with certain environmental allergens and/or viral infections during infancy/childhood when immune systems are developing
- Asthma can be controlled
- Asthma is classified as intermittent or persistent
 - Persistent Asthma classifications: mild, moderate or severe
- You can “DIE” from one Asthma attack regardless of classification

Asthma: Pediatrics

- Most common serious and chronic disease in infants/children
- Often difficult to diagnose (may be under or misdiagnosed)
- Findings may include: Wheezing, Cough (especially nocturnal/early am), Rapid breathing, Labored breathing, c/o chest pain, Reduced energy, Weak or tired, SOB/Coughing during and/or after physical activity
- Other risk factors
 - Smoke exposure prior to and after birth
 - Frequent upper respiratory infections
 - Low birth weight

Asthma in the Pediatric Population

- Seven million children in the United States have Asthma
- More than ½ had at least one asthma attack last year
- Asthma accounts for almost 13 million missed school days a year
- Significant disparities exist along racial and ethnic lines
 - In terms of morbidity
 - In terms of mortality
- Disproportionate burden for those living in low income and inner city situations

Asthma Pediatric considerations

- Physical activity
- How Asthma friendly is the child care setting?
- How Asthma friendly is the school?
- Is the Asthma action plan working?
- Management of Asthma exacerbations---Home, Daycare, School

Asthma in the Adult population

- 16 million adults have Asthma in the United States
- Asthma accounts for 10 million missed work days each year
- Health disparities exist along racial and ethnic lines
- Disproportionate burden for lower income and inner city individuals
- May often be under and or missed diagnosed

Asthma in Adults

- Symptoms include
 - Wheezing
 - Cough
 - Shortness of breath
 - Chest pain
 - Chest tightness
 - Fatigue
 - Weakness
 - Sweating
 - Problems with exertion/physical activity

Asthma Pediatric classifications

Asthma Classification					
	Symptoms		≤5 years of age	>5 years of age	
	Daytime	Nighttime	Exercise tolerance	PEF or FEV1	PEF variability
Mild intermittent	≤2 per week	≤2 per month	Excellent tolerance	≥80%	<20%
Mild persistent	>2 per week, but <1 per day	>2 per month	Exercise symptoms	≥80%	20%-30%
Moderate persistent	Daily symptoms	>1 per week	Frequent exercise symptoms	60%-80%	>30%
Severe persistent	Continual day symptoms	Frequent night symptoms	Exercise severely limited	≤60%	>30%

Asthma classifications age 12 years and older

FIGURE 1: CLASSIFYING ASTHMA SEVERITY AND INITIATING TREATMENT IN PATIENTS ≥12 YEARS OF AGE

Components of Severity		Classification of Asthma Severity ≥12 years of age			
		Intermittent	Persistent		
	Mild		Moderate	Severe	
Impairment Normal FEV ₁ /FVC: 8–19 yr 85% 20–39 yr 80% 40–59 yr 75% 60–80 yr 70%	Symptoms	≤2 days/week	>2 days/week but not daily	Daily	Throughout the day
	Nighttime awakenings	≤2x/month	3–4x/month	>1x/week but not nightly	Often 7x/week
	Short-acting beta ₂ -agonist use for symptom control (not prevention of EIB)	≤2 days/week	>2 days/week but not daily, and not more than 1x on any day	Daily	Several times per day
	Interference with normal activity	None	Minor limitation	Some limitation	Extremely limited
	Lung function	<ul style="list-style-type: none"> • Normal FEV₁ between exacerbations • FEV₁ >80% predicted • FEV₁/FVC normal 	<ul style="list-style-type: none"> • FEV₁ >80% predicted • FEV₁/FVC normal 	<ul style="list-style-type: none"> • FEV₁ >60% but <80% predicted • FEV₁/FVC reduced 5% 	<ul style="list-style-type: none"> • FEV₁ <60% predicted • FEV₁/FVC reduced >5%
Risk	Exacerbations requiring oral systemic corticosteroids	0–1/year (see note)	≥2/year (see note)		
		Consider severity and interval since last exacerbation. Frequency and severity may fluctuate over time for patients in any severity category. Relative annual risk of exacerbations may be related to FEV ₁ .			
Recommended Step for Initiating Treatment (See “Stepwise Approach for Managing Asthma” for treatment steps.)		Step 1	Step 2	Step 3	Step 4 or 5
		In 2–6 weeks, evaluate level of asthma control that is achieved and adjust therapy accordingly.			

Source: NIH, National Heart, Lung and Blood Institute. Expert Panel Report 3: Guidelines for the Diagnosis and Management of Asthma (EPR-3 2007). <http://www.nhlbi.nih.gov/guidelines/asthma/index.htm>.

Asthma

Practical steps

- Patient Self Assessment Tool completion

 - Intake/Patient portal/Prior to appointment with enrollment packet

- Staff training, education and competency resources at each level

 - Front line intake

 - Nursing

 - Providers

 - Finance/Billing

 - IT

Asthma

Decision Support considerations for Asthma

- Use of NHLBI 2013 guidelines
- Standing orders/Redi-reference in “Staff User Friendly” Locations
- Establish Asthma Resource kits
 - Inhalers
 - Spacers
 - Nebulizers
 - Asthma Action plans: Symptoms and Peak flow guidelines
 - Medication explanations: Rescue vs Controller
 - Specialty sources: Who, Insurance type, Ability to contact, What they require
- Utilize Teach Back Measures at all levels

Asthma

Delivery System Design considerations

- Decide and train following
 - Front-line/Intake staff
 - Nursing staff
 - Provider staff
 - Social Services
 - Pharmacy
 - IT
 - Outreach
 - Case Managers
- Empower
- Utilize Teach Back

Asthma

Activated Patient

- Self-Management tools
- Asthma action plans
- Knowledge of who and when to contact
- Individual and Group educational sessions
- Asthma Support groups

Asthma

Documentation considerations

- Diagnosis coding
 - Mild intermittent asthma: J45.2-
 - 20-uncomplicated
 - 21-acute exacerbation
 - 22-Status asthmaticus
 - Mild persistent asthma: J45.3-
 - 30-uncomplicated
 - 31-acute exacerbation
 - 32-Status
 - Moderate persistent asthma: J45.4-
 - Severe persistent asthma: J45.5-

Asthma

Documentation considerations

- Quality coding
 - 1038F-Persistent asthma
 - 4015F-Controller medication usage in persistent asthma
 - 1039F-Intermittent asthma