REFERRAL GUIDELINE

Pulmonology	Uncontrolled Asthma

Background	Persistent Asthma is an ongoing problem: • Disease severity is often underestimated • Despite Advanced Care, poor outcomes persist for many • Compliance with therapies is often less than 50% • Poor technique of inhaled medications is epidemic • Routine follow up is inconsistent.
Initial Evaluation	HISTORY: • Asthma Triggers/Symptoms • Response acute asthma therapy (Bronchodilator/ Systemic steroids • Asthma controller therapy trials • Frequency/Number of systemic steroids • Frequency/Number of unplanned medical visits, ED visits, hospitalizations, PICU admissions, intubations. • Other Atopy (eg allergic rhinitis, eczema, known allergies) • Family History of Asthma and Allergies LUNG EXAM: • Resp Rate, O2 saturations , work of breathing, lung exam including presence of adventitious breath sounds DIAGNOSTIC TESTING: • Baseline CXR (PA and lateral) • Consider spirometry if 5 years of age and if available • Consider Immunocap [allergy] testing acknowledging limitations.
Initial Management	RESCUE THERAPY for ALL asthma patients. • Consider duplicate medications for school use and divided homes. • Some patients require pretreatment with exercise. • Increase number of puffs via MDI to administer equivalent of a neb treatment (reference below) CONTROLLER PREVENTATIVE THERAPY: • "Preferred" therapy is inhaled corticosteroid (inhCS;) Alternative Montelukast. • Addition of long acting beta-2 agonist (LABA) for moderate to severe persistent asthma and/or not well controlled on inhCS alone. "Alternative" is addition of Montelukast UNCONTROLLED ASTHMA: • Evaluate for noncompliance (eg pharmacy refill history) • Evaluate technique and equipment (appropriately sized spacer, mask or mouthpiece with nebulizer.) • Evaluate for exacerbating factors (eg smoke, allergens) and consider empiric avoidance measures and/or allergy testing if indicated • Consider exacerbating comorbidities (eg atopy, post nasal drip, GERD.) CONSIDER "MASQUERADERS" OF ASTHMA: • Evaluate for other disease entities that can mimic or exacerbate asthma (eg Vocal Cord Dysfunction – handout below; often requires a referral.) ASTHMA ACTION PLAN: • Provide at initial visit, yearly and prn. *Many schools require completion of their own form. Consider endorsing self-administration of rescue therapy during school if appropriate.

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	*always consider ease of use, best technique for optimal lung deposition, convenience and cost when considering mode of delivery (wet neb vs meter dose inhaler vs dry powder inhaler.)	
When to Refer	Refer patients for any of the following: • Failed 2 month trial period of controller medication (inhCS) for persistent asthmatics • Life Threatening Asthma • Hospitalization(s) for Asthma • Frequent systemic steroids (≥2/yr) • Severe persistent or ≥ Step IV NIH Guidelines (med dose inhCS + another agent) • Significant Co-morbidities • Need for diagnostic testing or indeterminate diagnosis • Need for further education/training	
Pre-Visit Work Up	• Documentation of failed 2mo trial period of controller medications (which includes an inhCS) • Pertinent history, abnormal physical exam findings • Baseline CXR (PA and lateral) • Spirometry and allergy testing results as available	
Co-mgt Strategy (as appropriate)	**Specialist scope of care** • Confirm diagnosis • Address comorbidities • Pulmonary Function Testing when appropriate. • Compose and modify asthma action plan • Achieve control (absence or minimal baseline symptoms, absence or minimal exacerbations) • Limited # of maintenance/acute visits	**Primary care scope of care** • Reinforce specialists asthma action plan • Assume maintenance visits after control achieved
Return to Primary Care	May discharge from specialty clinic when disease is in the intermittent or mild persistent category. Consider when disease is moderate, persistent but well controlled.	
Guidelines Referenced	Full Report of EPR 3 Guidelines on Asthma. http://www.nhlbi.nih.gov/health-pro/guidelines/current/asthma-guidelines/full-report Guidelines Quick Reference https://www.nhlbi.nih.gov/files/docs/guidelines/asthma_qrg.pdf How to Use Inhalers http://use-inhalers.com/ Inhaler Videos for Training https://www.nationaljewish.org/healthinfo/medications/lung-diseases/devices Inhaler Handouts http://www.med.umich.edu/1info/FHP/practiceguides/asthma/various.pdf Neb vs MDI http://www.ncbi.nlm.nih.gov/pubmed/15901590 Resource for Vocal Cord Dysfunction https://www.nationaljewish.org/healthinfo/conditions/vcd/index.aspx	