

<b>Children's Hospital &amp; Research Center Oakland</b>	
<b>Allergy/Immunology</b>	
<b>Primary Goals for this Rotation</b>	
<b>5.1 GOAL: Prevention, Counseling and Screening (Allergy/Immunology). Understand the role of the pediatrician in preventing allergy and immunologic diseases, and in counseling and screening individuals at risk for these diseases.</b>	PC, MK, ICS, PL
<p>5.1.1 : Identify individuals at risk for developing allergic or immunologic disease by providing routine allergy/immunology screening of all patients and parents and offering prevention counseling that addresses:</p> <ol style="list-style-type: none"> <li>1. Breast-feeding and diet in the prevention of allergic disease</li> <li>2. Introduction of solid foods in the prevention of allergic disease</li> <li>3. Smoking and household chemicals/irritants that may exacerbate allergic diseases</li> <li>4. "Myths" related to allergic disease, e.g., its role in behavioral disorders such as ADHD and autism</li> <li>5. Risk factors for development of asthma and allergic diseases including family history</li> </ol>	
<p>5.1.2 : Provide allergy/immunology prevention counseling to parents and patients with identified allergic diseases, including:</p> <ol style="list-style-type: none"> <li>1. Allergen avoidance and environmental control, e.g., pets and indoor allergens</li> <li>2. Access to lay organizations and support groups</li> <li>3. Proper use of epinephrine self-injectors</li> </ol>	
<b>5.2 GOAL: Normal Vs. Abnormal (Allergy/Immunology). Develop a working knowledge of normal development of the immune system, and recognize pathophysiologic and other clinical findings that indicate deviations from the norm.</b>	PC, MK, PBL
<p>5.2.1 : Describe the normal development and pathophysiology of the immune system, including the cellular, humoral, phagocytic and complement-based systems.</p>	
<p>5.2.2 : Discuss the classification of hypersensitivity reactions,</p>	

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e.g. Gell and Coombs classification.	
5.2.3 : Explain the clinical history and findings on physical examination that suggest the presence of allergic-based disease or immunologic dysfunction that requires further evaluation and treatment. Include discussion of family history and genetic factors.	
5.2.4 : Develop a strategy for the work-up of suspected allergic disease or immunodeficiency, based on presenting symptoms and signs.	
5.2.5 : Interpret clinical and laboratory tests to identify allergic disease or immunologic dysfunction, including: screening tests for immune deficiency (e.g., CBC with absolute lymphocyte and neutrophil counts, Immunoglobulin levels, DTH skin tests); delayed hypersensitivity; allergy skin testing; serology (e.g., screening with RAST); and pulmonary function tests.	
5.2.6 : Describe the relationship of allergic disease and immunodeficiency to otitis media, sinusitis, pharyngitis, meningitis and pneumonia.	
<b>5.3 GOAL: Undifferentiated Signs and Symptoms (Allergy/Immunology). Evaluate, treat, and/or refer patients with presenting signs and symptoms that suggest an allergic or immunologic disease process.</b>	PC, MK, PBL, SBP
<p>5.3.1 : Create a strategy to investigate whether the following presenting signs and symptoms are caused by an allergic process or immunologic dysfunction, and determine if the patient should be treated or referred:</p> <ol style="list-style-type: none"> <li>1. Cough</li> <li>2. Wheezing</li> <li>3. Skin rash</li> <li>4. Recurrent pneumonia</li> <li>5. Recurrent skin infections</li> <li>6. Recurrent otitis, sinusitis, pharyngitis</li> <li>7. Rhinorrhea</li> <li>8. Red eyes</li> <li>9. Gastrointestinal symptoms (vomiting, diarrhea, abdominal pain, etc.)</li> <li>10. Failure to thrive</li> <li>11. Vomiting, diarrhea (including bloody or mucoid stools)</li> </ol>	

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<p>12. Syncope with exercise 13. Snoring</p>	
<p><b>5.4 GOAL: Common Conditions Not Referred (Allergy/Immunology). Diagnose and manage patients with common allergic/immunologic conditions that generally do not require referral.</b></p>	<p>PC, MK, PBL</p>
<p>5.4.1 : Diagnose, explain and manage the following allergic/immunologic conditions when they are mild to moderate in severity and without complications:</p> <ol style="list-style-type: none"> <li>1. Allergic rhinitis</li> <li>2. Allergic conjunctivitis</li> <li>3. Atopic dermatitis</li> <li>4. Asthma, mild intermittent and mild persistent</li> <li>5. Urticaria/angioedema</li> <li>6. Food allergies</li> <li>7. Common drug allergies</li> <li>8. Insect sting allergy-local reactions</li> <li>9. IgA deficiency</li> <li>10. Transient hypogammaglobulinemia of infancy</li> <li>11. Sinusitis and recurrent otitis media</li> </ol>	
<p><b>5.5 GOAL: Conditions Generally Referred (Allergy/Immunology). Recognize, initiate management of, and refer patients with allergic/immunologic conditions that generally require referral.</b></p>	<p>PC, MK, PBL, ICS, SBP, PL</p>
<p>5.5.1 : Identify, explain, initially manage and refer the following allergic/immunologic conditions:</p> <ol style="list-style-type: none"> <li>1. Allergic/immunologic conditions that are severe or refractory to therapy</li> <li>2. Asthma, moderate or severe persistent</li> <li>3. Patients who require diagnostic testing and/or immunotherapy</li> <li>4. Chronic urticaria</li> <li>5. Hereditary or severe angioedema</li> <li>6. Anaphylaxis</li> <li>7. Latex allergy</li> <li>8. Immunodeficiency (congenital, acquired, or metabolic) with compatible symptoms</li> <li>9. Serum sickness</li> </ol>	
<p>5.5.2 : Identify the role and general scope of practice of pediatric allergists and immunologists; recognize situations where children will benefit from the skills of specialists</p>	

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trained in the care of children; and work effectively with these professionals to care for children with allergies, asthma, and immunologic disorders.	
<b>5.6 GOAL: Anaphylaxis, Angioedema and Urticaria. Understand the role of the general pediatrician in the assessment and management of anaphylaxis, angioedema and urticaria.</b>	PC, MK, PBL, ICS, PL
5.6.1 : Recognize the signs and symptoms of urticaria, angioedema and anaphylaxis.	
5.6.2 : Distinguish anaphylaxis from anaphylactoid reactions.	
5.6.3 : Discuss the pathophysiology of urticaria, angioedema, and anaphylaxis.	
5.6.4 : Identify triggers for urticaria, angioedema, and anaphylaxis and provide counseling about avoidance.	
5.6.5 : Develop a treatment plan for initial management of urticaria, angioedema and anaphylaxis, including indications for use of epinephrine, antihistamines and steroids.	
5.6.6 : Establish an educational plan for a child with urticaria, angioedema, or anaphylaxis, including medical alert systems, trigger avoidance, and proper use of epi-pens and antihistamines.	
5.6.7 : Identify the indicators for an allergy referral of a child with urticaria, angioedema and anaphylaxis.	
<b>5.7 GOAL: Allergic Rhinitis and Conjunctivitis. Diagnose and manage patients with allergic rhinitis and conjunctivitis.</b>	PC, MK, PBL, ICS, PL
5.7.1 : Identify the signs and symptoms of allergic rhinitis and conjunctivitis, including differentiation of allergic from other causes of rhinorrhea and red eyes.	
5.7.2 : Describe causes of rhinitis and conjunctivitis other than allergic disease.	
5.7.3 : Identify co-morbidities associated with allergic rhinitis and conjunctivitis, including asthma, eczema, sleep-disordered breathing, sinusitis, etc.	
5.7.4 : Discuss the indications, clinical significance and limitations of diagnostic tests for allergic rhinitis and conjunctivitis. Interpret the results of these tests: total peripheral eosinophil count, prick and intradermal skin tests,	

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RAST tests, IgE levels.	
5.7.5 : Educate families and child care facilities about environmental and allergen controls that can alleviate allergic and nonallergic rhinitis and conjunctivitis, and discuss the non-infectious nature of allergic conjunctivitis.	
5.7.6 : Compare pharmacologic options for treatment of allergic and non-allergic rhinitis and conjunctivitis, considering potential side effects and drug interactions. These therapies include: oral and topical antihistamines and anticholinergics, topical steroids and vasoconstrictive agents, mast cell stabilizers (crolomes), decongestants, anticholinergic agents, leukotriene modifiers, combination medications and emerging therapies (e.g. monoclonal IgE).	
5.7.7 : Identify the indicators for an allergy referral of a child with allergic rhinitis and conjunctivitis.	
5.7.8 : Discuss the guidelines for safe administration of immunotherapy. Administer immunotherapy prescribed by an allergist to a patient and establish a plan to monitor for untoward reactions.	
<b>5.8 GOAL: Drug Allergy. Understand the principles, diagnosis and management of drug allergy.</b>	PC, MK, ICS, PL, SBP
5.8.1 : Discuss the pathophysiology of drug allergy.	
5.8.2 : Recognize the signs and symptoms of drug allergies, including differentiating drug allergy from other causes of skin rash, joint swelling and anaphylaxis.	
5.8.3 : Discuss the genetic basis, mechanisms and manifestations of drug allergy including urticaria, serum sickness, Stevens Johnson Syndrome, and anaphylaxis.	
5.8.4 : List the medications most commonly used to treat drug allergy and anaphylactic reactions.	
5.8.5 : Establish an education and treatment plan for a child with a drug allergy that includes drug avoidance and the use of antihistamines, epinephrine, steroids and supportive treatment.	
5.8.6 : Identify the indicators that would lead to subspecialist referral for a child with drug allergy.	
<b>5.9 GOAL. Food Allergy. Understand the role of the general pediatrician</b>	PC, MK, ICS,

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<b>in the assessment and management of patients with food allergy.</b>	PL, SBP
5.9.1 : Identify the signs and symptoms of food allergy and differentiate food allergy from other causes of skin rash, and GI or pulmonary symptoms.	
5.9.2 : Differentiate IgE-mediated food allergy from non-IgE mediated food allergy.	
5.9.3 : List the foods and formulas most commonly associated with food allergy.	
5.9.4 : Discuss the indications, clinical significance, and limitations of diagnostic tests and procedures to diagnose food allergies and interpret the results of skin testing, RAST testing, elimination diets, food challenges.	
5.9.5 : Explain the natural history of food allergies, including when suspected allergens may be introduced into the diet.	
5.9.6 : Create a treatment plan for a child with food allergies that includes food avoidance, food challenges, management of allergic symptoms, and emergencies.	
5.9.7 : Identify the indicators that would lead to subspecialist referral for a child with food allergy.	
<b>6.95 GOAL: Pediatric Competencies in Brief (Subspecialty Rotation). Demonstrate high standards of professional competence while working with patients under the care of a subspecialist. [For details see Pediatric Competencies.]</b>	
6.95.1 : Competency 1: Patient Care. Provide family-centered patient care that is development- and age-appropriate, compassionate, and effective for the treatment of health problems and the promotion of health.	
6.95.1.1 :Use a logical and appropriate clinical approach to the care of patients presenting for specialty care, applying principles of evidence-based decision-making and problem-solving.	
6.95.1.2 :Describe general indications for subspecialty procedures and interpret results for families.	
6.95.2 : Competency 2: Medical Knowledge. Understand the scope of established and evolving biomedical, clinical, epidemiological and social-behavioral knowledge needed by a	

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pediatrician; demonstrate the ability to acquire, critically interpret and apply this knowledge in patient care.	
6.95.2.1 :Acquire, interpret and apply the knowledge appropriate for the generalist regarding the core content of this subspecialty area.	
6.95.2.2 :Critically evaluate current medical information and scientific evidence related to this subspecialty area and modify your knowledge base accordingly.	
6.95.3 : Competency 3: Interpersonal Skills and Communication. Demonstrate interpersonal and communication skills that result in information exchange and partnering with patients, their families and professional associates.	
6.95.3.1 :Provide effective patient education, including reassurance, for a condition(s) common to this subspecialty area.	
6.95.3.2 :Communicate effectively with primary care and other physicians, other health professionals, and health-related agencies to create and sustain information exchange and teamwork for patient care.	
6.95.3.3 :Maintain accurate, legible, timely and legally appropriate medical records, including referral forms and letters, for subspecialty patients in the outpatient and inpatient setting.	
6.95.4 : Competency 4: Practice-based Learning and Improvement. Demonstrate knowledge, skills and attitudes needed for continuous self-assessment, using scientific methods and evidence to investigate, evaluate, and improve one's patient care practice.	
6.95.4.1 :Identify standardized guidelines for diagnosis and treatment of conditions common to this subspecialty area and adapt them to the individual needs of specific patients.	
6.95.4.2 :Identify personal learning needs related to this subspecialty; systematically	

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organize relevant information resources for future reference; and plan for continuing acquisition of knowledge and skills.	
6.95.5 : Competency 5: Professionalism. Demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to diversity.	
6.95.5.1 :Demonstrate personal accountability to the well-being of patients (e.g., following up on lab results, writing comprehensive notes, and seeking answers to patient care questions).	
6.95.5.2 :Demonstrate a commitment to carrying out professional responsibilities.	
6.95.5.3 :Adhere to ethical and legal principles, and be sensitive to diversity.	
6.95.6 : Competency 6: Systems-based Practice. Understand how to practice high-quality health care and advocate for patients within the context of the health care system.	
6.95.6.1 :Identify key aspects of health care systems as they apply to specialty care, including the referral process, and differentiate between consultation and referral.	
6.95.6.2 :Demonstrate sensitivity to the costs of clinical care in this subspecialty setting, and take steps to minimize costs without compromising quality	
6.95.6.3 :Recognize and advocate for families who need assistance to deal with systems complexities, such as the referral process, lack of insurance, multiple medication refills, multiple appointments with long transport times, or inconvenient hours of service.	
6.95.6.4 :Recognize one's limits and those of the system; take steps to avoid medical errors.	
<b>Procedures</b>	
<b>7.1.GOAL: Technical and therapeutic procedures.</b> Describe the following procedures, including how they work and when they should be used; competently perform those commonly used by the pediatrician in practice.	

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Allergy: shot administration	
Allergy: skin testing	
Medication delivery: IM/SC/ID	
Medication delivery: inhaled	
Pulmonary function tests: peak flow meter	
Pulmonary function tests: spirometry	
Pulmonary function tests: perform	
Pulse oximeter: placement	
<b>7.2. GOAL: Diagnostic and screening procedures.</b> Describe the following tests or procedures, including how they work and when they should be used; competently perform those commonly used by the pediatrician in practice.	
Pulmonary function tests: interpretation	
Radiologic interpretation: chest X-ray	
Radiologic interpretation: sinus films	
<b>Source</b> Kittredge, D., Baldwin, C. D., Bar-on, M. E., Beach, P. S., Trimm, R. F. (Eds.). (2004). APA Educational Guidelines for Pediatric Residency. Ambulatory Pediatric Association Website. Available online: <a href="http://www.ambpeds.org/egweb">www.ambpeds.org/egweb</a> . [Accessed 04/25/2008]. Project to develop this website was funded by the Josiah Macy, Jr. Foundation 2002-2005.	

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