Infectious Diseases Goals	Objectives by Competency and Level of Training			Assessment Methods
	PL-1	PL-2	PL-3	
GOAL 1: Prevention, Counseling and Screening. Understand the role of the pediatrician in preventing infectious diseases, and in counseling and screening individuals at risk for these diseases.	**Patient Care:** 1. Provide routine counseling about infectious disease prevention to all parents and patients, addressing: •Common infectious diseases of childhood •Routine immunization for the prevention of common childhood infections and illnesses •The role of hand hygiene in preventing the spread of infectious diseases •Behaviors that reduce risk of infectious disease transmission and acquisition (e.g., breastfeeding, avoidance of exposure to environmental tobacco smoke, avoidance of crowded settings such as daycare, schools, institutions) •Behaviors that may spread HIV, such as unsafe sexual practices, needle sharing and pregnancy 2. Provide counseling to parents and patients with specific infectious diseases about: •HIV testing, transmission and follow-up •TB exposure, expected course, treatment and transmission •Hepatitis B expected course, treatment and transmission 3. Explain to parents the significance and appropriate response to fever in children of various ages 4. Take an exposure history that provides clues to a specific diagnosis (include questions about ill contacts, travel, pets or other animal exposures, occupation, insect bites and diet)	**Patient Care:** 1. Provide routine and appropriate screening for infectious disease processes. •Screen for tuberculosis in high-risk populations and as schools require •Screen for hepatitis, parasites, and other disease processes in new immigrants as appropriate. •Counsel and screen pregnant women and screen newborns for HIV •Screen sexually abused children for sexually transmitted diseases (STDs), such as gonococcal, chlamydia, human immunodeficiency virus, hepatitis B, and syphilis •Screen sexually active adolescents for STDs at health visits 2. Take measures to prevent Group B strep in newborns 3. List situations in which screening is not appropriate but may be requested (e.g., suspected exposure to bacterial meningitis) 4. Explain the symptoms and physical findings that suggest the presence of an infectious disease	**Patient Care:** 1. Educate daycare organizations and providers about policies and methods that decrease the spread of infection in child care settings, and about unnecessary exclusion policies 2. Discuss with parents how the overuse of antibiotics has contributed to the development of antibiotic-resistant strains of common pathogens, and help them to understand when withholding antibiotic treatment is safe and effective	Direct Observation Global Evaluation
	Medical Knowledge: 1. Describe normal variability in body temperature, the factors that regulate body temperature, and use of body temperature to identify infection. Include factors that influence normal core body temperature 2. Describe the currently recommended immunization schedules for preventing infections in children 3. Discuss appropriate uses of passive antibodies 4. Explain the indications for chemo- and immuno-prophylaxis in common infections (meningitis, hepatitis), including indications for use of gamma globulin and management of chicken pox exposure in the immunosuppressed child	**Medical Knowledge:** 1. Compare and contrast different methods used to obtain body temperature, including type of thermometer (glass, digital, infrared radiation, skin strip) and measurement sites (axillary, oral, rectal, tympanic, skin) 2. Give examples of circumstances justifying special immunizations, such as indications for influenza vaccine and pneumococcal vaccine, and vaccination of infants born to a hepatitis B carrier, immunosuppressed patients and family contacts (including those on steroids), HIV positive children, and children adopted from other countries	**Medical Knowledge:** 1. Explain the difference between a descriptive diagnosis based on the anatomic syndrome involved (e.g., exudative pharyngitis) and an etiologic diagnosis (e.g., Group A streptococcal infection) and the diagnostic studies appropriate for each type 2. Discuss use of immunization to prevent disease after known exposure to disease (e.g., varicella and measles)	Global Evaluation In-Training Exam
	Systems Based Practice 1. Identify appropriate referral sources for children traveling internationally who may need additional vaccinations 2. Discuss principles of hospital-based infection control and employee health issues (as addressed by OSHA)	**Systems Based Practice** 1. Identify reliable sources for up-to-date information on new vaccines and recommended administration 2. Explain the three forms of isolation precautions (contact, droplet, and airborne) and discuss which infections require which precaution 3. Describe and follow current guidelines for infectious disease exclusion policies in school and daycare and explain their rationale 4. Recognize illnesses potentially associated with outbreaks (e.g., meningococcemia, E. coli O157:H7, cholera, measles, pertussis) and report confirmed or suspected cases to the local public health authorities	**Systems Based Practice** 1. Describe current federal laws related to immunization of children and the requisite office documentation (including National Childhood Vaccine Injury Act and Vaccine Adverse Event Reporting System [VAERS]) 2. Describe quality control measures for effective office administration of common vaccines 3. Explain effective methods to increase vaccination rates among children 4. Describe effective infection control procedures appropriate for day care, school and household settings 5. Recognize illnesses consistent with bioterrorism (e.g., smallpox, anthrax) and report suspected cases to the local public health authorities	Global Evaluation 360º eval
GOAL 2: Immunodeficiency. Understand the role of the general pediatrician in the assessment and management of patients with immunodeficiency.	**Patient Care:** Demonstrate the initial approach to evaluation, treatment and referral for a child with suspected immunodeficiency	**Patient Care:** Discuss treatment options available for patients with primary immunodeficiency disorders and the potential harm of blood transfusions and vaccines in these patients	**Patient Care:** Under supervision of an immunologist, develop a treatment plan for a child with immunodeficiency, including pharmacologic management, precautions, and immunizations	Direct Observation Global Evaluation
	Medical Knowledge: Identify the signs and symptoms of immunodeficiency diseases, and differentiate immunodeficiency from other causes of acute and chronic disease, as well as primary from secondary immunodeficiency disorders	**Medical Knowledge:** Organize immunodeficiency diseases into five pathophysiologic categories (antibody, cellular-mediated, combined, complement, phagocytic) and distinguish etiologic types (e.g., genetic, post-infectious, post-chemotherapy)	**Medical Knowledge:** Discuss the indications, clinical significance and limitations of diagnostic tests and procedures to assess immune function. Interpret the results of tests of: CBC (especially evaluation for age-appropriate ALC and ANC), lymphocyte (T, B, NK cell) number and function, immunoglobulin levels, antibody function, mitogen and antigen assay for lymphocyte function, DTH skin testing, complement levels, and neutrophil assays, as well as laboratory evaluations for secondary immune disorders, such as HIV and CF	Global Evaluation In-Training Exam
GOAL 3: Diagnose and manage infectious disease conditions that do not require referral. 1. Upper respiratory common cold, pharyngitis, otitis media and externa, sinusitis and facial cellulitis 2. Oral/pharyngeal: herpetic gingivostomatitis, herpangina, oral thrush (candida), parotitis, parapharyngeal and odontogenic infections and enteroviral enanthems 3. Middle airway: croup syndrome, pertussis 4. Lower airway: pneumonia (chlamydial, mycoplasma, bacterial, viral), bronchiolitis and latent tuberculosis infection 5. GI tract: esophagitis, enteritides (bacterial, viral, parasitic, antibiotic associated colitis), hepatitis (A, E, G), Helicobacter pylori 6. Renal: urinary tract infections, differentiating between pyelonephritis and cystitis 7. Genital: urethritis, vaginitis, epididymitis, orchitis, cervicitis and uncomplicated pelvic inflammatory disease 8. CNS: aseptic meningitis, post-varicella encephalitis, and acute cerebellar ataxia associated with varicella 9. Skin: bacterial (impetigo, cellulitis, furuncles, carbuncles), dermatophytes, candidal dermatitis, infestations (scabies and lice), and viral (common warts, venereal warts, molluscum contagiosum and herpes simplex virus) 10. Eyes: conjunctivitis, blepharitis, hordeolum (sty) and preseptal (periorbital) cellulitis 11. Parasites: pinworms, Toxocara canis, ascariasis, hookworm and giardia 12. Systemic: viral exanthems (measles, varicella, herpes simplex virus, parvovirus, rubella, human herpes virus 6), zoonoses (cat scratch disease), and viruses (infectious mononucleosis syndrome with either Epstein-Barr virus, Cytomegalovirus, or toxoplasma, respiratory syncytial virus disease, influenza, enterovirus, adenovirus) 13. Perinatal: focal infections of the scalp, mastitis, omphalitis, Group B strep and candidal infections 14. Infants/toddlers: potential occult bacteremia 15. Adolescents: sexually transmitted diseases (see genital infections) 16. Fever without localizing signs in various age groups 17. Fever in patient with underlying disease (e.g. in a patient with congenital heart disease.)	**Patient Care:** 1. Obtain accurate, relevant history efficiently, demonstrating a developmentally appropriate and prioritized approach. Perform accurate, targeted but thorough PE which is developmentally appropriate 2. Synthesize all available clinical information into a treatment planWhen caring for pediatric patients with common infections, determine when and whether drug therapy should be instituted	**Patient Care:** 1. Obtain relevant historical subtleties that inform and prioritize differential diagnoses and diagnostic information 2. Accurately track changes in PE over time 3. Develop a prioritized differential diagnosis and diagnostic and therapeutic plan 4. For common infections, demonstrate the ability to select an appropriate antibiotic, dose and route, based on antimicrobial mechanism of action, spectrum of activity, adverse effects, drug interactions, drug penetration and relative costs 5. Correctly prescribe antimicrobials based upon knowledge of local susceptibility/resistance patterns for common pathogens	**Patient Care:** 1. Role model gathering subtle and reliable information from patient and family 2. Routinely identify subtle or unusual PE findings, demonstrating an understanding of how they influence clinical decision making 3. Modify differential diagnosis and therapy based upon clinical course 4. Recognize disease patterns which deviate from common patterns and require complex decision makingIndependently manage patient with a broad spectrum of common infectious disorders 5. For certain common infections, such as otitis media and sinusitis, describe the circumstances when withholding antibiotic treatment may be safe and effective, what precautions should be used when withholding drug therapy, and strategies for achieving parental acceptance of withholding/delaying antibiotics 6. Develop familiarity with several reliable resources for information on common antibiotics, resistance patterns and new treatments for infectious diseases, and consistently use current information when prescribing antibiotics	Direct Observation Global Evaluation
GOAL 4: Recognize and initiate therapy in patients with infectious disease conditions that require consultation or referral. 1. Upper respiratory: mastoiditis 2. Oral/pharyngeal: peritonsillar, retropharyngeal and dental abscesses 3. Middle airway: epiglottitis, bacterial tracheitis, pertussis (symptoms requiring further evaluation and/or admission) 4. Lower airway: fungal pneumonia, severe or complicated pneumonia, parapneumonic effusion, empyema and lung abscess 5. Heart: endocarditis, thrombophlebitis, pericarditis, myocarditis, mediastinitis and acute rheumatic fever 6. GI tract: hepatic abcess, cholangitis/cholecystitis, chronic hepatitis B, C and D, hemolytic uremic syndrome, pancreatitis, appendicitis, peritonitis and abscess 7. Renal and perinephric abscesses 8. Genital: complicated PID and tubo-ovarian abscess 9. Musculoskeletal: osteomyelitis, septic arthritis, discitis and pyomyositis 10. CNS: complicated bacterial meningitis, brain abscess, epidural, subdural and paraspinal abscesses, encephalitis, transverse myelitis, peripheral neuropathies (diphtheria, botulism, tetanus), acute cerebellar ataxia not associated with varicella and Guillain-Barre, acute disseminated encephalomyelitis (ADEM), and partially treated meningitis 11. Soft tissue: staphylococcal scalded skin, toxic epidermal necrolysis, fasciitis 12. Eyes: orbital cellulitis, keratitis and endophthalmitis 13. Systemic: zoonoses/arthropod borne disease (brucella, leptospirosis, cat scratch, Ehrlichia, tularemia, Lyme, Rocky Mountain spotted fever) and Kawasaki disease 14. Intrauterine infections: CMV, rubella, parvovirus B19, syphilis, toxoplasmosis, herpes simplex virus (HSV) and varicella 15. Other: prenatal exposure to or congenital human immunodeficiency virus, acquired immunodeficiency syndrome, tuberculosis, systemic fungal infections, disseminated gonococcal infection, endotoxin shock, toxic shock, fever of unknown origin, fever and neutropenia, fever in immunocompromised patients 16. Immunocompromised hosts: acquired immunodeficiency syndrome, chemotherapy, steroid suppression, primary immunodeficiency, and organ or stem cell transplant recipient 17. Newborn: perinatal herpes, perinatal systemic fungal, varicella and enteroviral sepsis	**Patient Care:** Explain the findings on clinical history and examination that suggest a known or potential gastrointestinal condition	**Patient Care:** Identify, explain, provide initial management and support, and seek urgent referral when these conditions are suspected	**Patient Care:** 1. Recognize immediate life-threatening complications associated with the diagnosis and treatment of infectious disorders. Refer for intensive care as indicated 2. Review the role and thought process of the specialist when dealing with patients who have complex or life threatening illnesses, such as the use of static vs. bactericidal drugs, drug combinations and synergies, and monitoring patients for toxicity and efficacy	Direct Observation Global Evaluation