# VANDERBILT VUNIVERSITY MEDICAL CENTER

Infectious Diseases

### **Goals and Objectives**

This section allows you to browse through the goals and objectives for each rotation in the program. The educational goals of the program are listed below as well as the ACGME Competencies.

## Educational Goals of the Infectious Diseases Fellowship Training Program

The ID Fellowship Program has been designed to enable fellows, upon completion of the program, to be able to:

- 1. Provide patient care that is compassionate, appropriate, and effective for the promotion of health and the management of health problems related to infectious diseases.
- 2. Apply established and evolving knowledge in the biomedical, clinical, epidemiological, and social-behavioral sciences to the care of their patients.
- 3. Improve the patient care that they provide by continuously assessing their performance and pursuing learning opportunities.
- 4. Effectively exchange information and collaborate with patients, their families, and other health professionals to contribute to their effective patient care.
- 5. Conduct their professional life in accordance with the expectations of the profession of medicine and society.
- 6. Function effectively within the system of healthcare (beyond the clinical encounter) to mobilize additional resources to provide optimal healthcare.
- 7. Pursue an academic career, focused on research or teaching, or as a scholarly practitioner.

## **ACGME Competencies**

## Patient Care (PC)

Residents must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.

## Medical Knowledge (MK)

Residents must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological and social-behavioral sciences, as well as the application of this knowledge to patient care.

## Interpersonal and Communication Skills (ICS)

Residents must demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals.

## Professionalism (P)

Residents must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles.

## Practice-Based Learning and Improvement (PBLI)

Residents must demonstrate the ability to investigate and evaluate their care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life-long learning.

# Systems-Based Practice (SBP)

Residents must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care.

## **Rogers Infectious Diseases Service**

1. To demonstrate the ability to **apply medical knowledge about HIV infection and its complications during the clinical encounter,** a fellow would be expected to describe and discuss application to practice of:

- a. The signs and symptoms of HIV infection and its complications, including HIV-related malignancies (*MK*)
- b. The distinguishing features of various manifestations of HIV infection (*MK*)
- c. The indications for inpatient versus outpatient evaluation and treatment (MK)

d. The basic principles of antiretroviral therapy (ART), including the different classes of antiviral medications and their use, as well as common side effects and drug-drug interactions (*MK*)

e. Pathogenesis, symptoms, signs, typical clinical course, and management of HIV related opportunistic infections and recognition of the most common infections (*MK*)

f. Infection control issues related to exposure to HIV infection and how this impacts patient safety (*MK*)

g. Imaging and interventional techniques used in evaluating infectious processes in patients (*MK*)

- h. Treatment protocols for opportunistic complications of AIDS (*MK*)
- i. A nonjudgmental attitude regarding the mode of HIV acquisition (P)
- j. Knowledge and ability to communicate safe sex practices (*MK*, *IPCS*)

k. The bioethical, social, and legal issues concerning patient confidentiality and HIV infection (*MK*)

2. To demonstrate the ability to **diagnose HIV infection** during the clinical encounter, a fellow would be expected to:

- a. Obtain, document, and present an age-appropriate medical history that differentiates among etiologies of disease (*PC, MK, IPCS*)
- b. Perform a physical exam to establish the diagnosis and severity of disease (PC, MK)
- c. Generate a prioritized differential diagnosis recognizing specific history and physical exam findings that suggest a specific etiology in a potentially or known HIV-infected patient (*PC*, *MK*)
- d. Access and use appropriate information systems and resources to help delineate issues related to HIV infection and its complications (*PC, MK*)
- e. Define indications for, order, and interpret results of diagnostic and laboratory tests both prior to and after initiating treatment, based on the differential diagnosis and justification in

ordering them, including consideration of test cost, performance characteristics, and patient preferences (*PC*, *MK*)

- g. Identify the patient's problem(s) from the differential diagnosis by combining scientific knowledge, information obtained in the clinical encounter, and collective experience with similar patients (*PC, MK*)
- h. Communicate the diagnosis of HIV infection in a caring and compassionate way, recognizing the impact that the diagnosis has on a patient's quality of life, well-being, ability to work, and family (*IPCS, P, MK*)

3. To demonstrate the ability to **manage patients with HIV infection or its complications** based on the patient's identified problem, a fellow would be expected to:

a. Develop an appropriate treatment plan for patients with HIV infection and/or its complications

- 1) Following parameters of disease progression/activity (e.g., CD4 lymphocyte count, viral load) (*PC, MK*)
- 2) Monitor for the development of side effects from opportunistic treatment and drug interactions (*PC, MK*)
- 3) Prescribe and monitor appropriate opportunistic infection prophylaxis. (*PC, MK*)
- 4) Incorporate patient preferences in clinical decision-making (PC, P, IPCS)
- 5) Use risk-benefit, cost-benefit, and evidence-based considerations in the selection of diagnostic and therapeutic interventions for HIV infection and its complications (*PC*, *P*, *SBP*)

6) Respond in a caring and compassionate way to patients who are nonadherent to treatment for HIV infection and its complications (*IPCS, P*)

b. Integrate the expertise of other health care professions in the treatment of patients with HIV infection and its complications (*P*, *SBP*)

c. Use of consultants when necessary and refer to specialists, including psychological support, if indicated (*PC*, *SBP*)

d. Access and use appropriate information systems to ascertain information about health system and community resources (*SBP*)

e. Record, present, research, critique, and manage information about the patient and clinical decision-making (*PC*)

f. Communicate with the patient and his or her family in a caring and compassionate manner that facilitates understanding of the diagnosis, treatment plan, subsequent follow-up plan, preventive measures and prognosis (*PC, CS*)

g. Review performance, identify opportunities for improvement, and pursue learning activities focused on improvement that include, but are not limited to, reading, conversations with attending and peers, and participation in formal educational activities offered by the fellowship program or other educational organizations (*PBLI, P*)

<sup>1</sup>Each learning objective is categorized as one or more of the ACGME core competencies in parenthesis after the

objective statement. Abbreviations for each of the core competencies are as follows:

PC=Patient Care

PBLI-Practice-Based Learning Improvement

MK= Medical Knowledge	IPCS = Interpersonal communication skills
P=Professionalism	

## Vanderbilt ID Consult Services

To demonstrate the ability to **apply medical knowledge about infectious diseases**, a fellow would be expected to describe and discuss:

- a. the signs and symptoms of infectious disease in the following organ systems
  - 1. Central nervous system (MK)
  - 2. Gastrointestinal (MK)
  - 3. Genitourinary (*MK*)
  - 4. Respiratory (MK)
  - 5. Skin *(MK)*
  - 6. Rheumatologic/musculoskeletal (MK)
  - 7. Eye (*MK*)
  - 8. Cardiovascular (MK)
- b. the signs and symptoms of
  - 1. Endocarditis (MK)
  - 2. Systemic inflammatory response syndrome, sepsis syndrome, sepsis (MK)
  - 3. Sexually transmitted disease (MK)
  - 4. Non-HIV viral disease (MK)
  - 5. Infection in the immunocompromised non-HIV patient (MK)
  - 6. Systemic mycoses (MK)
  - 7. Tick-borne diseases (*MK*)
  - 8. Parasitic diseases (MK)
  - 9. Emerging pathogens (MK)
  - 10. Infectious disease issues in occupational health (MK)
  - 11. Infectious disease in the returning traveler (MK)
  - 12. Infections of implanted foreign bodies and devices (MK)
  - 13. HIV infections and its complications (MK)
  - resistance to antibacterial agents, including (but not limited to)
  - 1. MRSA, MRSE (MK)
  - 2. Enterococcus, VRE (MK)
  - 3. Aerobic Gram-negative organisms (MK)

d. indications for diagnostic tests in the workup of patients suspected of having infectious diseases (*MK*)

e. the limitations of radiographic, laboratory, and other diagnostic tests that are relevant

for infectious diseases (MK)

c.

f. rationale and effective prescribing of antimicrobial therapy targeting viral, bacterial, fungal, and other infectious agents, including the spectrum of antimicrobial drugs, their clinical indications, their side effects, and costs (*MK*)

g. Infectious Diseases Society of America treatment guidelines for the care of patients with specified infections (*MK*)

h. the role of the microbiology laboratory in the evaluation and management of patients with infectious diseases (*MK*, *SBP*)

2. To demonstrate the ability to diagnose a wide variety of acute and chronic infectious diseases in hospitalized adult patients, a fellow would be expected to:

a. Obtain, document, and present an age-appropriate medical history that differentiates among etiologies of a variety of clinical presentations (*PC, MK, IPCS*)

Perform a physical exam to establish the diagnosis and severity of disease (PC, MK)

Generate a prioritized differential diagnosis recognizing specific history and physical exam findings that suggest a specific etiology (*PC*, *MK*)

c. Access and use appropriate information systems and resources to help delineate issues *(SBP)* related to infectious diseases *(PC, MK)* 

d. Define indications for, order, and interpret results of diagnostic and laboratory tests both prior to and after initiating treatment, based on the differential diagnosis, justify ordering them, including consideration of test cost and performance characteristics as well as patient preferences (*PC, MK*)

e. Perform basic procedural skills (PC)

f. Identify the patient's problem from all the problems listed in the differential diagnosis by combining scientific knowledge, information obtained in the clinical encounter and collective experience with similar patients (*PC*, *MK*)

g. Communicate the diagnosis in a caring and compassionate way, recognizing the impact that the diagnosis has on a patient's quality of life, well-being, ability to work, and family (*MK*, *P*, *IPCS*)

3. To demonstrate the ability to **manage patients with infectious disease**, a fellow would be expected to:

a. Develop an appropriate treatment plan based on the patient's identified problem.

1. Incorporate patient preferences in clinical decision making (PC, P, IPCS)

2. Access and use appropriate information systems to ascertain information about health system and community resources *(SBP)* 

3. Use risk-benefit, cost-benefit, and evidence-based considerations in the selection of diagnostic and therapeutic interventions (*PBLI*, *P*)

b. Record, present, research, critique, and manage information about the patient and clinical decision-making (*PC*)

c. Communicate with the patient and his or her family in a caring and compassionate manner that facilitates understanding of the diagnosis, treatment plan, subsequent follow-up plan, preventive measures and prognosis (*PC, CS*)

d. Communicate with the physician who requested the consultation concisely in a written

report that reviews results of the history and physical examination, laboratory and imaging data and then formulates a differential diagnosis and recommendations for treatment. (CS, P)

e. Review performance, identify opportunities for improvement, and pursue learning activities focused on improvement that include, but are not limited to reading, conversations with attending and peers, and participation in formal educational activities offered by the fellowship program or other educational organizations (*PBLI*, *P*)

f. Provide leadership and teaching for residents and medical students rotating on the consult service (*P*)

g. Learn important infection control practices and apply them to the prevention of healthcare-associated infections (*MK*)

<sup>2</sup>Each learning objective is categorized as one or more of the ACGME core competencies in parenthesis after the

objective statement. Abbreviations for each of the core competencies are as follows:

PC=Patient CareP=ProfessionalismMK= Medical KnowledgePBLI=Practice-Based Learning ImprovementSBP = Systems based practiceIPCS = Interpersonal communication skills

### Transplant ID Service

1. To demonstrate the ability to apply medical knowledge about immunosuppression in patients in the peri- and post-transplant setting, a fellow would be expected to describe and discuss:

a. characteristics of recipients of solid organ and hematopoietic stem cell transplants, including abnormalities of renal, hepatic, or bone marrow function that affect drug dosing (*MK*)

b. diseases necessitating transplantation (MK)

c. underlying anatomic changes associated with transplantation (MK)

d. means of immunosuppression and the mechanism of action of immunosuppressive drugs (*MK*)

e. interactions between immunosuppressive agents and anti-infective agents to assure appropriate choice and dosing of both classes of drugs (*MK*)

f. factors specific to the donor relevant to infections in the recipient (MK)

g. risk factors for the development of infectious diseases in the recipient (MK)

h. the principles of pre-transplantation screening for infectious disease, including the measurement of antibodies to toxoplasma, CMV, and other pathogens, Quantiferon Gold testing and vaccine administration (*MK*)

i. the broad range of infectious pathogens, opportunistic and non-opportunistic, to which recipients of transplantations are susceptible (*MK*)

j. indications for the initiation of treatment of infection and the specific agents used, including their toxicities and drug interactions (*MK*)

k. the rationale behind and use of preventive/prophylactic therapy (MK)

I. infection control issues in transplantation (SBP, PC)

m. the differences among transplant populations, cancer patients with prolonged neutropenia, and patients with other immunosuppressive conditions

2. To demonstrate the ability to **diagnose infectious diseases in a patient in the peri- and post-transplant setting**, a fellow would be expected to:

a. Obtain, document, and present an appropriate medical history that differentiates among etiologies of a variety of clinical presentations (*PC, IPCS, MK*)

b. Perform a physical exam to establish the diagnosis and severity of disease (*PC*, *MK*)

c. Generate a prioritized differential diagnosis recognizing type of transplant, time since transplant, immunosuppressive regimen, and prophylaxis received that suggest a specific etiology (*PC*, *MK*)

d. Access and use appropriate information systems and resources to help delineate issues related to infectious disease (*PC, MK*)

e. Define indications for, order, and interpret results of diagnostic and laboratory tests both prior to and after initiating treatment, based on the differential diagnosis, justify ordering them, including consideration of test cost and performance characteristics as well as patient preferences (*PC, MK*)

f. Perform basic procedural skills (PC)

g. Identify the patient's problem from the differential diagnosis by combining scientific knowledge, information obtained in the clinical encounter and collective experience with similar patients (*PC*, *MK*)

h. Communicate the diagnosis in a caring and compassionate way, recognizing the impact that the diagnosis has on a patient's quality of life, well-being, ability to work, and family (*IPCS, P, MK*)

3. To demonstrate the ability to manage patients with an infectious disease in the peri- and post-transplant setting, a fellow would be expected to:

a. Develop an appropriate treatment plan based on the patient's identified problem.

i.Incorporate patient preferences in clinical decision making (PC, P, IPCS)

ii.Access and use appropriate information systems to ascertain information about health system and community resources (SBP)

iii.Use risk-benefit, cost-benefit, evidence-based considerations in the selection of diagnostic and therapeutic interventions (*P P*)

b. Record, present, research, critique, and manage information about the patient and clinical decision-making (*MK*, *SBP*, *IPCS*)

c. Communicate with the patient and their family in a caring and compassionate manner that facilitates understanding of the diagnosis, treatment plan, subsequent follow-up plan, preventive measures and prognosis, with special emphasis on risks of exposure in the hospital, at home, and in the community (*PC, IPCS*)

d. Communicate with the transplant team concisely in a written report that summarizes the diagnosis and treatment (*IPCS*, *P*)

e. Review performance, identify opportunities for improvement, and pursue learning activities focused on improvement that include, but are not limited to reading, conversations with attending and peers, and participation in formal educational activities offered by the fellowship program or other educational organizations (*PBLI*, *P*)

<sup>3</sup>Each learning objective is categorized as one or more of the ACGME core competencies in parenthesis after the

objective statement. Abbreviations for each of the core competencies are as follows:

PC=Patient Care	P=Professionalism
MK= Medical Knowledge	PBLI-Practice-Based Learning Improvement
SBP= Systems based practice	IPCS=Interpersonal communication skills

#### Nashville VA ID Consult Service

1. To demonstrate the ability to apply medical knowledge about infectious diseases, a fellow would be expected to describe and discuss:

- a. the signs and symptoms of infectious diseases in the following organ systems
  - 1. Central nervous system (MK)
  - 2.Gastrointestinal (MK)
  - 3. Genitourinary (MK)
  - 4. Respiratory (MK)
  - 5.Skin *(MK)*
  - 6. Rheumatologic/musculoskeletal (MK)
  - 7. Eye infections (MK)
  - 8. Cardiovascular (MK)
- b. the signs and symptoms of
  - 1. Endocarditis (*MK*)

2.Systemic inflammatory response syndrome, sepsis syndrome, sepsis (*MK*)

- 3. Sexually transmitted diseases (MK)
- 4. Common viral infections (MK)
- 5. Infection in the immunocompromised non-HIV patient (MK)
- 6.Systemic mycoses (MK)
- 7. Parasitic diseases (MK)
- 8. Emerging pathogens (MK)
- 9. HIV infections and its complications (MK)
- 10. Infections of implanted foreign bodies and devices (*MK*)
- 11. Infections of implanted foreign bodies and devices (*MK*)
- c. Resistance to antibacterial agents, including (but not limited to)
  - 1. MRSA, MRSE (MK)
  - 2. Enterococcus, VRE (*MK*)
  - 3. Aerobic Gram negative organisms (*MK*)

d. the typical clinical features that help to differentiate among common infections (*MK*)

e. indications for diagnostic tests (*MK*)

f. rationale use of antimicrobial agents including commonly used antibiotics and antifungal medications, including the spectrum of antimicrobial drugs, their clinical indications and their side effects (*MK*)

g. role of radiology, laboratory, and other diagnostic services in the evaluation of patients with infectious diseases (*MK*)

h. the Infectious Diseases Society of America guidelines for the care of patients in the hospital setting (MK)

2. To demonstrate the ability to **diagnose** a wide variety of acute and chronic **Infectious diseases** in hospitalized adult patients, a fellow would be expected to:

a. Obtain, document and present an age-appropriate medical history, with special focus on psycho-social issues deriving from military service, that differentiates among etiologies of a variety of clinical presentations (*PC, IPCS, MK*)

b. Perform a physical exam to establish the diagnosis and severity of disease (*PC*, *MK*)

c. Generate a prioritized differential diagnosis recognizing specific history and physical exam findings that suggest a specific etiology (*PC, MK*)

d. Access and use appropriate information systems and resources to help delineate issues related to infectious disease (*PC, MK*)

e. Define indications for, order, and interpret results of diagnostic and laboratory tests both prior to and after initiating treatment, based on the differential diagnosis,

f. Perform basic procedural skills (PC)

g. Identify the patient's problem from all of the problems listed in the differential diagnosis by combining scientific knowledge, information obtained in the clinical encounter and collective experience with similar patient (*PC*, *MK*)

h. Communicate the diagnosis in a caring and compassionate way, recognizing the impact that the diagnosis 'as on a patient's quality of life, well-being, ability to work, and family (*IPCS, P, MK*)

3. To demonstrate the ability to **manage patients with infectious disease**, a fellow would be expected to:

a. Develop an appropriate treatment plan based on the patient's identified problem.

1. Incorporate patient preferences in clinical decision making (PC, P, IPCS)

2. Access and use appropriate information systems to ascertain information about health system and community resources (*SBP*)

3. Use risk-benefit, cost-benefit, and evidence-based considerations in the selection of diagnostic and therapeutic interventions (*PBLI*, *P*)

b. Record, present, research, critique, and manage information about the patient and clinical decision-making (*PC*)

c. Communicate with the patient and his or her family in a caring and compassionate manner that facilitates understanding of the diagnosis, treatment plan, subsequent follow-up plan, preventive measures and prognosis (*PC*, *IPCS*)

d. Communicate with the physician who requested the consultation concisely in a written report that reviews results of the history and physical examination, laboratory and imaging data and then formulates a differential diagnosis and recommendations for treatment. (*IPCS, P*)

e. Review performance, identify opportunities for improvement, and pursue learning activities focused on improvement that include, but are not limited to reading, conversations with attending and peers, and participation in formal educational activities offered by the fellowship program or other educational organizations. (*PBLI*, *P*)

f. Provide leadership to a team of health care providers (*IPCS*, *P*)

<sup>2</sup>Each learning objective is categorized as one or more of the ACGME core competencies in parenthesis after the

objective statement. Abbreviations for each of the core competencies are as follows:

PC=Patient Care	P=Professionalism
MK= Medical Knowledge	PBLI=Practice-Based Learning Improvement
SBP = Systems based practice	IPCS = Interpersonal communication skills

### **Outpatient Infectious Diseases**

1. To demonstrate the ability to **apply medical knowledge about infectious diseases**, a fellow would be expected to describe and discuss:

a. the etiology, epidemiology, pathogenesis, natural history, pathology, clinical features, prevention and management of acute and chronic infectious diseases, including:

- 1. mycobacterial and fungal infections (*MK*)
- 2. sexually transmitted diseases (MK)
- 3. infections in immigrants, refugees, and travelers (MK)
- 4. human immunodeficiency virus (HIV) infection and its complications (*MK*)

5. infections in immunologically compromised hosts (other than HIV), including Transplant recipients, congenital immunodeficiency, and other acquired deficiencies (*MK*)

- 6. skin and soft tissue infections (*MK*)
- 7. infections occurring as a result of emerging pathogens (MK)
- 8. viral hepatitis (*MK*)
- 9. tuberculosis (*MK*)
- 10. fever of unknown origin (*MK*)
- 11. community-acquired MRSA infections (MK)
- 12. zoonoses (MK)
- 13. orthopedic infections (MK)
- b. immunology and immunization to include
  - 1. adult vaccinology principles and practice (MK)
  - 2. immunological evaluation of patient with recurrent infections (MK)

c. principles and practice of prevention of infection by immunization and chemoprophylaxis (*MK*)

d. antimicrobials and other therapies in infectious diseases with emphasis on oral and home IV administration:

- 1. classification of agents (MK)
- 2. pharmacokinetics and pharmacodynamics in the normal and abnormal host (MK)
- 3. mechanism of action (*MK*)
- 4. mechanism of resistance (MK)
- 5. monitoring outpatients for toxicity and drug interactions (*MK*)
- 6. clinical indications and use
- 7. principles of Pharmacoeconomics as they relate to home therapy (*MK*, *SBP*)

2. To demonstrate the ability to diagnose a wide variety of acute and chronic infectious diseases in adult outpatients, a fellow would be expected to:

a. Obtain, document, and present an age-appropriate medical history in a timely way that differentiates among etiologies of a variety of clinical presentations (*PC, IPCS, MK*)

b. Perform a physical exam in a timely way to establish the diagnosis and severity of disease (*PC, MK*)

c. Generate a prioritized differential diagnosis recognizing specific history and physical exam findings that suggest specific etiology (*MK*)

d. Access and use appropriate information systems and resources to help delineate issues related to infectious disease (*PC, MK*)

e. Define indications for, order, and interpret results of diagnostic and laboratory tests both prior to and after initiating treatment, based on the differential diagnosis, justify ordering them, including consideration of test cost and performance characteristics as well as patient preferences (*PC, MK*)

f. Perform basic procedural skills (PC)

g. Identify the patient's problem from all of the problems listed in the differential diagnosis by combining scientific knowledge, information obtained in the clinical encounter and collective experience with similar patients (*PC, MK*)

h. Communicate the diagnosis in a caring and compassionate way, recognizing the impact that the diagnosis has on a patient's quality of life, well-being, ability to work, and family (*IPCS, MK*)

3. To demonstrate the ability to manage patients with infectious disease in the outpatient setting, a fellow would be expected to

a. Develop an appropriate treatment plan base' on the patient's identified problem.

1. Incorporate patient preferences in clinical decision making (PC, P, IPCS)

2. Access and use appropriate information systems to ascertain information about health system and community resources *(SBP)* 

3. Use risk-benefit, cost-benefit, and evidence -based considerations in the selection of diagnostic and therapeutic interventions (*PBL*, *P*)

b. Record, present, research, critique, and manage information about the patient and clinical decision-making (*PC*)

c. Communicate with the patient and his or her family in a caring and compassionate manner that facilitates understanding of the diagnosis, treatment plan, subsequent follow-up plan, preventive measures and prognosis (*PC, CS*)

d. Review performance, identify opportunities for improvement, and pursue learning activities focused on improvement that include, but are not limited to reading, conversations with attendings and peers, and participation in formal educational activities offered by the fellowship program or other educational organizations (*PBL/P*)

<sup>1</sup>Each learning objective is categorized as one or more of the ACGME core competencies in parenthesis after the objective statement. Abbreviations for each of the core competencies are as follows:

PC=Patient Care	P=Professionalism
MK= Medical Knowledge	PBLI-Practice-Based Learning Improvement
SBP = Systems based practice	IPCS = Interpersonal communication skills

#### **HIV Continuity Clinic**

1. To demonstrate the ability to **apply medical knowledge about HIV infection and its complications** during the outpatient clinical encounter, a fellow would be expected to describe and discuss application practice:

a. The signs and symptoms of HIV infection and its complications including HIV-related malignancies (*MK*)

b. The distinguishing features of the various manifestations of HIV infection (MK)

c. The course of HIV and its complications, physical and emotional health and development, impact of health

d. promotion/disease prevention, management of chronic and acute medical conditions, and family and environmental impact. (*MK*)

e. The indications for inpatient versus outpatient evaluation and treatment (MK)

f. The basic principles of highly active antiretroviral therapy (HAART), including the different classes of antiviral medications and their use, as well as common side effects and drug-drug interactions *(MK)* 

g. Pathogenesis, symptoms, signs, typical clinical course, and management of HIV- related opportunistic infections with recognition of which are most common *(MK)* 

h. Common skin and oral manifestations of HIV infection and AIDS (MK)

i. "Safe sex" practices; sexual and non-sexual modes of transmission (MK)

j. The bioethical, social, and legal issues concerning patient confidentiality of HIV infection. (PC, IPCS)

k. A nonjudgmental attitude regarding the mode of HIV acquisition. (P)

2. To demonstrate the ability to diagnose HIV infection in new patients and identify changes in health status of continuing patients, a fellow would be expected to:

a. Obtain, document and present an age-appropriate medical history that differentiates among etiologies of disease (*PC*, *IPCS*, *MK*)

b. Perform a physical exam to establish the diagnosis and severity of disease (PC, MK)

c. Generate a prioritized differential diagnosis recognizing specific history and physical exam findings that suggest a specific etiology in a potentially or known HIV-infected patient (PC, MK)

d. Access and use appropriate information systems and resources to help delineate issues related to HIV infection and its complications (PC, MK)

e. Define indication for, order, and interpret results of diagnostic and laboratory tests both prior to and after initiating treatment, based on the differential diagnosis, justify ordering tests, including consideration of test cost and performance characteristics as well as patient preferences (*PC, MK*)

f. Perform basic procedural skills (PC)

g. Identify the patient's problem from all of the problems listed in the differential diagnosis by combining scientific knowledge, information obtained in the clinical encounter and collective experience with similar patients (*PC*, *MK*)

h. Communicate the diagnosis of HIV infection in a caring and compassionate way, recognizing the impact that the diagnosis has on a patient's quality of life, well-being, ability to work, and family (*IPCS, PC, MK*)

3. To demonstrate his or her ability to manage a panel of patients with HIV infection or its complications in multiple visits based on the patient's identified problem, a fellow would be expected to:

a. Develop an appropriate treatment plan for patients with HIV infection or its complications

1. Follow parameters of disease progression/activity (e.g. CD4 lymphocyte count, viral load) (PC, MK)

2. Monitor for the development of side effects from antiretroviral treatment and drug-drug interactions (*PC*, *MK*)

3. Prescribe and monitor appropriate opportunistic infection prophylaxis (PC, MK)

4. Incorporate patient preferences in clinical decision making (PC, P, IPCS)

5. Use risk-benefit, cost-benefit, and evidence-based considerations in the selection of diagnostic and therapeutic interventions for HIV infection and its complications (*PC*, *P*, *SBP*)

6. Respond in a caring and compassionate way to patients who are non-adherent to treatment for HIV infection and its complications (*IPCS*, *P*)

b. Draw on the expertise of other health care professions in the treatment of patients with HIV infection and its complications *(SBP)* 

c. Consider use of consultants when necessary and referral to specialists, including psychological support, if indicated (*PC*, *SBP*)

d. Access and use appropriate information systems to ascertain information about health system and community resources *(SBP)* 

e. Record, present, research, critique, and manage information about the patient and clinical decision making

f. Communicate with the patient and his or her family in a caring and compassionate manner, with appropriate cultural sensitivity that facilitates understanding of the diagnosis, treatment plan, subsequent follow-up plan, preventive measures and prognosis (*PC, IPCS*) g. Review performance, identify opportunities for improvement, and pursue learning activities focused on improvement that include, but are not limited to reading, conversations with attending and peers, and participation in formal educational activities offered by the fellowship program or other educational organizations. (*PBLI, P*)

<sup>1</sup>Each learning objective is categorized as one or more of the ACGME core competencies in parenthesis after the objective statement. Abbreviations for each of the core competencies are as follows:

PC=Patient Care	P=Professionalism
MK= Medical Knowledge	PBLI-Practice-Based Learning Improvement
SBP=Systems Based Practice	IPCS=Interpersonal Communication Skills