SAUDI COMMISSION FOR HEALTH SPECIALITIES
Scientific Board of Internal Medicine

TRAINING PROGRAM FOR THE SAUDI SPECIALITY IN ADULT INFECTIOUS DISEASES FELLOWSHIP

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I. INTRODUCTION

Infectious Diseases specialty is of paramount importance to the individual, the hospitals, the health care workers, the health care economy, and the community. As developing nations in our region, infectious diseases still impose a significant burden. The growth of populations, urbanization, and development of communities has all contributed to the changing patterns of microbe-related ailments. The needs for highly specialized, progressive, and enthusiastic infectious diseases specialists are pressing all over the region and not limited to Saudi Arabia. They are involved in immunization programs, disease epidemiology, community health, infection control, cost containment in health industry, and management of outbreaks. The Saudi Commission for Health Specialities recognizing the roles of Infectious Diseases and the needs for the qualified specialists has developed the Fellowship Training Program in Infectious Diseases for adult patients. The Program is structured and organized to graduate well-rounded independent specialist infectious diseases. Several health care institutions and academic medical centers with highly qualified staff provide the training. The clinical material and resources make the training experience rich and exciting during the entire three-year duration.

II. OBJECTIVES

GENERAL OBJECTIVES

The Program aims to graduate physician competent to function as a Consultant in Infectious Diseases. During the course of the training, the candidate must acquire clinical competence in the diagnosis and management of common bacterial, viral, fungal and parasitic diseases. The candidate will acquire sound knowledge in the basic sciences
of microbiology, immunology, pathology and pathophysiology of infectious diseases. Competent knowledge in antimicrobial therapy including classification, mechanism of action, and mechanism of resistance, pharmacokinetics and toxicity of antimicrobial agents is also targeted. The candidate will acquire laboratory skills and be able to interpret data related to diagnosis of infections. Adequate knowledge and skills in general epidemiology, hospital epidemiology, hospital infection control, travel medicine, research and quantitative methods for infectious disease are goals during the later stages of training. The candidate must become familiar with the ethical considerations in practice and research of infectious diseases and is expected to acquire communications skills necessary to function effectively with other physicians, health care workers, patients and their relatives.

**SPECIFIC OBJECTIVES:**

After completion of the training program, the fellow will have acquired the following competencies.

a. **KNOWLEDGE**

1. The trainee is expected to have the appropriate level of knowledge relating to the etiology, epidemiology, pathogenesis, natural history, pathology, clinical features, prevention and management of the following acute and chronic infectious diseases:
   - Community-acquired infections
   - Nosocomial infections
   - Sepsis and septic shock
   - Infections from emerging pathogens
   - Infections in the immunocompromised host.
   - Infections in travelers
- Mycobacterial infections
- Acute viral infections
- Human immunodeficiency virus infection
- Sexually transmitted infections

2. Principles and practice of infection control to include:
  - Knowledge and experience in hospital infection control practice
  - Understanding the duties and responsibilities of the infection control practitioner and hospital epidemiologist.
  - Recognition and investigation of outbreaks.
  - Reporting requirements of outbreaks.
  - Management of sporadic nonsocomial infections
  - Economic implications of infection control.
  - Principles of prevention and implementation of infectious control interventions, including educational strategies.
  - Occupational health
  - Surgical chemoprophylaxis

3. Microbiology and clinical laboratory testing as they relate to the following:
  - The principles of molecular biology, microbial genetics, microbial physiology and microbial structure.
  - Specimen selecting, collection, transportation and assessment of specimen quality.
  - Basic microscopy
  - Test performance and interpretation of results
  - Understanding of pathology, virulence factors, life cycles, taxonomy, structure, physiology, and pathogenesis.
  - Proteinaceous infectious particles
4. Immunology, including:
   - Details of innate and adoptive immunity
   - Pathogenic mechanisms by which immune responses facilitate or prevent disease, including the role of cytokines
   - Principles and practice of immunization techniques together with adverse effects and efficacy of immunizing agents.
   - Immunological evaluation of patient with recurrent infections

5. Antimicrobials and other therapies in infectious diseases:
   - Classification
   - Pharmacokinetics and pharmacodynamics in the normal and abnormal host.
   - Mechanisms of action and resistance
   - Toxicity and drug interactions
   - Clinical indications and use
   - Principles of pharmacoeconomics
   - Antimicrobial use control and restriction policies

b. SKILLS

1. Elicit a history that is relevant, concise, accurate and appropriate to the patient’s problem(s), including the relevant epidemiologic and travel history related to particular infectious disease.

2. Perform a physical examination that is relevant and appropriate.

3. Select medically appropriate investigation tools, including microbiologic tests, in a cost-effective, ethical and useful manner.

4. Perform and supervise common procedures important for diagnosis and treatment of infectious diseases.
5. Access, retrieve, appraise and apply relevant information of all kinds to problem-solving and introduce new therapeutic options to the clinical practice of infectious diseases.

6. Anticipate short and long term complications of infectious diseases and their treatments.

7. Appropriately deliver patient/family education using the above-mentioned knowledge.

8. Demonstrate insight into his / her own limitations.

c. COMMUNICATION SKILLS

1. Establish professional relationships with patients / families and listen effectively.

2. Discuss appropriate information with patients / families and the health care team.

3. Council patients and family regarding infectious diseases.

4. Consult effectively with other physicians and health care professionals including laboratory personnel, Infection control practitioners and public health personnel.

5. Write professional consultation notes and medical reports.

6. Contribute effectively to other interdisciplinary team activities.

d. EDUCATION AND RESEARCH

1. Develop, implement and monitor a personal continuing education strategy.

2. Critically appraise sources of medical information and apply evidence-based practice.
3. Contribute to the teaching / training of patients, house staffs / students and other health professionals.

4. Pose an infectious diseases research question (clinical, basic or population health).

5. Develop a proposal to solve the research question:
   a. conduct an appropriate literature search based on the research question
   b. identify, consult and collaborate with appropriate content experts to conduct the research
   c. propose a methodological approach to solve the question

6. Carry out the research outlined in the proposal.

7. Defend and disseminate the results of the research.

8. Show an appreciation of the infectious diseases literature with the ability to critically evaluate it and apply the results thereof.

e. PROFESSIONALISM

1. Deliver highest quality care with integrity, honesty and compassion.

2. Exhibit appropriate personal and interpersonal professional behaviors.

3. Practice medicine ethically consistent with obligations of a physician.

III. ADMISSION REQUIREMENTS

1. Possess a Saudi Commission Certificate in Internal Medicine or equivalent (approved by SCHS) or have at least successfully completed the written component of the Saudi Specialty Certificate in Internal Medicine.
2. Be licensed to practice medicine in Saudi Arabia.

3. Provide written permission from the sponsoring institution, allowing him / her to participate in full-time training for the entire 3-year program.

4. Sign an undertaking to abide by the rules and regulations of the Training Program and the Saudi Commission.

5. Successfully pass the interview.

6. Provide three letters of recommendation from consultants with whom the candidate has recently worked.

IV. PROGRAM STRUCTURE

The adult Infectious Disease Fellowship Training Program is a three (3) years joint program between accredited hospitals. Exposure includes in-patient care, consultations, and outpatient care. The Fellow will spend the following length of time in each area:

**First Year:**
- Adult Clinical Infectious Disease: 8 months
- Microbiology Lab: 3 months
- Vacation: 1 month

**Second Year:**
- Adult Clinical Infectious Disease: 3 months
- Immunocompromised Hosts and HIV/AIDS: 3 months
- Pediatric Infections: 2 months
- Microbiology Lab: 3 months
- Vacation: 1 month

**Third Year:**
- Adult Clinical Infectious Disease: 3 months
- Infection control: 3 months
- Research: 3 months
- Elective: 2 months
- Vacation: 1 month
V. Duties, Vacations, and Holidays

The Fellow is entitled to one month vacation annually and one Eid holiday per year. Sick and maternity leave shall be compensated for during or at the end of training in coordination with the Program Director. Night and weekend on-call duty shall be an average of one every three. Fellows are expected to perform regular duties the day after call and ensure continuity of care for their patients.

VI. Evaluation

As per training bylaws of Saudi Commission for Health Specialities, continuous supervision and evaluation of the Fellow should be done by the consultant in charge and a written evaluation using the designated form should be done by the end of each rotation. The decision of progress of the trainee to the next level will be based on the evaluations. Written final examination is done for all the trainees.

VII. Final Examination and Certification

After completing the three-years training successfully, the trainee is allowed to sit for the final certifying examination, which consists of two components;

a. Written examination, consists of 120 best single answer MCQ type over 3 hours.

b. Clinical examination in the form of OSCE Certification

Promotion

- Annual Promotion depends on annual overall evaluation.

- Each Certificate year, evaluation will be discussed in Saudi Council Adult ID board for approval.

Successful candidates will be awarded “Saudi Speciality Certificate in Infectious Disease” and abbreviated as SSC-ID
VIII. Appendix

1. Accreditation Requirements for Infectious Diseases Training Site

The following are accreditation requirements for certain components of the fellowship program. Sites may be accredited for one or more components based on qualification:

1. Clinical - General Infectious Diseases
   1.1 SCHS - Accredited Medical Residency Training Program.
   1.2 Two full time Infectious Disease Consultants as board-certified or SCHS - accredited per Fellow.
   1.3 At least 300 Infectious Diseases’ consultations per year.
   1.4 Infectious Diseases 24-hour a day, 7 days a week On-Call Service
   1.5 Microbiology laboratory that meets the requirement set in no.4
   1.6 Medical library, latest edition of three ID textbooks and 10 ID journal subscriptions.
   1.7 Ambulatory Care Infectious Diseases Clinic half session per week per fellow.

2. Clinical - Infections in the Immunocompromised Host
   2.1 All above requirements
   2.2 Active neoplasia-related immunocompromised patients with active involvement of the infectious disease service in their management.
   2.3 Active inpatient HIV / AIDS service not less than 25 admissions per year.
   2.4 Active outpatient HIV / AIDS service not less than 10 visits per week.

3. Pediatric Infectious Diseases
3.1 The hospital must be accredited by SCFHS for pediatric fellowship training.

4. Laboratory
4.1 Clinical Consultant Microbiologist accredited by SCFHS
   4.1.1 General Microbiology
   4.1.2 Mycology
   4.1.3 Mycobacteriology
   4.1.4 Serology
   4.1.5 Virology

5. Infection Control;
5.1 Active infection control service
5.2 Infection Control Committee Meeting at least once per month
5.3 Written and updated Infection Control Policies
5.4 Infection Control Practitioners 1/250 beds

2. The Program Director
He / She should be a full time Infectious Disease Consultant and have served in this capacity for a minimum of five years. He / She should also be approved by the Scientific Board and be able to:

1. Demonstrate commitment to the speciality.
2. Show the interest, authority and commitment necessary to fulfill teaching responsibilities in order to develop, implement and achieve the educational goals and objectives of the program.
3. Maintain an active clinical involvement in the service of Infectious Disease.
4. Pursue continuing education in Infectious Disease.
5. Exhibit an active interest in medical research related to Infectious Disease.