



ANTI MICROBIAL RESISTANCE

Introduction to Anti Microbial Resistance

Medicines play an important role in healthcare delivery, and when used correctly, they can help treat diseases, relieve symptoms, and alleviate patient pain. The rational use of medicines demands that patients receive medications that are suitable to their health needs, in doses that satisfy their own specific requirements, over an adequate period of time, and at the lowest possible cost to them and their community. Nonetheless, irrational medicine use is a significant concern in many countries.

According to WHO, more than half of all medication are prescribed, dispensed, or marketed incorrectly, and half of all patients do not take them correctly. Medicine overuse, underuse, or misuse wastes scarce resources and poses widespread health risks. One of the most common irrational use of medicines is the inappropriate use of antimicrobials, that further leads to antimicrobial resistance (AMR).

AMR emerges as bacteria, viruses, fungi, and parasites adapt to antibiotics, resulting in drug inefficiency and persistent infections, as well as an increase in the risk of serious illness and transmission. AMR is a huge global threat to people's health, jeopardizing the ability to prevent and treat a variety of infectious diseases. In the eastern Mediterranean region, AMR is being exacerbated due to a lack of laboratory capability, antimicrobial stewardship, and good data.

The health workforce is vital to providing high-quality health care. The capacity of health systems to perform well and respond effectively to health challenges such as AMR is based on a health workforce that is trained, effective, empowered, adequately qualified, and well-managed. The Global Strategy on Human Resources for Health: Workforce 2030 has stressed the critical importance of identifying health workforce challenges through effective training and education. Recognizing this need, IAPH has developed training curriculum on AMR-related issues targeting the health care professionals.

Anti Microbial Resistance Programs

The training in Anti Microbial Resistance consists of three programs, with three months duration for each program:

[Program 1: Basic Antimicrobial Resistance](#)

[Program 2: Antimicrobial Resistance Surveillance](#)

[Program 3: Advanced Antimicrobial Resistance](#)

Residents who complete the nine-month program requirements will be awarded a Higher Diploma Certificate (HDC)

Eligibility Criteria

- Bachelor's degree from a recognized university in health, medicine, behavioural, or social sciences, or any other related field of science.
- Preferably with work experience in a health-related field
- Demonstrated ability to study in English

In All Programs:

Training Delivery method
- In-class method
- Blended learning method

Training Language
- Arabic
- English

Who Should Apply

Programs are designed for healthcare professionals, which include: physicians in family medicine, surgeons, primary care, internal medicine, obstetrics and gynecology, and emergency medicine as well as pharmacists, veterinarians, nurse practitioners, physician assistants, and allied health professionals. Programs are also valuable for those looking for a career in antimicrobial stewardship.

Program Overview

The Basic Antimicrobial Resistance Program equips residents with the important skills needed to address antimicrobial resistance in modern public health.

The overall objective of this program is to equip health professionals with the knowledge and skills needed to combat antimicrobial resistance. The program's total duration is three months comprising four weeks of in-class or blended study and eight weeks of on-the-job training supervised by a dedicated mentor.

Learning Outcomes

By the end of the program, participants will be able to:

- Discuss the current debate and thinking surrounding antimicrobial resistance in modern public health
- Skillfully practice various functions of antimicrobial stewardship
- Detect and manage antimicrobial resistance
- Apply various measures to prevent the transmission of organisms in health care setting

Training Courses

- Introduction to Public Health
- Antimicrobial Stewardship-Level 1
- Antimicrobial Resistance-Level 1
- Infection Control-Level 1

Field Work

Residents spend eight weeks in the field work in order to be exposed to real-life situations and to practice the skills they gain with the guidance of a dedicated mentor. The following field projects are expected to be conducted during the field work period:

- Conduct a stakeholder analysis
- Analyze antibiotic resistance patterns by conducting a retrospective analysis of a common infection (e.g. UTI)

Program Overview

The Surveillance and Research of Antimicrobial Resistance Program equips residents with the skills needed to actively work against antimicrobial resistance. The overall objective of this program is to equip healthcare professionals with the knowledge, and skills to work through the “One Health” approach, using relevant public health tools to combat antimicrobial resistance.

The program’s total duration is three months comprising four weeks of In class/online study and eight weeks of on job training supervised by a dedicated mentor.

Learning Outcomes

By the end of the program, participants will be able to:

- Conduct outbreak investigation and response to common public health problems, including anti-microbial resistance and health facilities’ infection
- Identify research topics and methods relevant to antimicrobial resistant genes and antimicrobial resistant bacteria
- Conduct scientific studies on antimicrobial resistance and effectively communicate them
- Provide evidence-based recommendations on antimicrobial resistance through enhanced surveillance and research
- Implement and promote antimicrobial stewardship

Training Courses

- Basic Epidemiology
- Antimicrobial Resistance-Level 2
- Antimicrobial Stewardship-Level 2
- Applied Research in Anti-Microbial Resistance

Field Work

Residents spend eight weeks in the field work in order to be exposed to real-life situations and to practice the skills they gain with the guidance of a dedicated mentor. The following field projects are expected to be conducted during the field work period:

- 1- Design a Global Antimicrobial Resistance Surveillance System (GLASS) for AMR
- 2- Plan an awareness-raising campaign on antimicrobial resistance

Program Overview

The Advanced Antimicrobial Resistance Program equips residents with the skills needed to advance antimicrobial stewardship. The overall objective of this program is to equip the healthcare professionals with knowledge, and skills that are critical to effectively and efficiently control infections and design and manage HIV, TB, and malaria control programs through advanced antimicrobial stewardship approaches.

The program's total duration is three months which is composed of five weeks of In class/online study and seven weeks of field work supervised by a dedicated mentor.

Learning Outcomes

By the end of the program, participants will be able to:

- Effectively and efficiently maintain and improve the performance and the outcomes of antimicrobial resistance stewardship program.
- Combat the antimicrobial resistance through effective and efficient HIV, TB and malaria control programs
- Protect the patient, the care giver, and visitors against microbial infections in a cost-effective manner
- Implement and promote advanced antimicrobial stewardship approaches

Training Courses

- Multidrug Resistance
- Infection Control-Level 2
- Antimicrobial Stewardship-Level 3
- Management and Leadership
- Scientific Writing

Field Work

Residents spend seven weeks in the field work in order to be exposed to real-life situations and to practice the skills they gain with the guidance of a dedicated mentor. The following field projects are expected to be conducted during the field work period:

- Make evidence-based decisions to solve antimicrobial resistance
- Develop a national 'one health' plan for antimicrobial resistance



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