

Improving Health Worldwide

Antimicrobial Resistance: A Multidisciplinary Approach



LONDON
SCHOOL of
HYGIENE
& TROPICAL
MEDICINE



ANTIMICROBIAL
RESISTANCE
CENTRE

Short Course
15 - 19 July 2019

Background

At the Sixty-eighth World Health Assembly in May 2015, the World Health Assembly endorsed a global action plan to tackle antimicrobial resistance (AMR). The global action plan sets out five strategic objectives around which the course is based: 1) to improve awareness and understanding of antimicrobial resistance; 2) to strengthen knowledge through surveillance and research; 3) to reduce the incidence of infection; 4) to optimize the use of antimicrobial agents; and 5) develop the economic case for sustainable investment that takes account of the needs of all countries, and increase investment in new medicines, diagnostic tools, vaccines and other interventions.

The course

This five-day course has been designed to address the need to understand all aspects of the intractable problem of AMR; and enable students to develop multi- and inter-discipline One Health responses and interventions to reduce the global threat of AMR. The course will have a specific focus on AMR in low- and middle-income countries.

LSHTM will provide the centre and facilities for this short course which will be taught by UK and international experts. It is an introductory course and will meet the needs of a wide variety of practitioners.

Attendance

The course will be full time for five days plus a field visit. There will be a total of 34 hours contact time, which will include 28 hours of formal teaching and 6 hours of directed group work. Two public evening networking events with keynote speakers will also be included.

Course aims

- To bring together a diversity of faculty and postgraduate students, interested in the subject to learn and discuss together. Both faculty and attendees will benefit from this networking through shared experiences.
- To review and analyse a wide range of relevant topics - including definitions, genetics, epidemiology, public health impact, ethics, patient and health worker knowledge, chemical analysis, regulation and potential interventions

Objectives

By the end of the course participants should be able to understand and discuss the issues surrounding:

- The laboratory diagnosis of AMR
- Bacterial cell targets for antimicrobials and how mutations can lead to reduced susceptibility to antibiotics
- The use of surveillance in understanding local and global priorities and transmission of important clones
- One health and the role of agriculture and the environment
- The clinical use of infection control, diagnostics and antibiotic stewardship
- The economics of AMR
- The social aspects of antimicrobial use especially in non-clinical settings and the role of sanitation and hygiene

Course content

- The history of antibiotics and emergence of antibiotic resistance
- Antibiotic targets and mechanisms of resistance
- Diagnostic laboratory identification of AMR
- Break points and standardisation
- AMR surveillance methods and burden of drug-resistant infections
- Pharmacokinetics, exposure and drug failure
- One health
- The use of genomics in AMR
- Antibiotic usage and agriculture
- AMR and the environment
- AMR and the microbiome
- Infection control
- Antimicrobial stewardship
- The role of diagnostics in reducing antibiotic usage
- Role of water, sanitation and hygiene in AMR
- Role of vaccines in reducing AMR
- Novel alternatives to antimicrobials
- Developing new therapies
- Economics of AMR
- Social science aspects of antibiotic use
- Role and metrics of Interventions

Who should attend?

The course is aimed at postgraduate students, postdoctoral and young scientists and clinicians who would benefit from an understanding of the public health importance of AMR and actions to tackle the problem.

Teaching methods

Teaching will include formal didactic lectures, laboratory practical, computer based practical and a visit to Flemings original laboratory at St. Marys Hospital, with appropriate reading lists provided in advance of the course.

The course includes group discussions sessions. Teaching faculty will have a variety of backgrounds, experience and expertise in various aspects of AMR.

There is no formal assessment but at the conclusion of the course, a certificate of attendance will be provided.

Key information



Course organisers:

Dr Richard Stabler, Co-Director of the LSHTM Antimicrobial Resistance Centre,
Prof Clare Chandler, Co-Director of the LSHTM Antimicrobial Resistance Centre



Fees for 2019:

£1,500. Reduced fees for applicants based in low-and middle-income countries are available.



Contact email:

shortcourses@lshtm.ac.uk



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www.lshtm.ac.uk/study/short-courses/antimicrobial-resistance

The London School of Hygiene & Tropical Medicine is highly ranked in a number of university league tables. In 2017, it was named first in Europe for research impact in sciences (CWTS Leiden Ranking) as well as receiving a prestigious Queen's Anniversary Prize for Higher and Further Education. In 2016, it won the Times Higher Education 'University of the Year' award.

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