

Open Medical Institute Salzburg Medical Seminar: Pandemics

22-26 August 2017
Open Medical Institute
Arenbergstraße 10
Salzburg, Austria

Seminar director

Professor Arnaud Fontanet
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Seminar objective

The overall objective of the *Pandemics* seminar is to provide clinicians with a theoretical and practical understanding of the mechanisms of outbreaks of infectious diseases, how to conduct multidisciplinary investigations in response to outbreaks, how to implement prevention and control measures in clinical settings in order to minimise the impact of an infectious disease outbreak, and the role of national and international health authorities in the management of infectious disease outbreaks.

Seminar structure

The course will be delivered across 3 days, with theoretical seminars in the morning followed by practical and interactive sessions in the afternoon.

Day 1: 23 August 2017

Morning

Emerging diseases: Lessons from history

Arnaud Fontanet

This session focuses on the emergence of diseases over the 20th and 21st centuries, with a particular emphasis on the way in which the emergence of microbes has influenced epidemiological concepts and methodologies, as well as public health actions. This session provides a comprehensive overview of how microbes have emerged, the key factors which have determined their spread in the population, and the measures which have been used to counter their expansion.

Steps in outbreak investigation

Maria Van Kerkhove

This session provides an overview of the principles for conducting infectious disease outbreak investigations: how to define an outbreak; confirm diagnoses; define a case; search for cases; generate hypotheses using descriptive findings; test hypotheses using analytical epidemiology; draw conclusions; conduct additional investigations; communicate results to scientists and public health officials; and implement control and prevention measures.

Afternoon

MERS-CoV and nosocomial transmission

Maria Van Kerkhove

This session focuses on the role of nosocomial transmission in the epidemiology of Middle East respiratory syndrome coronavirus (MERS-CoV) outbreaks, particularly in Saudi Arabia and the Republic of Korea. It will cover triage strategies and infection control measures for health care settings.

Case study: Nosocomial outbreak of MERS

Maria Van Kerkhove

This interactive session will work through a MERS outbreak. It will cover case importation, factors which determine the further spread of the virus within the population and the actions of national and international health authorities to stop the spread of the virus.

Day 2: 24 August 2017

Morning

Key epidemiological indicators and routes of transmission

Arnaud Fontanet

This session covers the principles of infectious disease transmission and key terminology: incubation period, infectious period, latent period, reproduction number. This session provides a comprehensive overview of methods used to measure epidemic spread, and identify routes of transmission, with specific examples drawn from real-world situations.

Case study: Zika in French Polynesia and the Caribbean

Arnaud Fontanet

This practical session focuses on the Zika outbreaks in French Polynesia and the Caribbean. It will cover the emergence of Zika virus, the methods used to describe the natural history of infection, including neurological complications, and the use of mathematical modelling methods to determine the impact of an infectious disease outbreak.

Afternoon

Case study: Pediatric acute encephalitis-like syndrome outbreaks in northern Vietnam

Arnaud Fontanet

Rebecca Grant

This practical session will draw on the experiences of conducting investigations into outbreaks of acute encephalitis-like syndrome among children in northern Vietnam. It will cover the multidisciplinary components of outbreak investigation, epidemiological study designs, interpretation of data collected during an outbreak and the challenges to conducting outbreak investigations in the field.

Day 3: 25 August 2017

Morning

Hepatitis C: Emergence and overview of modes of transmission

Arnaud Fontanet

This session will focus specifically on the emergence of the hepatitis C virus (HCV) and the burden of the disease, both in industrialised countries and in low income countries. This session will also address the routes of HCV transmission and methods of control.

Case study: Investigation of acute Hepatitis C in Fever Hospitals in Egypt

Arnaud Fontanet

This interactive session will work through the HCV epidemic in Egypt. It will cover routes of transmission, factors which have determined the further spread of the virus within the population, therapeutic treatment development and the actions of national health authorities.

Afternoon

Antimicrobial resistance and control of nosocomial outbreaks of multiresistant bacteria

Stephan Harbarth

This session provides a comprehensive overview of antimicrobial resistance in the hospital setting, and it will cover the measures to be taken to control the spread of multiresistant bacteria in these settings.

Case study: ICU-acquired infection

Stephan Harbarth

This interactive session will focus specifically on ICU-acquired bacterial infections. It will also cover antibiotic stewardship and address prevention strategies for the emergence of antibiotic resistance in the individual patient, as well as development of novel diagnostic tests for the hospital setting.

Seminar presenters

Arnaud Fontanet	Professor Fontanet is a medical epidemiologist specialised in infectious diseases. He heads the Center for Global Health and the Emerging Diseases Epidemiology Unit at the Institut Pasteur Paris, he is a Professor - Health and Development Chair - at the Conservatoire National des Arts et Métiers (Cnam) and he serves as the co-Director of the Pasteur-Cnam School of Public Health.
Maria Van Kerkhove	Dr Van Kerkhove is an infectious disease epidemiologist working in the High Threat Pathogens Unit of the World Health Organization. She is the WHO Technical Lead for MERS-CoV.
Stephan Harbarth	Professor Harbarth is a hospital epidemiologist and senior infectious disease consultant in the Infection Prevention and Control Service of the Geneva University Hospitals.
Rebecca Grant	Ms Grant is the research officer within the Institut Pasteur Center for Global Health and project assistant for the Institut Pasteur Outbreak Investigation Task Force.

Practical information

Seminar language

English

Applications

Eligibility criteria are available on the Open Medical Institute [website](#).

Applications are to be submitted through the Open Medical Institute [online portal](#) before 12 June 2017.

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