Anticipating emerging infectious disease epidemics

1-2 December 2015
Geneva, Switzerland
Session 3
Science and technology: opportunities and challenges
Professor Gabriel Leung
Dean, Li Ka Shing Faculty of Medicine, University of Hong Kong, China

Former Under Secretary for Food and Health and Director of the Chief Executive’s Office, Hong Kong

Director of the University’s WHO Collaborating Centre for Infectious Disease Epidemiology and Control

His research defined the epidemiology of two novel viral epidemics, namely SARS in 2003 and H7N9 in 2013. While in government, he led Hong Kong’s policy response against Pandemic (H1N1) 2009.

Session 3

Topic 1

What’s new for surveillance and detection?

Dr Nur A. Hasan

Adjunct Faculty, University of Maryland Institute for Advanced Computer Studies, USA
Next-Generation Sequencing and Ultra Rapid Bioinformatics for Microbial Detection and Biosurveillance:
Synthetic Biology

Emerging Infectious Disease
Detect
Analyse
Control

RISK

Emerging Infectious Disease
Detect
Analyse
Control

RESPOND

• Nature still better than humans for biological threats
• New Detection, Analysis and Control methods
• RRI: Integration through stakeholder engagement
• Improved Speed & Efficiency of Response

Adapted from Drew Endy

Dr James Ajioka
Senior Lecturer, Department of Pathology, University of Cambridge, UK
Dr Mark Perkins
Chief Scientific Officer, FIND, Switzerland

New generation of POC detection technologies

HIV p24
Hep B
Hep C
Syphilis
HHV-8
CD4
Knowledge can be high but perception can change

Risk perception changes as the epidemic ‘moves’

Dr Amanda McClelland
Senior Officer - Emergency Health, IFRC, Switzerland
Session 3

Topic 5

Communicating in the 21st Century

Ms Barbara Bentein
Head Principal Advisor Ebola Crisis Cell, UNICEF HQ, USA

Three Key Elements:

- Listening to communities and building trust
- Engaging with communities so that they own the response
- Understanding the communication landscape and diaspora

POLIO ERADICATION THE LAST 1%

BEFORE THE KNOCK

THE INTERACTION

AFTER THE VACCINATION

World Health Organization