Anticipating emerging infectious disease epidemics

1-2 December 2015
Geneva, Switzerland
Session 4
Making the most of Big Brother
Dr Brian McCloskey

*Director of Global Health, Public Health England Wellington House, UK*


Worked with WHO’s Mass Gatherings Advisory Group since 2008, and Director of the first WHO Collaborating Centre on Mass Gatherings

Part of a WHO Mission to Saudi Arabia in 2009 to advise on the implications of Pandemic (H1N1) 2009 for the Hajj.

Involved with the response to MERS-CoV in UK, Saudi Arabia and RoK

PHE’s National Incident Director for Ebola in 2014 and seconded to work with the UN Special Envoy on Ebola until April 2015

Member of WHO’s IHR Review Committee and works with the Chatham House Centre on Global Health Security
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Topic 1

Modelling outbreaks: pros and cons

Prof Christl Donnelly

Professor of Statistical Epidemiology, Imperial College London, UK
Infection and death from influenza A H1N1 virus in Mexico: a retrospective analysis
*Lancet* 2009

*Simulation of the first 240 days of an influenza pandemic starting in rural Thailand
*Nature* 2005

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**WHO Ebola Response Team**

**NEJM**
Dr Paolo Ruti

*Chief, World Weather Research Division, WMO, Switzerland*
Ensemble analysis and forecast cycle

With the courtesy of P Bauer, ECMWF
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Topic 3

Use of big data to anticipate epidemics and their evolution

Dr Kamran Khan

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20 000 Round Trips
Dr Cécile Wendling

Associate Researcher, Sociology Organization Centre, France

- Health surveillance is often a reactive process, with no real integration of early signals and wild cards. Therefore, it is difficult to detect radical changes that have a strong impact in the medium or long term.
- To embed this proactive dimension, foresight is a key approach to use, and many methods exist among which the scenario approach is explored.
- In describing possible future scenarios, as well as the elements in favor of one scenario rather than another, health surveillance can help decision makers to influence the context in order to guide towards one or more favorable futures.
Some questions for the audience

• How do we capture, collect and optimally analyze data on the drivers and amplifiers of epidemics?
• What can the health sector learn from other sectors that are further ahead in anticipating risks?