

5.K. Workshop: How can institutional preparedness for public health emergencies contribute to 'health for all'?

Organised by: EUPHA section on Infectious diseases control, ECDC and EUPHA section on Public health economics
Contact: aura.timen@rivm.nl

Chairperson(s): Aura Timen - The Netherlands, Karl Ekdahl - ECDC

Strengthening health institutions' capacity for preparedness is vital for emergency risk response. Ideally preparedness aims to build the infrastructure for anticipation, early recognition, mitigation, and response to outbreaks and threats. And, last but not least, recovery from an outbreak and implementation of sustainable lessons learned to be able to face the next crisis. Institutional preparedness (i.e. preparedness of healthcare organization) is not a "stand alone" activity, but needs to be seen in the overall context of a health system's preparedness. The legacy of recent crises such as SARS, H1N1 pandemic or Ebola and the current experiences with Zika show that preparedness is not optimal and that there is a large variability that needs to be addressed. There are considerable gaps in

preparedness for public health emergencies, as well as in preparedness training and incorporation of preparedness in institutional activities. Furthermore, preparedness has often been an activity rather confined exclusively to a single healthcare facility, while a public health emergency requires strategies and effective coordination of resources allocation and expertise across all local response agencies.

This workshop aims to present the state-of-the-art with respect to institutional preparedness, (economic impact) assessment tools and frameworks and discuss current open issues. We bring together scientists and experts from various countries and with various backgrounds of expertise in order to identify priorities for strengthening institutional preparedness. Five speakers will present their point of view with regard to priorities to strengthen preparedness and will engage in a discussion with the audience (moderated by the chairs), to deepen the understanding of the elements that need to be addressed with the highest level of urgency and to which EUPHA and ECDC can be of added value.

Key messages:

- Institutional preparedness requires optimal allocation of resources within a multidisciplinary approach including both frontline health institutions and institutions outside the health sector
- Efforts must be directed to understand the role of the private sector and of NGOs and to align their activities with those of public entities while preparing for crises

From SARS to H1N1 to Ebola and beyond: learning from experience with institutional responses to public health emergencies**Michael Stoto***M Stoto*

Georgetown University Washington, USA, Harvard T.H. Chan School of Public Health, Boston, USA

Contact: stotom@georgetown.edu

One challenge to improving institutional preparedness is that health emergencies seem like one-off events; unique epidemiologic characteristics and circumstances require ad hoc responses. As a result, lessons learned from one event do not seem to apply to the next. To overcome this challenge, global, national, and subnational institutions charged with protecting the public must develop and employ rigorous research tools for root cause analysis to learn from actual events. A logic model including capabilities and capacities defined at a high enough level so that experience can be translated to prepare for the unknown in other settings is also needed. Building on these tools, public health institutions can develop preparedness competencies for staff training.

Analysis of health emergencies including H1N1 and Ebola has identified 3 primary capabilities: (1) assessment, including incident recognition, risk characterization, epidemiological investigation, surveillance and epidemiological monitoring, laboratory analysis, and environmental monitoring; (2) policy development and implementation, including for infection control and treatment guidance, for population-based disease control, and enforcing laws and regulations; and (3) healthcare services, including preventive services, medical surge, management of medical countermeasures and supplies, and care for healthcare workers and emergency responders. Equally important are 2 capabilities describing social capital – institutions' ability to (4) coordinate the efforts of public and private entities to manage crises, including communication with healthcare providers; with emergency management, public safety, and other sectors; and with public health agencies at the global, European, national, and subnational levels; and (5) to conduct emergency risk communication including identifying of public information needs and developing message content and delivering through appropriate channels.

ECDC support for strengthening capacity for preparedness in the Member States**Karl Ekdahl***K Ekdahl*

European Centre for Disease Prevention and Control (ECDC), Stockholm, Sweden

Contact: karl.ekdahl@ecdc.europa.eu

European Centre for Disease Prevention and Control (ECDC) is the EU agency with role in identifying, assessing and communicating threats from infectious disease to human health. ECDC has several approaches towards providing support in the area of preparedness to crises such as the influenza pandemic, Ebola, and ongoing Zika. They include various activities driven by countries' needs including peer review country visits related to preparedness, concrete support through training courses and simulation exercises, as well as providing evidence in preparedness.

Examples will be presented around the peer review country visits on Ebola preparedness where ECDC staff and preparedness experts visited several countries. Opportunities for

collaboration with visiting colleagues from other MS were identified.

Another example includes the design and organization of a training course and a simulation exercise on mosquito-borne outbreak for a group of 31 countries – EU MS, enlargement and ENP countries, carried out while preparedness for Zika infection was still ongoing.

Finally ECDC developed a logic model on the preparedness of a health system, on the basis of which assessment can be done. Competencies for staff will be developed and competency-based training curricula will be developed so that we ensure a professionally trained group of experts working in preparedness in Europe.

Two elements are key when providing support to countries: be country-driven and be transparent. It is important to identify key institutions with role in preparedness and especially the frontline one – emergency rooms at hospitals or primary healthcare, as these are the ones firstly affected in case of emergencies and quite frequently are not included in preparedness efforts. In case of emergencies it is also often the case that institutions outside the health system are either on lead or involved, so inter-sectoral collaboration needs to be taken into account.

Priorities in preparedness: a strategic approach**Michael Edelstein***M Edelstein*

Chattam House, London, UK, EUPHA section on Infectious Diseases control

Contact: michael.edelstein@doctors.org.uk

The recent Ebola outbreak in West Africa has highlighted two important points: first, the consequences of an absence of preparedness at the local level; second, how a local outbreak in a remote part of the world can rapidly become a global crisis. Preparedness should therefore be seen through a global perspective, and is as strong as its weakest link. This is a particular concern as emerging infectious diseases are increasing in terms of frequency and impact as a result of globalization. Until every country has the capacity to prevent, detect and respond to infectious disease threat, there is a global risk. The revised International Health Regulations, enacted in 2007, provide a legally-binding framework through which countries can assess their surveillance, response and preparedness capacity against required standards. However, these assessments are currently self-administered, and the IHR lack an enforcement mechanism. As a result, the world remains ill prepared. Since the Ebola outbreak, the World Health Organization has vowed to give the IHR "more teeth" and several global initiatives have been implemented to assess and improve global preparedness and global health security as a result. Preparedness against infectious disease threats should not be seen as an addition to healthcare systems, but as an integral part. Therefore issues such as healthcare workforce, laboratory capacity, or immunization are essential aspects of global health security. In order to be prepared, we must also recognize the importance of collaborating outside of the health sector to prepare ourselves. The role of non-traditional actors such as the private sector, or NGOs needs to be better understood.

Preparedness issues related to leadership**Erik Baekkeskov***E Baekkeskov*

School of Social and Political Sciences, The University of Melbourne, Melbourne, Australia

Contact: erik.baekkeskov@unimelb.edu.au

Why do different European states use different interventions against the same public health threats? In a time of globalization, shared information and biomedical scientific progress, such questions are increasingly urgent for researchers and policy-makers alike. Political science and related policy studies specialize in such questions and offer various answers. My research tests several rival explanations. It uses the 2009

H1N1 flu pandemic context and quasi-experimental ('most-similar systems') case research designs to control variations. Specifically, many countries' major intervention against pandemic flu in 2009 was mass vaccination. But even rich and mature democracies opted for very different vaccination policies in terms of how many vaccines they made available to their populations and which population groups were offered vaccination. Though otherwise very similar, the Netherlands, Sweden and Denmark are cases in point. Using in-depth case studies of how these countries made their vaccination policy decisions, my study shows that differences between the countries in how their leading government-appointed public health experts had anticipated pandemic flu mortality and morbidity, and how they thought about vaccination in response, made all the difference when it came to making interventions against H1N1 during 2009. Politics and pharmaceutical business pressures also played parts, but as causal mechanisms rather than drivers. Hence, how national public health systems imagine and prepare for pandemic influenza can be pivotal to how they actually respond, and can strongly differentiate how even very similar and neighboring states manage such crises. Sharing and debating planning assumptions across borders thus becomes a way to preventing future surprises and potential conflicts over "correct" courses of action, and is even a potential source for multi-tracked rather than single scenarios and preparations

How can economic evaluations contribute to institutional preparedness?

Tek-Ang Lim

TA Lim

EUPHA section on Public health economics
Contact: tekanglim@yahoo.com

There have been a number of epidemics across the world these past years (Ebola virus, Zika virus etc.). Most of the new infections in the population could not have been avoided as there was no prevention treatment such as vaccines for instance and/or the information about the virus was limited (Zika virus for instance). There has been a growing concern to define a preparedness plan in order to respond effectively to new and emerging threats across the world. Since the mid-20th century, economic evaluations have been used to determine the optimal allocation of resources in different fields (education, road traffic safety, etc.), the use of economic evaluations have also been extended to the health sector. This presentation will focus on how economic evaluations can complement traditional epidemiological studies and contribute to facilitate the decision regarding the definition of institutional preparedness plans.

There are different methodologies for economic evaluations (cost-benefit analyses, cost-effectiveness analyses, cost-saving, etc.); there is a growing literature that successfully addresses the monetary quantification of the overall impacts of adverse health risk factors and public health interventions. The presentation will focus on how no matter which methodology is adopted, the economic evaluation relies on evidence and data and should be adapted in order to be useful to determine the best allocation of resources in the preparedness plan.

Economic evaluations may contribute to enhance the effectiveness of defining institutional preparedness plans by providing information on optimal allocation of resources. In times of emergency risk response, economic evaluations help to determine the most cost-effective strategies and as such set priorities. However, it is essential to adopt a multidisciplinary approach in order to develop a more robust and comprehensive framework for health threat assessment in institutional preparedness plans.