ASSET

share and move to face nasty bugs

Pandemic Preparedness and Response Bulletin

Issue 3, January 2016

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ASSET

Action plan on Science in Society related issues in Epidemics and Total pandemics

Highlighting strategic priorities and policy-related initiatives on Pandemic Preparedness and Response, the "Share and Move" ASSET Bulletin intends to be essential to a wide-ranged target: competent institutional actors and public health authorities, decision-makers, even on social networks.

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Editorial

THE ASSET PANDEMIC PREPAREDNESS AND RESPONSE BULLETIN ACHIEVES ITS THIRD ISSUE

On the ground in this number: examining unsolved questions in pandemics and epidemics

Planning for the Next Global Pandemic is the title of an editorial on the International Journal of Infectious Diseases stating that "In order to mitigate human and financial losses as a result of future global pandemics, we must plan now. As the Ebola virus pandemic declines, we must reflect on how we have mismanaged this recent international crisis and how we can better prepare for the next global pandemic. Of great concern is the increasing frequency of pandemics occurring over the last few decades."

Emerging virus indicates a newly discovered virus, one that is increasing in incidence or with the potential to increase in incidence. Emerging viruses are recognized to be a threat not only to human health but also to the wild life and other species. Further, communicable diseases not only impact on people's health conditions, but also on several socio-economic aspects. Facing epidemics and pandemics is thus a major challenge for both science and society, a challenge that requires a multidisciplinary approach.

In such this framework ASSET is placed: a EU-funded cooperative program which combines a multidisciplinary set of expertise in order to address effectively scientific and societal challenges raised by pandemics and associated crisis management. Engagement, gender equity, science education, open access, ethics and governance are thus the keywords encompassed in the main action plan launched in 2001 by the European Commission, with the aim to foster public engagement and a sustained two-way dialogue between science and civil society.

As introduced in the second issue of the ASSET Pandemic Preparedness and Response Bulletin, Share and move, each number is mainly focused on one of the six Science in Society (SiS) topics: governance of pandemics and epidemics; unsolved scientific questions; crisis participatory governance; ethical, legal and societal implications; gender pattern – vulnerability; intentionally caused outbreaks.

After dealing with governance of pandemics and epidemics, it is time to concentrate on unsolved scientific questions. Also the article mentioned above "discusses many issues including priority emerging and reemerging infectious diseases; the challenges of meeting international health regulations; the strengthening of global health systems; global pandemic funding; and the One Health approach to future pandemic planning. […] The West African Ebola virus pandemic has shown us yet again that the world is ill prepared to respond to a global health emergency." That follows similar statements made after the H1N1 influenza pandemic in 2009 such as: "The world is ill prepared to respond to a severe influenza pandemic or to any similar global, sustained and threatening public health emergency".

In line with this approach, the present third ASSET Pandemic Preparedness and Response Bulletin, Share and move, explores unsolved scientific issues (i.e. research on vaccines but also on human behavioural response and risk communication) that were highlighted within the project "Study and Analysis" phase, detailing them with regard to pandemic and emergency preparedness and response, and to relevant information shared on the web and by the most used social media.

In the end, over specific issues raised, we would end as the editorial quoted at the beginning did: "Clearly a 'One Health' approach is the way forward".

Pandemic Preparedness and Response

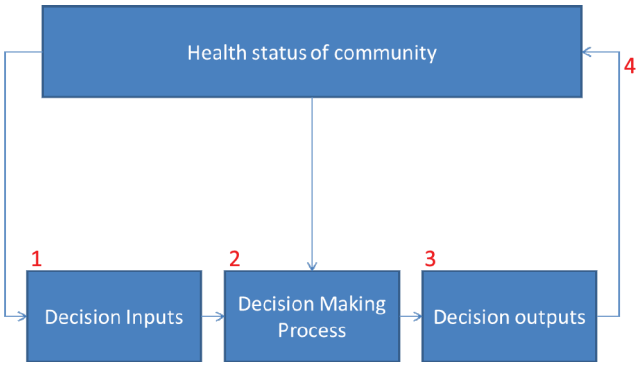
STUDYING THE "UNSOLVED SCIENTIFIC QUESTIONS" IN ASSET

What were the main open problems occurring in the 2009 pandemic?

The European Commission's Directorate for Science, Economy and Society decided in mid-2010 to set up an Expert Group on Science, H1N1 and Society ('H1N1 Expert Group', or 'HEG') in order to clarify the 'Science in Society' (SiS)-related research questions raised by the H1N1 pandemic and associated crisis management. In their report 'Science, H1N1 and society: towards a more pandemic-resilient society', at page 5, the HEG Expert Group has pointed out the general lack of knowledge from humanities and social sciences in pandemic preparedness: 'Current knowledge about public perceptions, citizens' preferred sources of information and also the impact of health professionals were not taken into consideration'.

For the future, the sort of data Britta Lundgren has discussed in her article, created by disciplines such as ethnology and folklore, provide an unexpected and fruitful source of information for policy-makers to draw on when discussing prerequisites for vaccination—not only when searching for rhyme or reason but also for re-interpretation of trust and fears. She analysed vaccine decisions operated by population in Sweden where a mass-vaccination intervention with the vaccine Pandemrix was performed. It was decided that everybody should have been vaccinated, stating that 'there is no rhyme or reason' for refraining from vaccination except for obvious medical reasons such as having an allergy to the vaccine or suffering from an autoimmune disorder. In the end, the uptake of the Pandemrix vaccine was high in Sweden (60%), and the intervention was deemed a success in administrative and political terms. Anyway, the author argues that vaccination interventions requiring compliance from large groups of people need to take into account the kinds of personal experience narratives that are produced in the complex interplay of life factors.

Also following the proposals of the HEG, the ASSET project elaborated a reference guide of unsolved scientific related research questions raised by the H1N1 pandemic and associated crisis management. This report outlines the main unanswered scientific problems concerning pandemics, particularly focusing on influenza and taking as example the A(H1N1) pdm 2009, with the aim to identify key points for an optimal preparedness in case of a pandemic in the future. Results of analysing steps occurring in decision-making processes were shown: issues presented concerned the state of the art in surveillance of emerging pathogens with potential risk of causing pandemics; decisions, preparedness and response enacted during H1N1 pandemic; risk communication addressed and human behaviours. The authors suggested that "a lack of research independent from industrial interests, as well as not enough research, has been focusing on basic influenza mechanisms, in particular targeting questions essential for the protection of the society at large and not only for scientific interest".



In a news on BMJ Nigel Hawkes refers to a report from the Academy of Medical Sciences and the Wellcome Trust saying that "a failure to carry out research during the 2009 flu pandemic has left the world unprepared for another one, with huge gaps in the knowledge base that should by now have been filled". The brief note reports what Jeremy Farrar stated: "No vaccines were available to prevent severe acute respiratory syndrome (SARS) or Middle East respiratory syndrome (MERS) and it had

taken six to nine months to set up trials for an Ebola vaccine. Furthermore, the numbers involved in trials during the 2009 H1N1 flu pandemic had been "close to zero". As a result, it is not known how well antiviral drugs such as oseltamivir (Tamiflu) and zanamivir (Relenza) work against pandemic strains of flu. […] The research protocols and infrastructure need to be put in place now—in 'peace time'—so we can start collecting new evidence immediately at the start of a new epidemic or pandemic." Carl Heneghan and Ben Goldacre remind that because oseltamivir and zanamivir are effectively at the end of their patents, trials will have to be publicly funded, forcing clinicians to rely instead on "often woeful" observational data. The former expert insists "Use of antivirals in a pandemic would not be based on the best available evidence, but principally on poor quality evidence and opinion. This is primarily due to the failure to undertake trials in the last outbreak." In another note on BMJ as well, Ingrid Torjesen reports that "Campaigners for clinical trial transparency have written an open letter to all US presidential candidates urging them to declare support for the principles of open access to clinical trial data and to commit to making it a reality in the United States if elected."

Beside specific issues concerning vaccines, the ASSET guide highlights some other unsolved questions more relevant to the methodological features of the MMLAPs, as this collaborative program is, that are such many weak areas and topics as well as in a European contest of documented low trust in public authorities and politics ("post-trust society" phenomenon) the research community is challenged on:

- communicating science in presence of uncertainties, particularly through initiatives to the public were carried out without significant expertise input;
- involvement of civil society to contrast the current old-fashioned one-direction approach adopted within decision processes, implying any feedback from the civil society;
- absence of compliance to the "epidemic intelligence framework" and low exploitation of data coming from new informal surveillance systems;
- lack of involvement for those subjects active on the field, e.g. General Practitioners, within the process of increasing awareness on pandemics and, for example, negative attitudes of healthcare workers towards vaccination;
- underestimation of social networks' role to understand public perceptions, to disseminate information and to increase knowledge and awareness;
- inter-disciplinary approaching public health problems (e.g. scarce interest towards sociology, anthropology, behavioural mathematical models in epidemiology).

Tracks of the ASSET Roadmap

In the ASSET project a systematic and accurate work followed the reference guide on unsolved scientific related research questions raised by the H1N1 pandemic and associated crisis management to design a Roadmap towards responsible, open, citizens-driven research and innovation on vaccines and antiviral drugs in pandemics. Starting from user involvement experiences in health and pharmaceutical sector, it is under study to what extent, and according to which conditions, user innovation is possible in the field of R&I on epidemic infectious diseases prevention and response. In this report evidence-based knowledge are collected to trace the pathway, showing what is the required to shift from a technological centred approach to a citizen-driven approach, indicating as well the extent and the conditions under which PPI is feasible. The review summarized in fact the best available evidence and also very instructive examples of situations where a user driven approach is strongly required as in developing diagnostic, prevention and campaign approaches. Both the figures of citizens and health professionals were used as filter.

Using the definition of roadmap as a detailed plan or explanation to guide ASSET in setting standards or determining a course of action, it can be considered as a part of the ASSET Strategic Plan that is further and in more depth detailed by the Action Plan and operationalized through a kit of tools identified. Then, among

the numerous hints produced for the roadmap a selection was operated on the ones we need to focus on in order to target industry, academy, institutional stakeholders in the field of vaccines and anti-influenza drugs. According to the EU decision 1082, such a roadmap is conceived as to be applicable at national level.

The ASSET Community of Practice (CoP) believes that open innovation in pandemic related research requires initial investments because a shift in the traditional technology-based approach is needed. This idea is in accordance with the project Strategic Plan and its Best Practice Platform/Stakeholder Portal. ASSET researchers found a significant increase in knowledge of patients' relevance and public involvement (PPI) in health research, that can be an important tool to overcome the current distrust in public health authorities and biomedical scientists. Unfortunately, public collaboration in research has been accidental whereas it should be systematic; few practical cases of PPI are available in literature. No examples of PPI in vaccine research are available. To involve progressively these topics within the RRI framework, ASSET is sharing these findings with relevant stakeholders and, to achieve that, using the opportunities offered by the its own Action Plan, like the project High Level Policy Forum (HLPF).

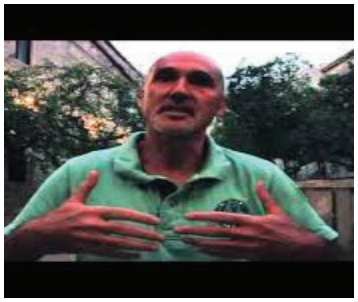
MODELS FOR HUMAN BEHAVIOURS: THE VOICE OF EXPERTS IN THE FIELD

A study

"Survey on the likely behavioural changes of the general public in 4 European countries during the 2009/2010 pandemic" is a chapter of the book titled Modeling the Interplay Between Human Behavior and the Spread of Infectious Diseases. That study moves from the issue to assess the likely impact of public health interventions, it is important to predict the acceptance of control measures, as well as the behavioural changes that may occur among the general public in response to epidemics, in particular lethal ones. The emergence of 2009 pandemic allowed us to assess the general public's behaviour during the pandemic, via two surveys: one at the beginning and one after the first wave of the 2009 pandemic, in four European countries. Results showed some differences between participating countries in previous behaviours relating to seasonal flu and in beliefs and knowledge about 2009 pandemic influenza. No substantial differences were detected among the four countries in the first survey with respect to the intended behaviours in anticipation of the spread of the pandemic virus. However, results from the second survey showed differences within and among the four participating countries. The two surveys were useful in showing differences between behavioural intentions and actual actions related to the 2009 pandemic influenza. To our knowledge this is the first study investigating the actual behaviour of the population in four EU countries and provides crucial descriptions of pandemic impact on social-network dynamics parameters which can be included in mathematical models.

An interview

Alberto d'Onofrio (IPRI; ASSET Partner) interviews Piero Manfredi (University of Pisa, Italy) asking him three questions implying behavioural items in mathematical models.



Alberto d'Onofrio: ***In Public Health (PH) Sciences and in Mathematical Modelling of infectious diseases the traditional focus is "Investigating epidemics that have a social impact". In Behavioural Epidemiology there is an additional paradoxical focus: "Investigating how the Society impacts on the spread of infectious disease". Why this new concept ? Why is it important?***

Piero Manfredi: *Large historical evidences show that human societies always set up measures (sometimes lacking any scientific basis…) to respond to the threats posed by infectious diseases. Such measures were mostly occurring at the community level (e.g. quarantine, migrating, or closing the city gates), but also individual responses were reported. Despite this evidence, for long time mathematical epidemiologists have preferred to disregard individual behaviours, and the ensuing societal impact on infection spread, by assuming that individual behaviour is static, i.e. unaffected by available information about*

the disease and possible protection measures against it. This hypothesis implies that individuals will continue to contact each other at the same rate regardless of how low or high is the perceived risk of acquiring infection/dying from it, or will continue to keep the same vaccine uptake irrespective of any rumour about the risk of vaccine adverse events. This is a simplification of reality which in modern societies has been disconfirmed in several occasions. A major instance is represented by the scare of the Mumps-Measles-Rubella (MMR) vaccine, arisen after the publication of a paper (later retracted!) suggesting a causal link between MMR immunization and autism. This rumour suddenly increased the perceived risk of vaccine side effects, so that many parents decided not to immunize their children. This in turn yielded a protracted dramatic decline of MMR coverage in the UK, eventually responsible of measles resurgence. Another example: the failure of immunization against the 2009 H1N1 pandemics. In this case, a combination of possibly inadequate public communication jointly with the perception that the disease was mild led many people not to vaccinate to avoid risks of side effects from a vaccine perceived as being of insufficiently proven safety. These examples indicate that human behavioural responses can threaten the success of control programs, and therefore favouring diseases spread and persistence. This is why in the future it will be utmost important that modelling studies of infections further focuses on the interplay between diseases spread, their perceptions and related human responses, especially when these are at risk of being policy resistant.

Alberto d'Onofrio: *Can PH Authorities try to influence behaviours of citizens. Might this kind of PH intervention be modelled?*

Piero Manfredi: *Yes. The PH system (PHS) is the key provider of information about infections and related risks, and about availability (and pro and cons) of possible control actions, such as e.g. immunization, screening, reducing risky behaviour, etc. As such the PHS can affect perceptions of risk by citizens. These perceptions from the PHS, and perceptions from other information sources, can be incorporated in the mathematical models.*

Alberto d'Onofrio: *Can Behavioural Epidemiology help overcoming doubts existing on applying mathematical models in PH?*

Piero Manfredi: *In the last 20 years, mathematical models for the transmission and control of infections have had a tremendous impact on PH, since they provide – within the boundaries of our knowledge - a rational approach to the impact evaluation of PH interventions. This role has been recently challenged exactly because most adopted models take human behaviour as given, i.e. as a "constant" unaffected by the state of the infection, and by the information and rumours circulating in the population about pros and cons of control measures. That human behaviour can deeply affect the success of control interventions is a matter of fact nowadays, as we have seen. Awareness of this is therefore fundamental before planning any new intervention strategies. Explicitly considering hypotheses about human behaviour, e.g. about possible degrees of accepting an immunization program by the public, would allow a more general understanding of the likely effects of the program considered, thereby conferring robustness to the its assessment.*

Emergency Preparedness and Response

EBOLA: IS REALLY GONE OR JUST FORGOTTEN?

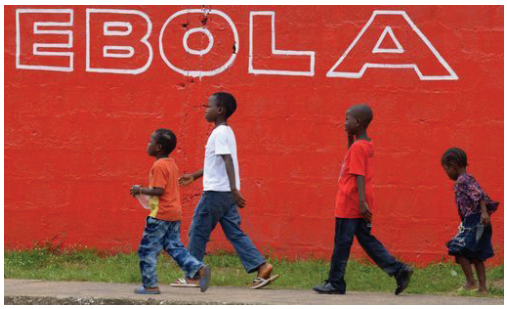
If the infection is over in Liberia since September 2015, with about 30 people in West Africa getting infected with Ebola virus weekly, UN says outbreak 'not yet finished

'Even after progress in bringing the West African Ebola outbreak under control, the health risks and danger provoked by Ebola virus disease (EVD) is continuing. Liberia was declared Ebola-free since September 2015, 3 and Sierra Leone since November 2015, 7 but on January 2016, 15 a woman died. This outbreak in Guinea, Liberia, and Sierra Leone caught the world badly unprepared during 2013–14, leading to 28.607 notified cases and claiming 11,314 lives (November 2015) since the outbreak was first declared in March 2014. EVD is in fact included among the top five to ten emerging pathogens likely to cause major epidemics that were listed by WHO in the month of December 2015.

An editorial on The Lancet (Vol 386 October 24, 2015) states that "WHO responded slowly to this major challenge in countries with sparse health provision, and disease control measures worked imperfectly. […] Despite previous outbreaks in sub-Saharan Africa, limited understanding of the physiological effects of Ebola virus has compromised preventive and therapeutic efforts. […] A study in The Lancet Infectious Diseases on 49 survivors of a 2007 Ebola outbreak in Uganda reported ocular deficits and hearing loss, among other health problems, which persisted for 2 years […] [as well as] post-Ebola discharge criteria are discussed […] in The Lancet Global Health. Salutary lessons are still being learned

from the West African Ebola outbreak—opportunities for and benefits of research will be greatest in the communities most affected. WHO's Director-General Margaret Chan believes the world is "dangerously ill-prepared" for further infectious disease outbreaks spread through the air or contagious during an incubation period.

Strengthening of and investment in health systems in countries most at risk of infectious disease outbreaks are key to prevention, and in the worst case scenarios control, of health emergencies."



In a study published on The New England Journal of Medicine, it was estimated the effectiveness of artesunate–amodiaquine, as compared with artemether–lumefantrine or no antimalarial treatment, in reducing mortality among patients with confirmed EVD who were admitted to the Ebola treatment centre in Foya. Few treatment practices or therapeutics are known to significantly reduce the risk of death. Recent in vitro assessments of drugs approved by the U.S. Food and Drug Administration for anti-EVD activity have identified a number of candidates among compounds that are used to treat other diseases, including malaria. However, little to no evidence exists on the clinical efficacy of any of these compounds against EVD. Guidelines for the management of EVD recommend treatment for malaria in patients with suspected EVD, either for those patients in whom malaria has been confirmed by a positive laboratory or rapid diagnostic test or for all patients with suspected EVD regardless of malaria diagnosis. The latter option (systematic treatment regardless of malaria confirmation) is often preferred in settings with a high malaria burden because of the prophylactic effect of malaria drugs, even in the absence of current infection. Some guidelines recommend an artemisinin-based combination of artemether and lumefantrine as the first choice of therapy because of concerns about potential liver-related toxic effects of amodiaquine in the primary alternative combination, artesunate–amodiaquine. In August 2014, the Ebola treatment centre in Foya (Lofa County, Liberia) ran out of its supply of artemether–lumefantrine after a sudden spike in admissions to the centre. During a 12-day period, artesunate–amodiaquine was supposed to be prescribed systematically for all patients with suspected EVD who were admitted to the Ebola treatment centre, with no other known systematic changes in care. Although this situation was unplanned, it provided the conditions to explore the possible differential effects of these two antimalarial therapies on survival among patients with confirmed EVD. The interest of the study in making these comparisons was driven by in vitro results that showed the efficacy of amodiaquine in inhibiting Ebola virus activity.

RE-EMERGING INFECTIOUS DISEASES

An editorial on The Lancet titles "Zika virus: a new global threat for 201

Zika virus is an emerging mosquito-borne arbovirus that was first isolated from a rhesus monkey in Uganda in 1947, and caused sporadic human infections in some African and Asian countries, with usually mild symptoms of fever, rash, and arthralgia. In 2007, it caused an epidemic on Yap Island in the Federated States of Micronesia, then spread to many countries in Oceania, before arriving in the Americas in 2014–15, probably via Easter Island.

Central and South America are facing new Zika outbreaks so that concerns about the threat posed to global health security by the virus are further escalating. After detection of autochthonous (locally transmitted) cases of Zika in Colombia, El Salvador, Guatemala, Mexico, Paraguay, Puerto Rico, and Venezuela, "five autochthonous cases detected in Suriname are reported in Correspondence online, with complete coding of the Zika virus sequence for one patient, and envelope protein coding sequences for three others. Phylogenetic analyses show that the Suriname strains belong to the Asian genotype, and are closely related to the strain that was circulating in French Polyne-

sia in 2013. Last month, the Ministry of Health in Brazil reported a twentyfold annual increase in cases of newborn babies with microcephaly in the north-eastern region of the country. The ocular findings (funduscopic changes in the macular region) in three of these babies with microcephaly are described in a second Correspondence published online. A causal link between Zika virus in the mother and microcephaly in the newborn baby has yet to be firmly established, but is a worrying possibility. Other congenital neurological anomalies and an increased frequency of Guillain-Barré syndrome linked to Zika virus have also been reported.

With an estimated 440 000–1 300 000 cases in Brazil alone (January 2016), Zika virus could be following in the footsteps of dengue and chikungunya, which are also transmitted by the Aedes aegyptimosquito. Given that an outbreak anywhere is potentially a threat everywhere, now is the time to step up all efforts to prevent, detect, and respond to Zika virus."

Public Health Initiatives

PANDEMIC INFLUENZA PREPAREDNESS: SHARING OF INFLUENZA VIRUSES AND ACCESS TO VACCINES AND OTHER BENEFITS

Report of the Special Session of the Pandemic Influenza Preparedness Framework Advisory Group

The WHO Director-General has transmitted to the Executive Board at its 138th session the report of the Special Session of the Pandemic Influenza Preparedness Framework Advisory Group, which was held in Geneva on 13 and 14 October 2015. Within the relevant recommendations addressed to the DG, it can be found that all aspects of the PIP Framework should be comprehensively considered "and [to] assess whether implementation of the PIP Framework is meeting its objectives in accordance with its provisions to: Improve pandemic influenza preparedness and response, and strengthen the protection against pandemic influenza by improving and strengthening the WHO Global Influenza surveillance and response system "WHO GISRS", with the objective of a fair, transparent, equitable, efficient, effective system for, on an equal footing: (a) the sharing of H5N1 and other influenza viruses with human pandemic potential; (b) access to vaccines and other benefits".

MANAGING GLOBAL HEALTH SECURITY

The World Health Organization and Disease Outbreak Control

In line with the lectio magistralis by Luigi Migliorini (WHO/EU) at the first edition of the ASSET Summer School (Rome; September 2015, 21-24), this book examines how the World Health Organization's approach to fulfilling its disease eradication mandate – now commonly described as 'global health security' – has changed and adapted over time. Drawing on constructivist and rationalist theories of international organization, as well as several case studies (malaria, smallpox, SARS, influenza, Ebola), the volume explores how the organization's secretariat has exercised autonomy and authority to establish new customary practices and amend disease control policies and procedures in response to past failures and successes. Kamradt-Scott also investigates how the organization's member states have responded to these changes by imposing new constraints on the WHO's behaviour, and what these changes signal for the future. The topics are: 1) The Legal Basis For The WHO's Global Health Security Mandate And Authority; 2) The WHO's Classical Approach To Disease Eradication; 3) Securitization And SARS: A New Framing?; 4) New Powers For A New Age? Revising And Updating The IHR; 5) Pandemic Influenza: 'The Most Feared Security Threat'; 6) Global Health Security And Its Discontents.

I-MOVE: A EUROPEAN NETWORK TO MEASURE THE EFFECTIVENESS OF INFLUENZA VACCINES

Monitoring seasonal and pandemic influenza vaccine effectiveness in Europe

Since 2007, the European Centre for Disease Prevention and Control (ECDC) has supported I-MOVE (influenza monitoring vaccine effectiveness), a network to monitor seasonal and pandemic influenza vaccine effectiveness (IVE) in the European Union (EU) and European Economic Area (EEA). To set up I-MOVE, both a literature review and a survey were conducted on methods used in the EU/EEA to measure IVE and held expert consultations to guide the development of generic protocols to estimate IVE in the EU/EEA. On the basis of these protocols, from the 2008/09 season, I-MOVE teams have

conducted multicentre case–control, cohort and screening method studies, undertaken within existing sentinel influenza surveillance systems. The IVE estimates have been useful in helping to guide influenza vaccine policy at national and European level.

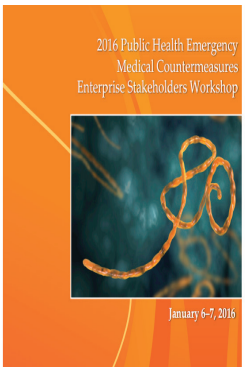
PAST CONFERENCES

Lessons learned for public health at the EU Conference on the Ebola outbreak in West Africa. Some ASSET project Partners partook in the Communication Workshop

Ministers for Health as well as high-level representatives from the Member States, European Commission, World Health Organization (WHO) and NGOs met on 12 October 2015 in Mondorf-les-Bains (Luxembourg) for a three-day conference entitled "Lessons learned for public health from the Ebola outbreak in West Africa – how to improve preparedness and response in the EU for future outbreaks". Among the main conclusions, it was stated that cross-sectoral cooperation is needed to strengthen the European health security system and Ebola served mainly as a test so far, leaving so much desired in terms of preparedness and response. Four workshops were held and the third dealt with "Communication activities and strategies addressed to the public and health professionals". Some ASSET Consortium Partners joined it that led to three main conclusions: Health Security Committee Communicators network shall be fully operational and active; Emergency Risk Communication must be considered as an integral part of any emergency response; an important factor to take in account is deployment of trained communication experts to affected countries. When preparing national and transnational emergency plans, research on communication and other SiS related issues (such as exploited in programs like ASSET or also TELL ME) need to be carefully considered because of their impact on the spread of the disease itself.

PHEMCE Stakeholders Workshop 2016

Among the range of serious threats the United States continues to face to its national health security naturally occurring and emerging infectious diseases (EID), including pandemic influenza, can be retrieved. The Public Health Emergency Medical Countermeasures Enterprise (PHEMCE) coordinates Federal efforts to ensure that our nation is prepared with the medical countermeasures it needs to meet the challenges posed by EID threats. This two-day workshop (January 2015, 6-7) highlighted past progress and future directions in developing, stockpiling and effectively utilizing drugs, vaccines, and devices that may be required in public health emergencies.



NEXT CONFERENCES

Research and innovation on vaccines

All about vaccines will be explored at the Euro Vaccines 2016 (10th Euro Global Summit and Expo on Vaccines & Vaccination) conference that is going to be held in Rome, Italy from June, 2016 16 to 18.

An international forum for the prevention and control of emerging infectous diseases

The Conference on Emerging Viruses (ICEV 2016) will be held in Dubai August 10-11, 2016. Ebola, HIV, dengue, Influenza, Hantavirus are some of prominent emerging viruses. Over 2.5 billion people - over 40% of the world's population - are now at risk from dengue and WHO currently estimates there may be 50-100 million dengue infections worldwide every year.

Social networks

BRIEF HIGHLIGHTS FROM LINKEDIN

Treatment of Ebola with malaria and Zika are discussion issues

Within the discussions started and run by the LinkedIn group "Global Public Health" (169,316 members) also two of the issues presented in the current Bulletin are debated: correlation between Ebola and preventative Malaria treatment (3,215 "like"; 01/2015) and how Zika is not always a harmless infection resulting in microcephaly that is a brain condition affected more than 2,000 infants in Brazil (3,821 "like"; 01/2015).

HHS FUNDS DEVELOPMENT OF HIGH-SPEED MANUFACTURING FOR N95 RESPIRATORS

Manufacturing line could offer more than 10 times current capacity for pandemic preparedness

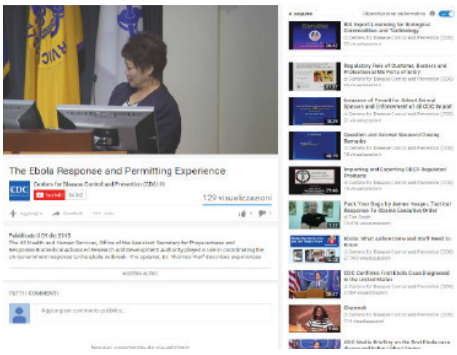
On December 2015, 10 it is communicated in a note that to protect health care workers and other patient caregivers in an influenza pandemic or other public health emergency, the U.S. Department of Health and Human Services Office of the Assistant Secretary for Preparedness and Response (ASPR) will support development of a high-speed manufacturing line to produce N95 respirators. This type of equipment is used in health care settings to prevent the transmission of microorganisms through airborne particles. ASPR leads HHS in preparing the nation to respond to and recover from adverse health effects of emergencies, supporting communities' ability to withstand adversity, strengthening health and response systems, and enhancing national health security. HHS is the principal federal agency for protecting the health of American population. Pandemic preparedness in the United States is considered imperative to protecting health and saving lives, and respirator manufacturing capacity remains a critical gap in that preparedness.

THE US RESPONSE TO EBOLA TOLD ON YOUTUBE

CDC chooses to communicate by video on the web

The US Health and Human Services, Office of the Assistant Secretary for Preparedness and Response/ Biomedical Advanced Research and Development Authority played a role in coordinating the US Government response to the Ebola outbreak. The speaker, Dr. Thomas Warf, describes experiences related to the importing and exporting of Ebola virus samples and the research and development of potential Ebola vaccine candidates. Comments on this video are allowed in accordance with CDC comment policy

This video can also be viewed at this link (Published on 09 December 2015)



HHS News
U.S. Department of Health and Human Services
www.hhs.gov/news

On the web

THE EU-FUNDED PROJECT ECOM

To develop evidence-based tools for an effective communication in outbreak management

ECOM stands for *"Effective Communication in Outbreak Management: development of an evidence-based tool for Europe"*. It is a research project under the 7th Framework Programme of the EU (FP7-HEALTH-2011) and runs from February 2012 till February 2016. Its main goal is to develop an evidence-based behavioural and communication package for health professionals and agencies throughout Europe in case of major outbreaks of infectious diseases.

From the ASSET world

In terms of Policy watch, the second ASSET High Level Policy Forum meeting has been organized by TIEMS and hosted at the Danish Board of Technology (DBT), in Copenhagen, on January 2015, 15. The main focus of the meeting was the ASSET Strategic Plan, the Vaccination and Gender Issues findings and Preparations for Citizens consultations. Other topics of discussion were the EU conclusions and the decision 1082 update coming out from the EU Lessons learned Conference and Workshop in Luxembourg in October 2015.

Within the work on Action Plan definition, basing on the lines defined in the ASSET Strategic Plan and in its related Roadmap project researchers are studying a detailed description and timetable of MML actions in its Action Plan Handbook to be operationalized through a Tool Box. The action plan is composed of action steps and includes a specific plan on competence development aimed at enhancing awareness, knowledge, commitment and capacity necessary to incorporate gender perspectives, ethical considerations, science communication, citizens participation, in flu pandemic preparedness strategies and actions.

In a SnapShot!

FROM ECDC

A tool to calculate the Burden of Communicable Disease in Europe

The Burden of Communicable Disease in Europe (BCoDE) toolkit is a stand-alone software application which allows calculation of disability-adjusted life years (DALYs) for a selection of 32 communicable diseases and six healthcare-associated infections.

Disclaimer

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The European grant agreement ensures scientific and editorial freedom to the ASSET consortium partners.

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