

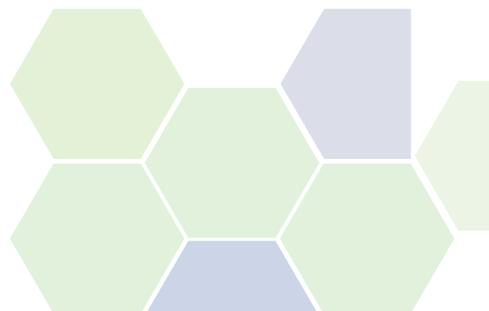


Pandemic Preparedness and Response Bulletin

Issue 4, August 2016



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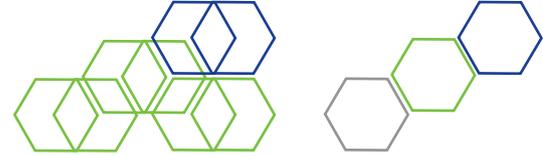




ASSET

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

WELCOME TO THE FOURTH ISSUE OF THE ASSET PANDEMIC PRE-PAREDNESS AND RESPONSE BULLETIN

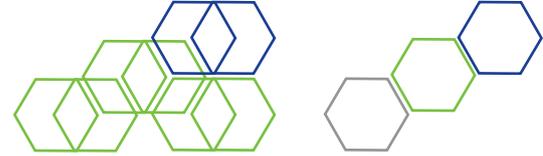
The focus in this number is on the intentionally caused outbreaks

[Report from Paris](#) is the title of an article by Charlotte J. Haug published on the New England Journal of Medicine that describes the process since the terrorist attacks occurred in Paris in November 2015 till a long-term healing perspective implying concepts such as preparing a resilient system as a whole and ending “This is public health [...] During that night, I [Benoît Vallet, Director General of Health in France] had the feeling I was back in the emergency room or in an intensive care facility. But this time, I was curing the body of society”. These statements have become even much more meaningful after the attacks in Brussels, in Iraq and in Pakistan in late March 2016.

The European cooperative program [ASSET](#) combines a multidisciplinary set of expertise in order to effectively address scientific and societal challenges raised by pandemics and what WHO defines public health emergencies of international concern. 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 anticipated in the previous ASSET Pandemic Preparedness and Response [Bulletin](#), *Share and move*, each number is mainly focused on one of the six Science in Society (SiS) topics dealt with in ASSET: governance of pandemics and epidemics; unsolved scientific questions; crisis participatory governance; ethical, legal, and societal implications; gender pattern - vulnerability and intentionally caused outbreaks.

The [second](#) issue focused on governance of pandemics and epidemics, the [third](#) Bulletin concentrated on unsolved scientific questions. Proposing the same structure like the previous ones, the present number deals with intentionally caused outbreaks that were highlighted within the project “*Study and Analysis*” phase, with regard to the aspects of preparedness and response, and to relevant information shared on the web and by the most used social media.



Pandemic Preparedness and Response

STUDYING “INTENTIONALLY CAUSED OUTBREAKS” IN ASSET

How do these public health international emergencies characterize?

The risk posed by Intentionally Caused Outbreaks (ICO) represents a growing concern for law enforcement, governments and public health officials around the world. Biological materials - such as bacteria, viruses, parasites and toxins - are significantly cheaper and easier to produce, handle and transport than radiological or chemical materials. They are difficult to detect and symptoms from exposure may not appear for days, possibly weeks. Moreover, advances in laboratory technology have brought the science for building a bioweapon within reach of terrorists and non-state actors. Although it has been very rare to see biological materials being used as weapons, such incidents are of importance due to their potentially high consequences. Even a hoax event can be an effective way of instilling widespread fear among the public.

When an outbreak occurs, it may be difficult to determine whether the outbreak is intentional or not. By assessing the history, proven occurrences, threat assessments and countermeasures (among other areas) we are able to see some overarching issues that could constitute governance problems for concerned actors.

In ASSET, ICOs have been addressed by [analysing](#) relevant policy documents and carrying out a taxonomy of the main governance problems, chiefly the tension between secrecy and transparency, freedom of research and security, citizen involvement and experts’ decisions.

The analysis has been performed about science progress that can potentially be used for biological attacks, capacity response to biological threats, policies developed at national and international levels, laboratory safety and security, dual-use and biological threat agents.

The taxonomy of the main governance problems posed by the risk of ICOs in democratic societies was

- developed and populated as a table cross-categorising the problems.

The main governance problems were then classified under specific problem areas:

- **Tension between secrecy and transparency** - problems relate to state biological weapons programmes, international agreements with vague repercussions and loose implementation, dual-use research, stockpiles, biological agents’ reservoirs and public communication;
- **Freedom of research and security** - criticalities mainly refer to dual-use issues, movements of agents and equipment, laboratory safety and security and the security of the public;
- **Citizen involvement** - weak issues concern protection of citizens, their say in decision-making processes, involvement in prevention, preparedness, response and recovery as well as public communication aspects;
- **Experts’ decisions** - the main governance problem areas lie within expert involvement in policy, expert involvement that is required for decisions and complex problem areas not possible to solve without expert advice and communicating complex areas to policy-makers and the public.

Each problem occurring in the four categories listed above was analyzed at international and national levels, considering the implication of several features, namely medical services, infrastructure, public, law enforcement, industrial, communication, media, research, and pharmaceutical.

What’s next

As explained before, governance problems were the focus. An approach based on identifying problems may be less complicated than a solution-oriented approach. Problem identification does not mean there are no possible solutions to be operated. These are problems that should be noted while developing policies and good governance, but the overview of main policy documents does give some pointers to viable solutions and important focus areas that are already progressing.

Governance problems may be more easily identified in current literature and research rather than existing policy documents that aim to address the problems. In other words, policy-makers do not necessarily have to come up with new solutions for all governance problems. It is important to address the problems identified, but equally important to keep working



with solutions that can be furthered and broadened such as international regimes and agreements.

This analysis could be used as food for thought concerning intentionally caused outbreaks, for all phases of contingency planning. There is a wide variety of issues in the field, and no single policy solution can be sufficient without a holistic approach that considers the society as a whole. All of the four problem areas identified should be considered and the taxonomy might be consulted to better define focus areas and to investigate most important aspects to include. Stakeholders who could be interested in the analysis developed are: policy makers dealing with intentionally caused outbreaks, chemical, biological, radiological and nuclear (CBRN) security, bioterrorism and related subjects.

A FOCUS ON ALERT-RESPONSE CAPACITY BUILDING UNDER THE INTERNATIONAL HEALTH REGULATIONS (IHR)

Procedures concerning public health emergencies of international concern (PHEIC)

Some serious public health events that endanger international public health may be determined under the Regulations to be public health emergencies of international concern ([PHEIC](#)). The term Public Health Emergency of International Concern is defined in the IHR (2005) as “an extraordinary event which is determined, as provided in these Regulations:

- to constitute a public health risk to other States through the international spread of disease; and
- to potentially require a coordinated international response”.

This definition implies a situation that is serious, unusual or unexpected, carries implications for public health beyond the affected State’s national border and may require immediate international action. The responsibility of determining whether an event is within this category lies with the WHO Director-General and requires the convening of a committee of experts - the IHR Emergency Committee. This committee advises the Director General on the recommended measures to be promulgated on an emergency basis, known as temporary recommendations. Temporary recommendations include health measures to be implemented by the State Party experiencing the PHEIC, or by other States Parties, to prevent or reduce the international spread of disease

and avoid unnecessary interference with international traffic.

The Emergency Committee also gives advice on the determination of the event as a PHEIC in circumstances where there is inconsistency in the assessment of the event between the Director-General and the affected country/countries. The Emergency Committee continues to provide advice to the Director-General throughout the duration of the PHEIC, including any necessary changes to the recommended measures and on the determination of PHEIC termination. WHO maintains an IHR roster of experts and the members of an IHR Emergency Committee are selected from this roster and/or WHO expert advisory panels and committees. At least one member of the Emergency Committee should be an expert nominated by a State Party within whose territory the event arises.

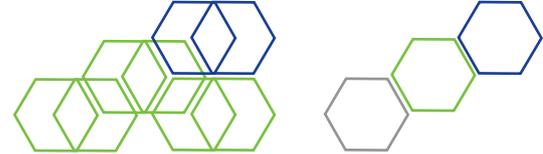
GLOBAL HEALTH SECURITY INITIATIVE (GHSI)

The [Global Health Security Initiative](#) is an informal, international partnership of health officials from the G7 countries, Mexico, and the European Commission, with WHO participation as an expert advisor to the GHSI. The aim of the GHSI is to strengthen health preparedness and response globally to threats of biological, chemical, radio-nuclear terrorism (CBRN) and pandemic influenza. It provides a platform for health security preparedness at global level and provides advice during health emergencies.

This Initiative was launched in November 2001 by Canada, the European Union, France, Germany, Italy, Japan, Mexico, the United Kingdom and the United States with the WHO participation. The GHSI was envisaged as an informal group to fill a gap for like-minded countries to address health issues of the day, such as global health security.

EUROPEAN CBRNE RISK ANALYSIS

Roberto Mugavero (from the University of Rome “Tor Vergata” - Department of Electronic Engineering), Valentina Sabato, Federico Benolli, Silvia Soldatelli (from the OSDIFE - Observatory on Security and CBRNe Defence) carried out an assessment of the current chemical, biological, radiological-nuclear and explosive (CBRNe) risk framework, highlighting main data related to criminal and accidental events occurred



in Europe from July 2014 and December 2015. The study is published in issue 26 of the TIEMS [newsletter](#) - March 2016, from page 83 to 92. There are also several European projects that deal with research on CBRN(e) risk and mitigation.

On 22 October 2013, the EU adopted a Decision to improve preparedness across the EU and strengthen the capacity to coordinate response to health emergencies ([Decision No 1082/2013/EU](#) of the European Parliament and of the Council of 22 October 2013 on serious cross-border threats to health and repealing Decision No 2119/98/EC).

This Decision entered into force on 6 November 2013.

This legislation is an important step forward in improving health security in the European Union and protecting citizens from a wide range of health threats. It helps Member States prepare for and protect citizens against possible future pandemics and serious cross-border threats caused by communicable diseases, chemical, biological or environmental events.

The EU coordinates national policies to combat major cross-border threats to public health, including deliberate or accidental release of CBRN agents. The EU also develops CBRN preparedness and response plans at the EU-level.

EU preparedness focuses on all types of CBRN hazard - man-made, natural, accidental or deliberate, e.g. deliberate contamination of drinking water, accidental radio-nuclear contamination or the emergence of a new infectious disease including those that take the form of a pandemic.

Organisational framework for CBRN threats in the EU - The EU Health Security Committee is the key coordination body for health security in the EU. The Committee is composed of representatives from the national administration of each EU country, the Commission's Directorate-General for Health and Consumers and other relevant Commission departments and agencies (e.g. ECDC, EMA). The three sections of the HSC are (1) CBRN, (2) influenza and (3) generic preparedness planning.

The Commission is actively developing and strengthening the international relations and cooperation on health security. It is a member of the Global Health Security Initiative, the international partnership to enhance public-health preparedness and response. With the World Health Organisation, the Commission is developing a road map for joint work on: international health regulations (IHR), emergency preparedness, communicable diseases such as HIV/AIDS and tuberculosis, antimicrobial resistance, immunization.

The EU-level CBRN preparedness/response activities include:

1. crisis-management arrangements and strategies
2. communication systems linking up EU countries
3. expert advice on prevention, treatment and mitigation
4. health risk assessments
5. promoting research in CBRN related topics.

Preparedness: the EU action in the field of preparedness planning for serious cross-border health threats aims at strengthening capacities to respond rapidly to any kind of emergency affecting or likely to affect public health. This includes advising national authorities and ensuring that they take on board the EU dimension, considering that emergency planning at national level may also have an impact beyond borders. Having an EU-level strategy provides a backbone for developing national plans to address different types of health threats - e.g. pandemic influenza, SARS, other events caused by biological or unknown agents, accidents caused by chemical agents, natural events of environmental origin such as climate change, or deliberate acts. It helps to ensure the inter-operability of national plans - through coordination mechanisms, analysis and communication tools.

Important areas of preparedness planning are:

- Generic preparedness planning
- [Pandemic influenza preparedness](#) (including joint procurement of pandemic vaccines)
- Preparedness for chemical, biological and radio nuclear (CBRN) threats
- Bridging health and security.

Risk assessment: in responding to an emerging cross-border health threat, the first crucial step is to assess the risks. The Decision 1082/2013/EU on serious cross border threats to health puts in place rapid and efficient risk assessment mechanisms. This involves mobilising expertise from the relevant EU and international bodies, to provide robust scientific advice to feed into risk management. Such advisory bodies include:

- European Centre for Diseases Prevention and Control (ECDC)
- European Food Safety Authority (EFSA)
- World Health Organisation (WHO)



Risk management: the Commission is working closely with EU governments to ensure that their response to serious cross-border health threats is coherent and well coordinated. The Commission's Health Security Initiative includes a requirement for them to notify all types of threats at EU level, not only communicable diseases.

The EU Health Security Committee has established a solid base for preparedness activities, by:

- enabling EU governments to exchange information and evaluate health events
- functioning as a discussion forum that advises health ministers
- facilitating coordinated crisis response by EU governments.

The Decision 1082/2013/EU on serious cross-border gives the Health Security Committee a solid legal footing in co-ordinating preparedness. It allows the Health Security Committee to decide quickly on the coordination of national responses, communication messages to the public and to the healthcare professionals.

Risk communication: clear and effective information and communication with the public and EU governments is an essential part of the crisis response. The Commission seeks to improve this by developing EU-wide strategies, better integrating communicators into the crisis-management process and strengthening their cooperation with decision-makers and risk managers.

The Health Security Committee has established a network that brings together communicators from national risk-management authorities, the Commission and EU agencies.

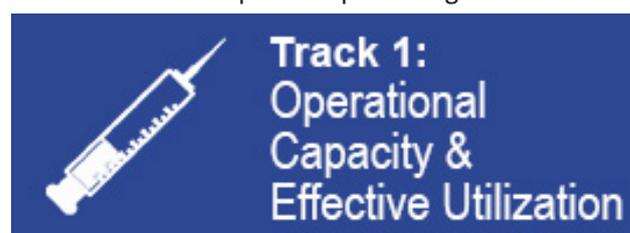
Within the EU, the network helps communicators cooperate with each other:

- during a crisis - share information in the early stages and coordinate common strategies and messages to the public
- longer-term - exchange best practice on health risks/crisis communication and recommendations for preventing diseases caused by the threats.

Globally, the network is an important channel for containing and mitigating global health threats. It enables the EU to spread information rapidly worldwide, by connecting with existing communicators' networks under the Global Health Security Initiative and the WHO network under the International Health Regulations (IHR).

PHEMCE STAKEHOLDERS WORKSHOP 2016

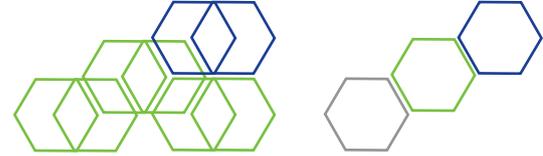
The United States continues to face a range of serious threats to its national health security from the deliberate use or accidental release of chemical, biological, radiological, and nuclear (CBRN) agents, as well as from naturally occurring and emerging infectious diseases (EID), including pandemic influenza. The Public Health Emergency Medical Countermeasures Enterprise (PHEMCE) coordinates Federal efforts to ensure that the USA is prepared with the medical countermeasures it needs to meet the challenges posed by CBRN and EID threats. A two-day [workshop](#) (January 2015, 6-7) highlighted past progress and future directions in developing, stockpiling and effectively utilizing the drugs, vaccines, and devices that may be required in public health emergencies caused by either naturally occurring epidemics or intentional chemical, biological, radiological and nuclear attacks. The workshop developed along four tracks:



- PHEMCE Preparedness Goals and Operational Capacity
- Clinical Guidance on the use of Medical Countermeasures
- Challenges of collecting post-marketing data on safety and efficacy for MCMs approved under the animal rule
- The Strategic National Stockpile



- Revised MCM Requirements process combined with Risk Assessments
- Science Needs during Crisis Response
- Biosafety and Biosecurity
- Focusing on Populations with Special Needs



 **Track 3:
Industry
Partnerships**

How Can We Help You Make that Product?
 Accelerating Research Transitions: NIH Support and
 Services for Medical Countermeasure Development
 Combating Antibiotic Resistant Bacteria Program
 Past, Present and Future of the MCM Initiative at
 FDA

 **Track 4:
Emerging
Infectious Diseases**

The MERS CoV Connection
 Dealing with Emerging Infectious Diseases
 Ebola Response - After Action Report
 Influenza and respiratory pathogens update

Emergency Preparedness and Response

WHO STATEMENT ON ZIKA VIRUS

From the first meeting of the International Health Regulations (2005) (IHR 2005) Emergency Committee

The first [meeting](#) of the Emergency Committee (EC) convened by the Director-General under the International Health Regulations (2005) (IHR 2005) regarding clusters of microcephaly cases and other neurological disorders in some areas affected by Zika virus was held by teleconference on 1 February 2016, from 13:10 to 16:55 Central European Time. The WHO Secretariat briefed the Committee on the clusters of microcephaly and Guillain-Barré Syndrome (GBS) that have been temporally associated with Zika virus

transmission in some settings. The Committee was provided with additional data on the current understanding of the history of Zika virus, its spread, clinical presentation and epidemiology. The following States Parties provided information on a potential association between microcephaly and other neurological disorders with Zika virus: Brazil, France, United States of America, and El Salvador.

The Committee advised that the recent cluster of microcephaly cases and other neurological disorders reported in Brazil, following a similar cluster in French Polynesia in 2014, constitutes a Public Health Emergency of International Concern (PHEIC). The Committee provided a list of recommendations to the Director-General for her consideration to address the PHEIC (clusters of microcephaly and other neurological disorders) and their possible association with Zika virus, in accordance with IHR (2005). Advice given by experts concern surveillance of microcephaly and other neurological disorders and precautionary measures about Zika virus transmission, in terms of longer-term and travel measures; clinical, virologic and epidemiologic data sharing among national authorities to facilitate international understanding of these events, to guide international support for control efforts, and to prioritize further research and product development. Based on this advice the Director-General declared a Public Health Emergency of International Concern (PHEIC) on 1 February 2016. The Director-General endorsed the Committee’s advice and issued them as Temporary Recommendations under IHR (2005).

WHO calls on countries to prepare as [Zika virus](#) expected to spread in Europe in late spring and summer



In light of the current widespread outbreak occurring in Latin America and the Caribbean, the risk for Zika virus importation and spread in the European Region should not be underestimated. To support countries in the European Region in targeting preparedness work and to guide prioritization of activities, the risk for a Zika virus disease outbreak was assessed.



A [new WHO report](#) assesses the risk of a Zika virus disease outbreak occurring during late spring and summer in the European Region. While the overall risk is low to moderate, countries where Aedes mosquitoes are present are more likely to experience a Zika virus outbreak. The report contains a series of actions that WHO recommends for countries, according to their likelihood of Zika transmission. WHO urges European countries, especially those with high and moderate likelihood of local Zika virus transmission, to follow these recommendations to prevent or rapidly contain a Zika virus disease outbreak. WHO's support to European countries to prepare for and respond to health risks such as Zika virus disease is a key aspect of the reform of WHO's work in emergencies.

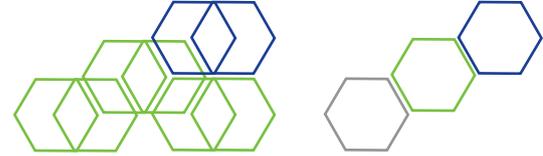
During a health crisis, such as the Zika virus outbreak, the European Commission works closely with the WHO and with EU governments to ensure that their response to cross-border health threats is coherent and well-coordinated, in accordance with Decision 1082/2013/EU on serious cross-border threats to health.

As regards communicable diseases, the European Centre for Disease Prevention and Control (ECDC) is in charge of providing risk assessment. At the request of the Commission the ECDC carried out a [risk assessment on Zika virus disease](#) (latest, sixth update published on 20 May 2016). The risk assessment synthesizes the main scientific developments from the past month, considers the main risks for the EU and its citizens and sets out a range of options for EU/EEA Member States' consideration. The evidence of an association between Zika virus infection during pregnancy and congenital central nervous system malformations, the association between Zika virus infection and Guillain-Barré syndrome and the geographic expansion of the outbreak, mean that the epidemic remains of public health importance. The evolution of the Zika epidemic in the Americas demands close monitoring as it has a direct impact on the risk of importation and possible occurrence of local transmission in the European Union.

ECDC endorses the update in the [WHO recommendations on preventative measures](#) against Zika virus infection for returning travelers. The [ECDC recommendations](#) are changing accordingly.

INFORMATION FOR TRAVELERS TO AND EU CITIZENS RESIDING IN AREAS WITH ACTIVE TRANSMISSION

- Travelers visiting countries where there is active transmission of Zika virus and EU citizens residing in these countries should:
 - be made aware of the ongoing outbreak of Zika virus infection and the fact that Zika virus is usually transmitted by mosquito vectors but can be also transmitted by sexual intercourse
 - take measures to prevent mosquito bites indoors and outdoors, especially between sunrise and sunset when Aedes mosquito vectors are most active and biting. These measures include:
 - The use of mosquito repellent in accordance with the instructions indicated on the product label
 - Wearing long-sleeved shirts and long trousers, especially during the hours when the type of mosquito that is known to transmit the Zika virus (Aedes) is most active
 - Sleeping or resting in screened or air-conditioned rooms, otherwise use mosquito nets, at night and during the day.
- Pregnant women and women who are planning to become pregnant and planning to travel to areas with widespread transmission should postpone non-essential travel
- Pregnant women and women who are planning to become pregnant and planning to travel to areas with sporadic transmission should consult their physician or a travel clinic and consider postponing non-essential travel
- Pregnant women residing in countries with active transmission (sporadic and widespread) should consult their healthcare providers for advice and follow strict measures to prevent mosquito bites
- Travelers with immune disorders or severe chronic illnesses should consult their doctor or seek advice from a travel clinic - particularly on effective prevention measures - before travelling to countries with active transmission
- Travelers to countries with active Zika transmission and EU citizens residing there should be ad-



vised that using condoms could reduce the risk of sexual transmission through semen.

INFORMATION FOR TRAVELERS RETURNING FROM AREAS WITH ACTIVE TRANSMISSION OF ZIKA VIRUS

- Pregnant women who have travelled or resided in areas with active transmission should mention their travel during antenatal visits in order to be assessed and monitored appropriately
- In order to protect the foetus, male travelers returning from areas with active transmission should consider using a condom with a pregnant partner until the end of pregnancy
- Travelers returning from areas with ongoing Zika virus transmission should be advised to use a condom for at least 8 weeks after returning, in order to reduce the potential risk of onward sexual transmission. **If before or during that period Zika virus symptoms occur, men should use condoms or consider abstinence for at least 6 months.**
- Travelers, including those with immune disorders or severe chronic illnesses, showing symptoms compatible with Zika virus disease within two weeks of return from an area with active transmission are advised to contact their healthcare provider and mention their recent travel.

ACTION FOR PREVENTING COMMUNICABLE DISEASES

Plan needed to prevent infectious disease spread via air travel

In an [article](#) by Rita Rubin published on JAMA the conclusion made within a Government Accountability Office (GAO) report is emphasized. The United States lacks a comprehensive plan to prevent and contain the spread of diseases such as Ebola through air travel. “US airports and airlines are not required to have individual preparedness plans, and no federal agency tracks which airports and airlines have them”, stated the [report](#) released by Rep Rick Larsen (D, Wash). The Chicago Convention, an international aviation treaty signed by the United States, requires member countries to develop a national aviation preparedness plan for communicable disease out-

breaks, according to the GAO. While the Department of Transportation and the Centers for Disease Control and Prevention say that parts of a national plan already exist, the Federal Aviation Administration has reported that individual airport plans are not aimed at handling an epidemic, the GAO said. “In a world where nearly 3 billion people board planes each year, the US aviation system must have a clear plan of action to handle infectious disease crises”, Larsen, ranking member of the aviation subcommittee, said in a [statement](#). Banning air travel, as some called for during the Ebola outbreak in 2015, “is not a feasible or effective solution to an epidemic”, Larsen added.

IN THE FIELD OF PREPAREDNESS

Millions could die as world unprepared for pandemics, says UN. Panel convened to analyse deadly outbreaks says capacity to respond to communicable diseases remains ‘woefully insufficient’

A global epidemic far worse than the [Ebola](#) outbreak is a real possibility and could kill many millions if the world does not become better prepared to deal with the sudden emergence and transmission of disease, the UN has said in a hard-hitting report. The report has emerged in draft form, as experts rally to deal with the rapid spread of the [Zika virus](#) across Latin America, which has been linked to thousands of cases of brain damage in babies. Countries in the region have again been caught off-guard because of the lack of scientific knowledge about the virus and the absence of good data on microcephaly, a condition in which babies’ heads fail to grow properly in the womb.

The report comes from the high-level panel on the global response to health crises, set up by the UN secretary general in April 2015, as the Ebola epidemic that killed more than 11,000 people finally waned. [Several other inquiries](#) into what occurred, and the slow and inadequate response by the World Health Organization (WHO), have reported and fed into the UN panel’s conclusions. In the UN report it is stated that “the high risk of major health crises is widely underestimated, and ... the world’s preparedness and capacity to respond is woefully insufficient. Future epidemics could far exceed the scale and devastation of the West Africa Ebola outbreak”, says the panel’s chair, Jakaya Mrisho Kikwete from Tanzania, outlining their findings in the preface. “Too often, global panic about epidemics has been followed by complacency and inaction. For example, the 2009 in-



fluenza pandemic prompted a similar review of global preparedness, but most of its recommendations were not addressed. Had they been implemented, thousands of lives could have been saved in West Africa. We owe it to the victims to prevent a recurrence of this tragedy.” The report, [which has been posted online in advanced, unedited form in the UN’s Daily Journal](#), is not just about the mishandling of Ebola, but about the crucial need for the world to put in place systems to detect and fight new disease threats. “Notwithstanding its devastating impact in West Africa, the Ebola virus is not the most virulent pathogen known to humanity”, says the report. “Mathematical modelling by the Bill and Melinda Gates Foundation has shown that a virulent strain of an airborne influenza virus could spread to all major global capitals within 60 days and kill more than 33 million people within 250 days”.

Other diseases that have recently caused widespread suffering include four major outbreaks of Middle East Respiratory Syndrome (Mers) in Saudi Arabia and the Republic of Korea, the pandemics of avian and H1N1 and severe acute respiratory syndrome (Sars). “These all serve as stark reminder of the threat to humanity posed by emerging communicable diseases”, says the report.

The panel says surveillance and response to outbreaks must be led by the WHO, but the key role should be played by a centre for emergency preparedness and response. The centre “...must have real command and control capacity”, says the report, and it should have the best technology available to identify, track and respond to an emerging threat. The report also says countries must report on their state of compliance to WHO every year and must be regularly reviewed. All countries must give the WHO more money, says the report - an increase of at least 10% in their funding. In addition, they must put \$300m for a contingency fund for emergencies, not \$100m as recently set up. A further fund worth \$1bn must be set up for the development of vaccines, drugs and testing equipment. Prof Jeremy Farrar, director of the Wellcome Trust, said: “Epidemic and pandemic diseases are among the greatest of all threats to human health and security, against which we have for too long done too little to prepare. After four inquiries into the preventable tragedy of Ebola, there is now a strong consensus about what must be done. The WHO’s leadership and member states must make 2016 the year of decision and act now to build a more resilient global health system. “As the UN panel and the other inquiries recommend, the cornerstones of better health security must be a strong, independent WHO centre

to lead outbreak preparedness and response, new mechanisms and financing for developing vaccines, drugs and diagnostics for potential epidemic threats, strong community engagement and investment in basic health infrastructure in every country, not just those that can afford it.”

Public Health Initiatives

MANAGING GLOBAL HEALTH ACCORDING TO THE WORLD HEALTH ORGANIZATION

Assessing challenges for the next 15 years on the basis of global health trends since 2000

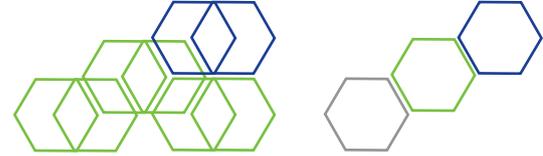
In 2015 the Millennium Development Goals (MDGs) come to the end of their term, and a post-2015 agenda, comprising 17 Sustainable Development Goals (SDGs), takes their place.

The World Health Organization has released a new comprehensive [report](#) analyzing global health trends since 2000 and carrying out an assessment of the challenges for the next 15 years. Looking back 15 years at the positive forces during the MDG era and assessing main challenges that will affect health in the coming 15 years, “Health in 2015: from MDGs to SDGs” reviews the key drivers of progress in health under the United Nations MDGs and recommends actions for the new Sustainable Development Goals (SDGs), which came into effect 1 January 2016.

“Snapshots” on 34 different health topics outline trends, achievements made, reasons for success, challenges and strategic priorities for improving health in the different areas.

These “snapshots” range from air pollution to hepatitis to road traffic injuries, and can be also consulted and/or downloaded separately.





The [fifth](#) part and SDG Target 3.3 are focused on the major infectious diseases. The SDG target also goes beyond the MDGs in broadening the scope of attention to specifically include ending neglected tropical diseases (NTDs), and combating waterborne diseases, viral hepatitis and other communicable diseases.

Globally, infectious and parasitic diseases are on the decline. The number of deaths due to infectious diseases, including parasitic diseases and respiratory infections, fell from 12.1 million in 2000 to 9.5 million in 2012. The percentage of all deaths due to infectious diseases decreased from 23% to 17%. In the African Region, and to a lesser extent the South-East Asia Region and the Eastern Mediterranean Region, infectious diseases are still a leading cause of death. The three regions account for 81% of all deaths and 89% of all YLL due to infectious and parasitic diseases in the world.

MDG progress has been made because of increased political commitment, strong global partnerships, drastic increases in funding, scaling up of new and existing interventions and better monitoring and use of data. Infectious disease outbreaks remain a concern to all countries, imposing a significant burden on economies and public health.

As we said, several respiratory infectious disease outbreaks have occurred since 2000, including the 2003 severe acute respiratory syndrome (SARS) epidemic and the 2009 A(H1N1) influenza virus epidemic. Cholera is endemic in many countries and the Haiti outbreak of 2010–2011 provided a vivid reminder of its potential to spread. Most recently, the outbreak of Ebola virus disease in West Africa resulted in over 28 000 cases and more than 11 295 deaths (as of 23 September 2015), causing considerable concern across the globe.

The spread of infectious diseases is affected by multiple socioeconomic, environmental and ecological factors as well as rapidly increasing antimicrobial resistance. The SDGs provide a new platform for an integrated approach across the economic, social and environmental pillars of development, which should be used to address all infectious diseases.

As already noted, a significant widening of focus relative to MDG is made with SDG: a shift from control to elimination and specific reference to TB, NTDs, hepatitis and waterborne diseases in addition to HIV/AIDS, malaria and “other diseases”.

Infectious disease outbreaks, such as epidemics of influenza, Ebola or cholera, are a global concern with potentially large economic and public health consequences. The most relevant SDG target is Target 3.d “Strengthen the capacity of all countries, in particular

developing countries, for early warning, risk reduction and management of national and global health risks”.

While there is no explicit SDG target on antimicrobial resistance, the issue is mentioned in paragraph 26 of the SDG declaration: “We will equally accelerate the pace of progress made in fighting malaria, HIV/AIDS, tuberculosis, hepatitis, Ebola and other communicable diseases and epidemics, including by addressing growing anti-microbial resistance and the problem of unattended diseases affecting developing countries”.



PRIORITY FOR EMERGING DISEASES RESEARCH

Hemorrhagic fevers lead the list of emerging diseases likely to cause severe outbreaks in the future and are targeted for accelerated research and development

The WHO has issued an initial [list](#) of diseases needing urgent research attention to prevent severe outbreaks. This list includes Crimean Congo hemorrhagic fever, Ebola and Marburg virus diseases, Lassa fever, Middle East respiratory syndrome and severe acute respiratory syndrome coronavirus diseases, Nipah, and Rift Valley fever. It is expected to be a key element in the WHO Research and Development (R&D) Blueprint for infectious diseases with epidemic potential currently under development for presentation in May 2016 at the 69th World Health Assembly in Geneva, Switzerland. Chikungunya, a severe fever with thrombocytopenia syndrome, and Zika were



designated as “serious” problems requiring action by WHO to promote R&D as soon as possible. HIV/AIDS, tuberculosis, malaria, avian influenza, and dengue were not included in the list because these infections are already being addressed via major disease control and research networks.



Social networks

On its Facebook page the Institute of Science in Society (i-sis) identified two relevant articles

DENGUE: OVER 30,000 DOCTORS REPORTED PANIC STRATEGY AND REQUIRE THE GOVERNMENT ACTIONS, an [article](#) (in Spanish language) published on ‘La plataforma’ that associates the current Dengue driven epidemic outbreak in Argentina and social mobilization

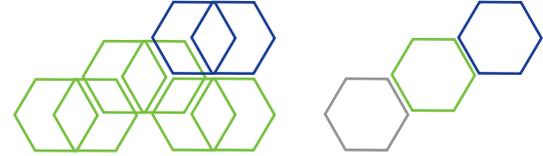


[Institute of Science in Society](#) shared a [link](#): [Dengue: Más de 30 mil médicos denuncian “estrategia de pánico” y exigen acciones al gobierno](#) [laplatafor-mainfo.com.ar](#)

Más de 30 mil médicos y trabajadores de la salud que integran la Federación Sindical de Profesionales de la Salud de la Argentina (FESPROSA) denunciaron “una estrategia de pánico” por parte de las corporacione.

More than 30,000 doctors and health professionals who adhere to the Argentinian Federation of health professionals (FESPROSA) denounced the “panic” strategy by governing board of companies and demanded that the governments strengthens the public health system and the state puts at the head of

social mobilization to fight the epidemic. The trade union reported a will in the government to intentionally conceal because of economic, social and climate causes of the epidemic, as well as massive and indiscriminate fumigation of toxic chemicals. In this sense, it calls for a not spasmodic strategy led by the State, leading to sanitation in a mobilized and conscious society. In turn, a public health system strengthened and combating poverty, exclusion, the mining model and chaotic urbanization, which are the real roots of the epidemic is needed. Through the document, it is stated that “...the disease is closely linked to the social conditions, and other aspects such as environmental deficits, climate change, flooding, the production of soybeans and the widespread use of herbicides, that are all the consequences of extractive industry. In Argentina and in the rest of America, populations suffering most from the epidemic are those with less access to sanitation and drinking water, who are the poorest. The Aedes control should be achieved with a wide direct social mobilization and supported by the state. Mosquito control cannot be recharged on families and individuals, hiding the State’s obligation to take the lead in strengthening the public health system and promoting integrated urban reform for healthy cities. In their release, FESPROSA claims that health authorities are trying to create panic about Zika when there is still not any conclusive evidence on the relationship between the virus and increasing cases of microcephaly. It is also stated “...this panic strategy was already tested and experienced for influenza A.



AN [ARTICLE](#) PUBLISHED ON 'THE SCIENTIST' REPORTS BRAZIL'S PRE-ZIKA MICROCEPHALY CASES

Researchers found that the suspected number of babies affected by microcephaly peaked in 2014, before the Zika virus had been reported in Brazil. A review of four years' worth of medical records finds far greater numbers of microcephaly cases from before the ongoing Zika virus epidemic than had been officially reported.

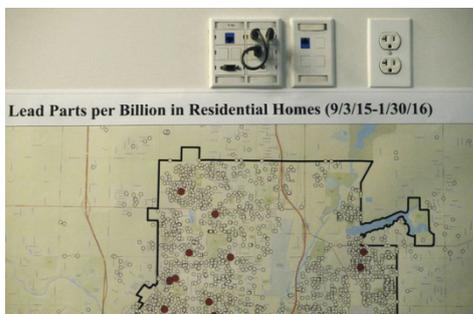


the water crisis in Flint. She reports to have spent time in the city talking with community members, government officials and technical experts about the situation. Understandably, residents are worried, confused and angry; people want a solution they can count on so they can drink a glass of water without worrying about it. As part of the fix, they also want to be sure that their kids go forward with the best shot they can have at a healthy life. She is used to responding to emergencies, but states this response is particularly challenging because it propelled her into a career in medicine and public health. Since that experience, much is changed. Today, we know that there is no healthy lead level in a child's blood. We also know now that there is a lot we can do to help kids who have been exposed to lead. Quality health care, good parenting, early childhood education and healthy food help counter some of the effects of lead. I'm hopeful that working together, we can put these in place for the people of Flint.

AMID WATER CRISIS: IT IS ABOUT WORKING TOGETHER FOR FLINT

The Flint water crisis in an [article](#) by Nicole Lurie, assistant secretary for preparedness and response for the U.S. Department of Health and Human Services

A map (in the figure below) showing lead concentrations in the water in Flint homes hangs in the lobby of the Environmental Protection Agency (EPA) Response Command Post in the city on February 2016, 2. Since the crisis began, the federal government executed a plan, but that is only one part of the effort within the emergency in Flint overall.



Progress is not only made by federal experts supporting state and local officials in identifying the problem's size and scope, but also helping make and execute a plan to mitigate short- and long-term health effects of lead exposure. To help, EPA is testing water in the distribution system and in homes to determine lead and chlorine levels. Chlorine keeps bacteria from spreading. EPA is making this information available to the public so Flint residents know what is in the water and can see progress. EPA also is testing water before and after it comes through filters to see how well filters are working. Preliminary tests are encouraging and show that filters are working well. To help meet the health needs of people impacted by lead, CDC is working with county and state health departments to determine the number of children exposed to lead in Flint to ensure that children who should be screened are getting screened. The US Drugs and Administration's Food and Nutrition Service is working with families in the Special Supplemental Nutrition Program for Women, Infants, and Children to provide ready-to-feed formula which doesn't need to be mixed with water. US Drugs and Administration is also providing additional grant funding to help affected schools purchase more fresh fruits and vegetables high in calcium, iron and Vitamin C because these foods can help children exposed to lead.

Nicole Lurie tells her experience since President Obama asked her to head the federal response to

Finding a solution to the water crisis is the first part of rebuilding a healthier, more vibrant community. Doing so requires more than the resources of any single government agency - county, state or federal. Civic and faith-based organizations, businesses and neigh-



bors will need to work together with government agencies and with families toward a common goal: recovering as a stronger community.

Nicole Lurie ends her article saying she imagines there are students in Flint who could benefit from getting out of the classroom and engaged in their community. Drawing on the talent and energy of every member of the community can help end this crisis faster and have a lasting positive effect: building a stronger, more resilient city, not just now but far into the future.

On the web

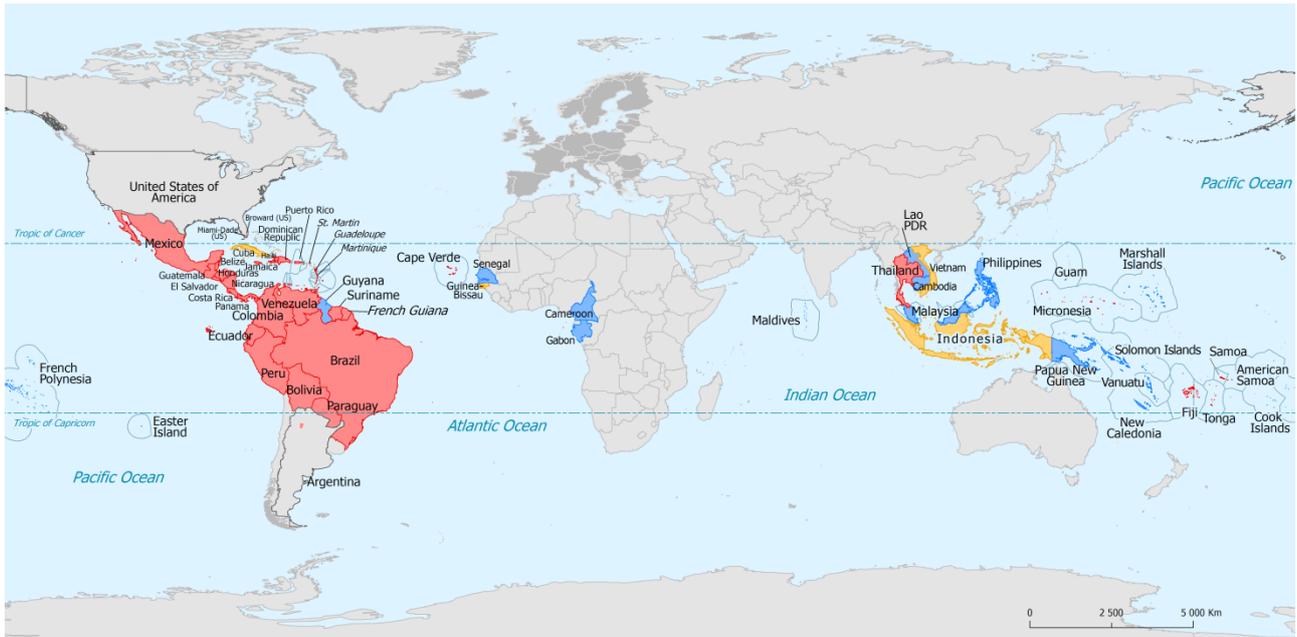
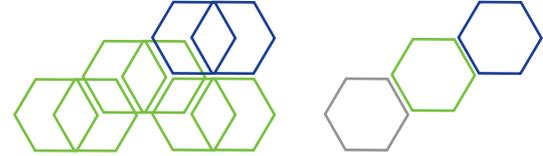
PUBLIC HEALTH EMERGENCY

Preparedness and emergency are the main thematic areas covered by the US Department of health and Human Services

Declared disasters and emergencies, as well as bioterrorism, chemical and radiation emergencies are some of the contents populating the US Public Health Emergency (PHE) [website](#). Beside the pages dedicated to disaster response and to agents, diseases, and other threats, involving the public is a key feature of the portal, either by social media profiles or by constant information and news updating.

The European centre for disease prevention and control (ECDC) is providing latest information about public health threats and changes in the epidemiology of communicable diseases that can potentially affect Europe. All updates are reported weekly in the [Communicable Disease Threats Report](#).

Countries and territories with reported confirmed autochthonous vector-borne transmission of Zika virus infection in the past three months are in the [linked page](#) (Based on data reported by 11 August 2016)



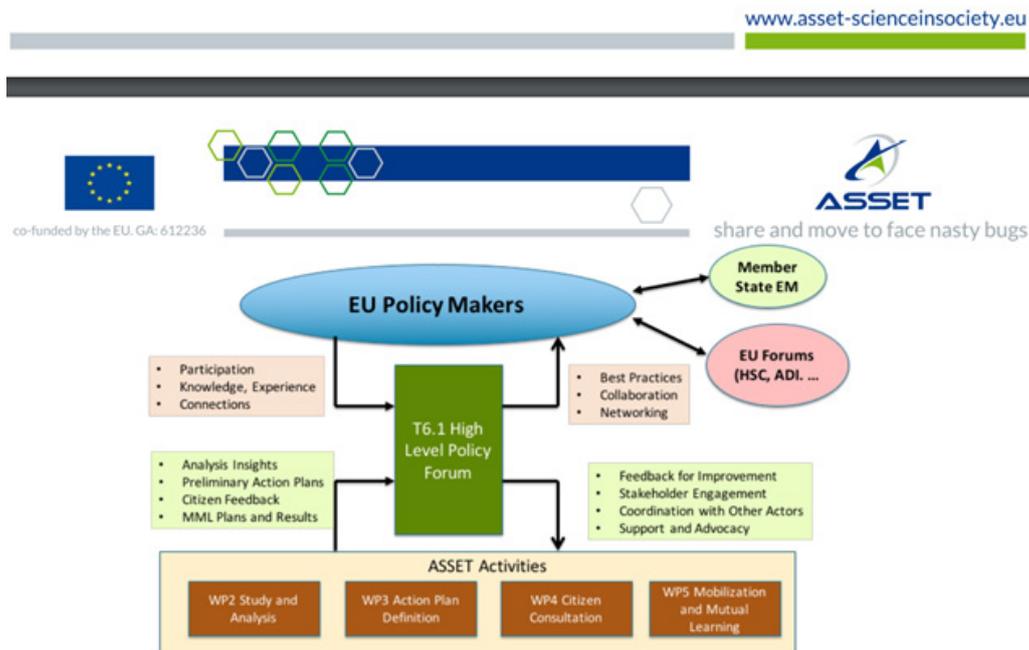
- Widespread transmission in the past three months
- Sporadic transmission in the past three months
- Past transmission (2007 – three months ago)
- EU/EEA Member States, including outermost regions
- Other countries and territories
- Maritime Exclusive Economic Zones for non-visible areas

ECDC. Map produced on 11 Aug 2016

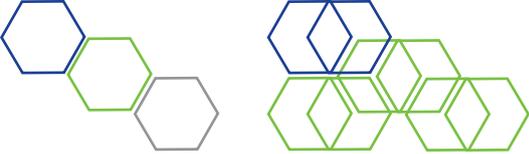
 Map your data at: <https://emma.ecdc.europa.eu>

From the ASSET world

In terms of Policy watch, the ASSET [High Level Policy Forum](#) works in liaison with project [partners](#) and European stakeholders and organizations as well. About Intentionally Caused Outbreaks that were the main focus of the present Pandemic Preparedness and Response Bulletin issue, a great law reinforcement comes from the EU [decision](#) No 1082/2013/EU of the European Parliament and of the Council of 22 October 2013 on serious cross-border threats to health.



Within the work on [Citizen consultation](#), a long propaedeutic work has been run since the autumn 2015. The real action of public consultation will be carried out on September 2016, 24th. Citizens living in eight countries will be consulted on relevant issues related to global public health emergencies. Results coming from this exercise will be considered in delivering local initiatives, to carry out in 12 cities, that are encompassed within the work on [mobilization and mutual learning](#).



In a SnapShot!

Our guiding principles

Evidenced-based interventions and innovation

PED ensures that novel technologies, systems, and techniques are validated and adopted for disease intervention and control in all settings (e.g. introduction of new rapid diagnostic tests).

Partnering

PED leverages expert networks to deliver evidence-based risk assessment, technical guidance, interventions and control strategies, and to inform national and international policy options (e.g. GIPRS laboratory network for influenza monitoring, assessment and vaccine formulation, EDPLN laboratory network for emerging pathogens, Global Infection Prevention and Control Network GIPCN).

Solidarity for access

PED initiatives ensure that vulnerable populations have access to life-saving supplies (diagnostics, vaccines and medicines) in the face of epidemic threats.



PED scope of work

Antimicrobial resistance

Pandemic Influenza Preparedness Framework

Epidemic and pandemic diseases

- Airborne diseases:** influenza (seasonal, pandemic, avian), severe acute respiratory syndrome (SARS), Middle East respiratory syndrome coronavirus (MERS-CoV)
- Water-borne diseases:** yellow fever, shigellosis, Zika fever, West Nile fever
- Vector-borne diseases:** chikungunya, dengue fever, lymphatic filariasis
- Epidemic meningitis**
- Resistant-borne diseases:** plague, leptospirosis, hantavirus, Lassa fever, shistosomiasis (acute & chronic)
- Haemorrhagic fevers:** Ebola virus disease, Marburg virus disease, Crimean-Congo haemorrhagic fever, Rift Valley fever
- Smolysis, meningococcus**
- Other zoonotic diseases:** Nipah virus infection, Hendra virus infection
- Any other emerging disease**

Initiatives and networks

- EWAVE** - Battle against Respiratory Viruses
- EWAVE** - Early Warning and Response systems for Epidemics in emergency
- EDPLN** - Emerging and Dangerous Pathogens Laboratory Network
- ICG** - International Coordinating Group for vaccines for epidemics
- GIPCN** - Global Infection Prevention and Control Network
- GIPRS** - Global Influenza Surveillance and Response System
- GLEAM** - Global Leptospirosis Environmental Action Network
- MENT** - Meningitis Environmental Risk Information Technologies
- WER** - Weekly Epidemiological Record
- EDCARN** - Emerging Diseases Clinical Assessment and Response Network



<http://www.who.int/csr/disease/en>

Contacts

Dr Sylvie Briand
Director
email: brs12@who.int

Mr Raphael Stahary
Programme Manager
email: staharyr@who.int



PED
PANDEMIC
& EPIDEMIC
DISEASES



At global level, the WHO [Department](#) of Pandemic and Epidemic Diseases (PED) develops strategies, initiatives, and mechanisms to address priority emerging and re-emerging epidemic diseases, thereby reducing their impact on affected populations and limiting their international spread. One of the activities on emergencies preparedness and response is the [biorisk](#) reduction.

WHO's five strategic categories

- 1 Communicable diseases
- 2 Non-communicable diseases
- 3 Health through the life course
- 4 Health systems
- 5 Preparedness, surveillance & response

Who we are

Emerging and re-emerging epidemic diseases pose an on-going threat to global health security. Technical expertise and scientific knowledge are the foundation of effective epidemic control strategies.

PED is a multidisciplinary team that includes disease-specific and public health experts with field experience responding to outbreaks and emergencies under the International Health Regulations.

WHO's Health General Programme of Work 2014-2019 targets "Reducing mortality, morbidity and societal disruption resulting from epidemics... through prevention, preparedness, response and recovery activities" as one of the Organization's five strategic imperatives.

PED's expert resources ensure rapid and effective assessment of both emerging and persisting epidemic disease risks

PED PANDEMIC & EPIDEMIC DISEASES

Promoting strategies and initiatives for priority emerging and re-emerging epidemic diseases

The Department of Pandemic and Epidemic Diseases (PED) develops mechanisms to address epidemic diseases, thereby reducing their impact on affected populations and limiting their international spread.

What we do

- Improve the evidence-base for epidemic diseases to inform national and international decision-making**
- PED gathers and shares scientifically sound information to support the development of evidence-based policies and guidance workbooks. The Weekly Epidemiological Record (WER), for example, has helped under-resourced countries to access timely outbreak news and the latest guidance on pandemic and epidemic diseases.

- Protect communities through timely risk assessment, monitoring and field investigation of epidemic diseases of international concern**
- PED's expert resources ensure rapid assessment of both emerging and re-emerging epidemic risks to guide outbreak response strategies. These risks include avian and pandemic influenza, yellow fever, dengue, meningitis, plague, viral haemorrhagic fevers, antimicrobial resistance and novel coronavirus.

- Support countries throughout the epidemic cycle: Preparedness, Response and Resilience to epidemics**
- PED provides strategic leadership and expertise to optimize international support to countries affected by emerging or re-emerging epidemics. This includes prepositioning reagents and drugs, managing global vaccine stockpiles, deploying technical field assistance, capacity building and supporting preparedness plans. PED also fosters the development and accessibility of more effective vaccines or treatments.

- Optimize health care to reduce mortality**

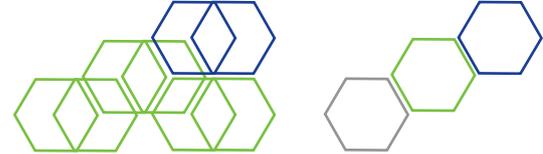
Through guidelines and research agenda, PED aims to improve clinical management (treatments and diagnostics) of epidemic diseases. This includes careful surveillance of antimicrobial resistance and guidance on infection prevention and control. The focus is on diseases for which vaccines are not available or not yet fully accessible by affected populations.

- Establish and manage global mechanisms to tackle the international dimension of epidemic diseases**

PED advances global mechanisms to ensure consistent, equitable and

sustainable access to life-saving interventions. These global mechanisms include the Pandemic Influenza Preparedness (PIP) Framework, the International Coordinating Group (ICG) for the deployment of yellow fever, cholera, and meningitis vaccines, as well as the development of global processes to combat antimicrobial resistance.





Disclaimer

The ASSET project was designed to accomplish a European Commission Call (DG Research and Innovation - HEALTH), for developing a Mobilization and Mutual Learning Action Plan in response to epidemics and pandemics with regard to Science in Society related issues.

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

The views expressed in the ASSET Pandemic Preparedness and Response Bulletin “Share and move” are those of the authors and may not necessarily comply with European policy.

Statements in the Bulletin are the responsibility of their authors and not authors’ institutions.

In case of conflict of interests, it is declared.

Readers are advised to verify any information they choose to rely on.

Suggestions and/or questions are welcomed at valentina.possenti@iss.it

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Graphic layout

Lorenzo Fantozzi (Istituto Superiore di Sanità, Italy)

Editorial Committee

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