



ASSET Project Press Kit

Share and move to face nasty bugs

ACTION PLAN ON SCIENCE IN SOCIETY
RELATED ISSUES IN EPIDEMICS AND TOTAL PANDEMICS

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CONTENTS

- **What is ASSET?**
- **What is the aim of ASSET?**
- **What has ASSET produced until today?**
- **Data visualizations as tools of analysis**
- **Background**
 - What is a pandemic?
 - What is the role of communication in epidemics and pandemics?
 - Why is the threat of emerging diseases greater today than it used to be? Are we better prepared?
 - What did happen in 2009 A(H1N1)pandemic flu?

WHAT IS ASSET?

Encouraging dialogue and enhance mobilization
in case of infectious threats

ASSET (Action plan in Science in Society in Epidemics and Total pandemics) is a European Union co-funded transdisciplinary, Mobilisation and Mutual Learning Action Plan project, with 14 consortium partners from 11 countries, ending at the end of 2017.

It serves as bridge between stakeholders, experts, public health authorities, and the general public, in order to encourage to improve dialogue and enhance mobilisation in cases of infectious threats.

ASSET project picks up from the legacy of the TELL ME project, funded after the 2009 A(H1N1) pandemic, when it became clear that preparedness in European member states was not completely adequate yet, especially in terms of communication. The main challenge was in dealing with the perception and communication of risks.

The subsequent CE Decision 1082/2013/EU on serious cross-border threats to health strengthens this idea, stressing that “inconsistent or confusing communication with the public and stakeholders such as healthcare professionals can have a negative impact on the effectiveness of the response from a public health perspective as well as on economic operators”.



WHAT IS THE AIM OF ASSET?

ASSET combines public health, vaccine and epidemiological research, social and political sciences, law and ethics, gender studies, science communication, and media, in order to develop an integrated transdisciplinary strategy for pandemic and epidemic preparedness at local, national and international levels.

It aims to address, in preparedness and response to pandemics and epidemics, six particular topics which connect science and society:

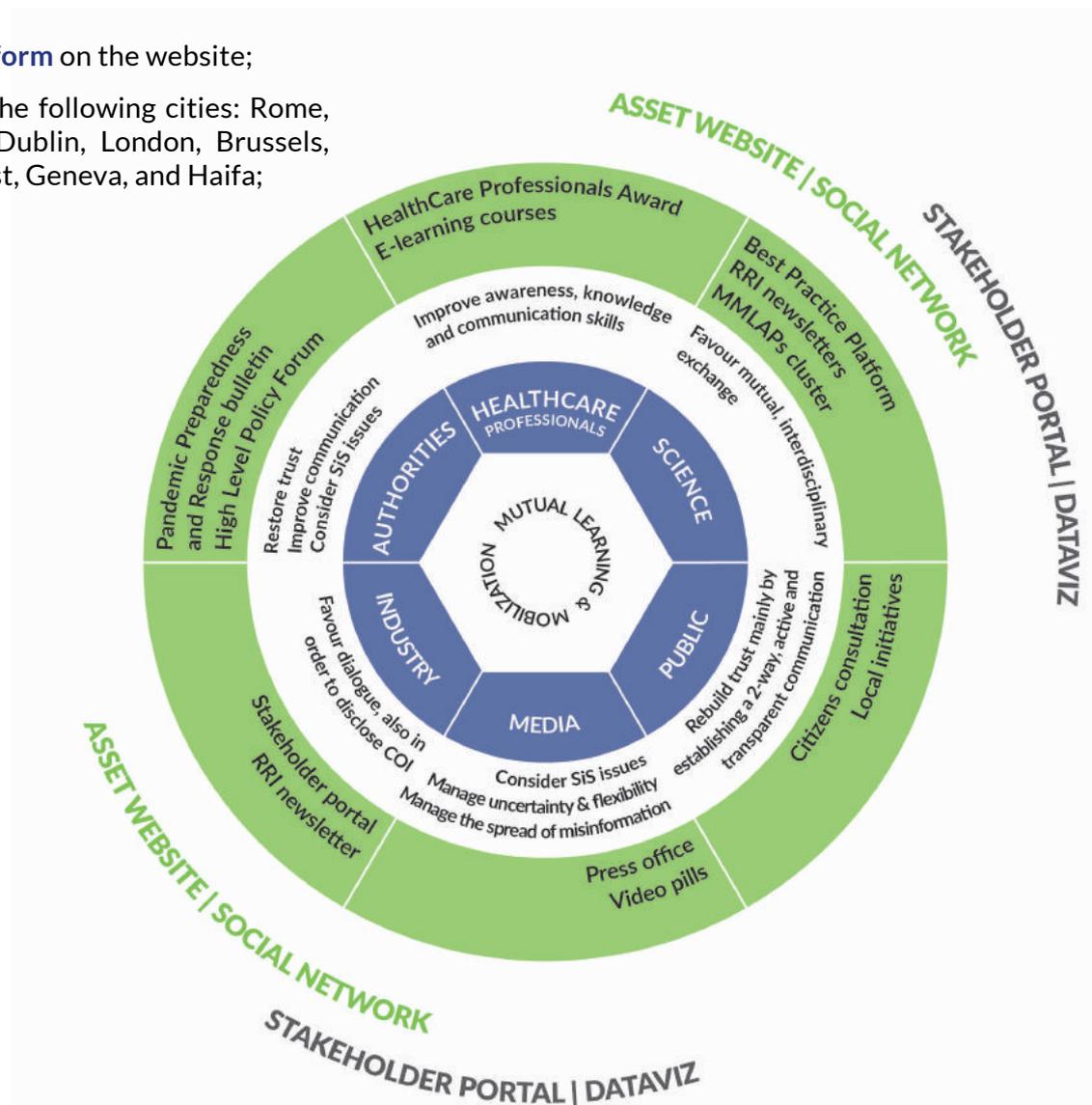
- **Governance of flu pandemics and other similar crises**, both by supranational (i.e., WHO) and national authorities, including the declaration of pandemics and Public Health Emergencies of International Concern (PHEICs), following International Health Regulations (IHR) and in transparent relationship with the pharmaceutical industry and the media;
- **Unsolved scientific questions** regarding influenza and pandemic situations, e.g., how to communicate uncertainties and counteract hoaxes, along with open access, which allows fruitful exchanges among scientists;
- **Participatory governance**, involving the public and different stakeholders in policy making and decisions about influenza and pandemics, with a more democratic approach at all levels;
- **Ethical, legal, and societal implications** of pandemics, which are crises that can have a strong impact on travel, trade, and economics, while addressing specific groups as associated with a disease (e.g., for geographical or professional reasons). This can cause stigmatising behaviours that can help infections to spread;
- **Gender issues in pandemics**, such as the different rates of flu vaccinations between males and females, and the implications of infection in pregnancy by the Zika virus;
- **Risk of intentionally caused outbreaks** in an unstable international situation of terror threats.



WHAT HAS ASSET PRODUCED UNTIL TODAY?

For this purpose, ASSET produced:

- An **Action Plan** with practical tools targeted at different stakeholders: international, national, and local authorities and organisations, healthcare professionals, scientific community industry, media, and the general public;
- A **Citizen Consultation** in eight EU countries;
- Several **means of interaction** among stakeholders by website, social media, bulletins, and newsletters;
- A **High Level Policy Forum**, involving policy-makers from different countries;
- An **annual Summer School** in Rome;
- A **Virtual Cluster** gathering different EU related projects;
- A **Best Practice platform** on the website;
- **Local Initiatives** in the following cities: Rome, Milan, Paris, Lyon, Dublin, London, Brussels, Oslo, Sofia, Bucharest, Geneva, and Haifa;
- **Data Visualisations.**



DATA VISUALIZATIONS AS TOOLS OF ANALYSIS

The main goal of ASSET project is to develop a comprehensive strategy for a better preparedness and response to infectious diseases by improving dialogue and cooperation between science and society.

The relationship between science and society is often characterized by a high degree of complexity, which is not easy to communicate. Publicly available data represent an invaluable source of information that may become extremely useful not only in unravelling such complexity, but also in displaying it through data visualizations. The following reports are examples of our data analyses, aimed at finding answers to specific questions regarding the links, between science and society, related to infectious disease. The analyses are powerful communication tools, since they can be used to effectively describe a complex theme and to share it easily on the web.

1. Are mandatory vaccinations a shortcut to overcoming hesitancy and refusal?

The growing spread of hesitancy and refusal in Europe fuels the debate over mandatory vaccinations, as a tool to reach and maintain a high level of vaccine coverage. In [this analysis](#) we found **no evidence of a relationship between mandatory vaccinations and rates of childhood immunization in European countries.**

We gathered data on all the countries within the European Economic Area:

- Information on policies of mandatory or recommended vaccinations came from the VENICE project (The Vaccine European New Integrated Collaboration Effort);
- Data on childhood immunisation coverage was obtained from UNICEF.



The analysis focused on three relevant vaccinations, about which different countries have adopted different policies. The vaccines are polio (Pol3), measles (MCV1), and pertussis containing vaccines (DTP3).

While the polio vaccine is mandatory in many countries, the pertussis vaccine is more often only recommended, even in countries where other vaccinations are compulsory. Measles vaccination is an important indicator of hesitancy and refusal, because misinformation accusing it of causing autism, despite evidence of the misinformation's fraudulent source, is still going on.

From 2007 to 2013, countries where a vaccination was mandatory did not usually reach better coverage than neighbouring or similar countries where there was no legal obligation.

Despite its limits, the study suggests that making vaccines mandatory does not necessarily increase vaccine coverage. Other factors – such as, for instance, the difficulty for healthcare systems in reaching all children – could be involved.

For more details see:

www.asset-scienceinsociety.eu/reports/page1.html

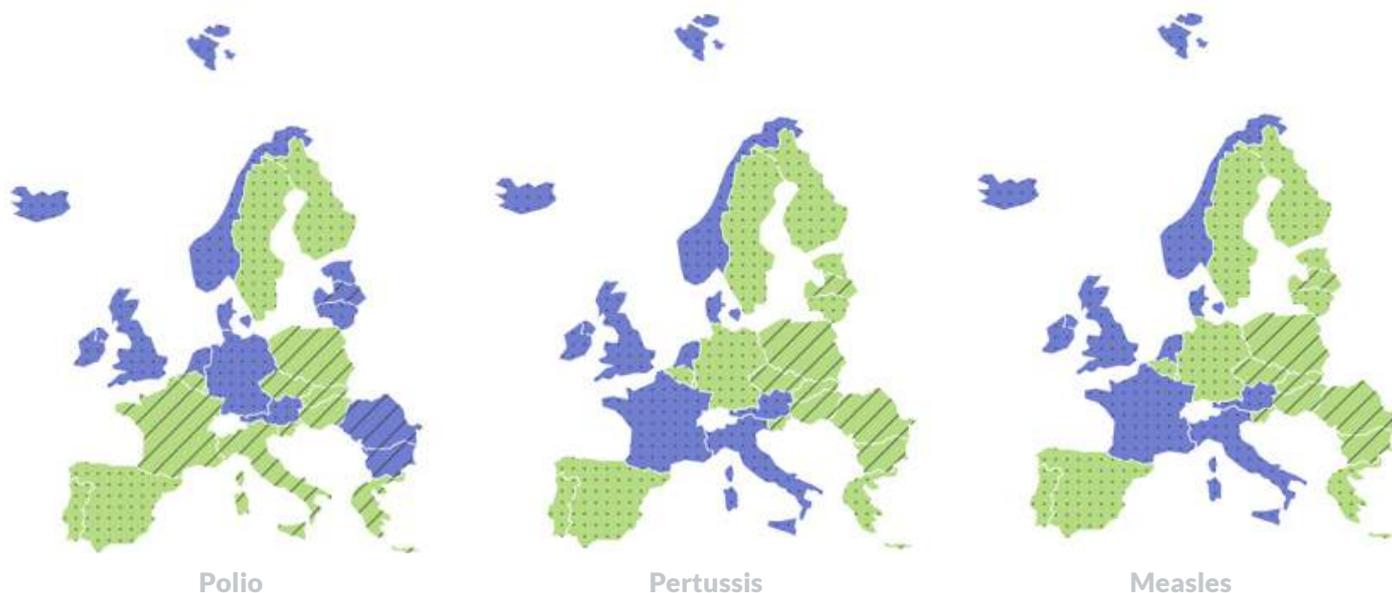


FIG 1 In the maps, one for each vaccine, countries where a vaccination is mandatory has been marked with a lined background, while those where the same vaccination is recommended have a spotted background. Countries coloured in green have had an average higher vaccine coverage than the EU/EEA average – evaluated on all the countries over the period considered – while the coverage is lower than the average in the blue ones. No evident correlation between colours and different backgrounds appears on the maps.

2. Scarce attention to ethical issues in national pandemic influenza plans

Influenza pandemics are unpredictable, but recurring, events, which can have severe consequences on human health and socio-economic life at a global level. For this reason, the World Health Organization (WHO) has recommended that all countries prepare a pandemic preparedness and response plan. In several, subsequent documents and guidelines, the international authority stressed the importance of ethical principles such as equity, liberty, and solidarity in dealing with infectious diseases. It states that any measure limiting individual rights and civil liberties (such as isolation and quarantine) must be necessary, reasonable, proportional, equitable, not discriminatory, and not in violation of national and international laws.

Despite the importance given by the WHO to ethical issues, which can influence people's behaviour and in this way can also have a practical impact on the spread of diseases, most European national preparedness and response plans do not even mention ethical issues, according to a semantic analysis performed by ASSET experts.

We went through EU and WHO documents and through national pandemic plans developed by 10 countries of the European Union/European Economic Area (EU/EEA) and by Switzerland (which are those available in English on the ECDC website), **in order to evaluate the relevance of ethical issues and the application of ethical principles in their development.**

The analysis showed ethical issues are hardly considered, and that there was a lack of discussion on ethical issues in most pandemic plans developed from European countries, except for Switzerland, the United Kingdom, the Czech Republic, and France. This is even more relevant, since the analysis revealed multiple areas of possible ethical interest within the different plans, as ASSET data visualisation has clearly shown.

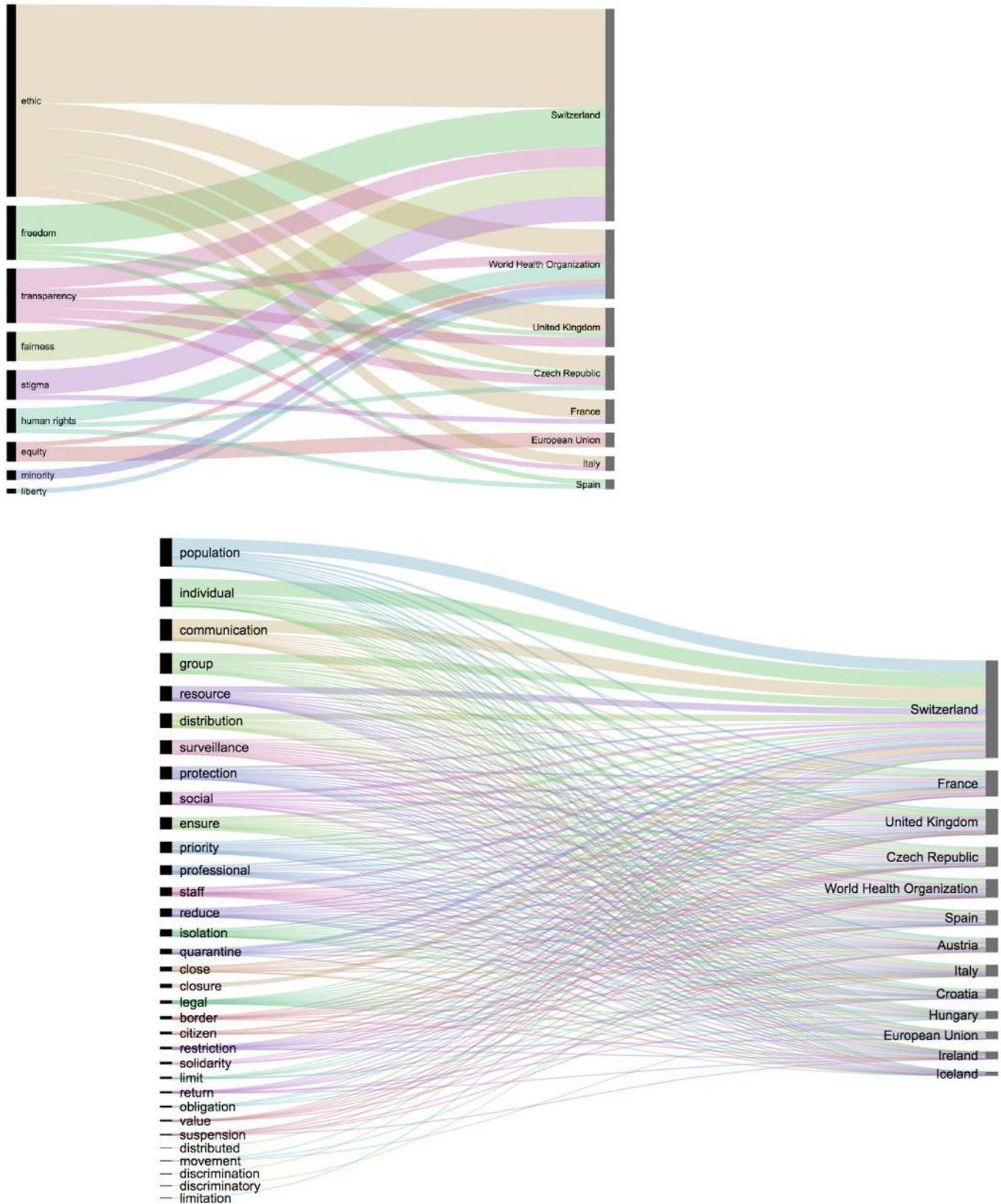
The ASSET study represents a useful tool to guide future drafters of pandemic plans, since it encourages debate on the necessity of updating all national pandemic plans with topics of great relevance in case of epidemics and pandemics, since plans generally do not consider ethical issues enough.

For more details see: www.asset-scienceinsociety.eu/reports/page2.html

Datavisualizations as tools of analysis

Scarce attention to ethical issues in national pandemic influenza plans

FIG. 2 The analysis has been based on two keyword lists: in a first, generic, list, keywords represent areas of possible ethical interest; in a second, more specific, list, keywords are more precisely related to ethical issues actually addressed in each national pandemic plan.



BACKGROUND

WHAT IS A PANDEMIC?

A pandemic is literally “an epidemic extended to all (“pan”, in Greek) the planet”. In the real world, some argue that explosive transmissibility is sufficient to declare a pandemic, while others maintain that severity of infection should also be considered .

Epidemiologists, virologists, policy makers, clinicians, and common people give different meaning to the term pandemic, which can refer to:

- The **geographical extent** of a pathogen’s transmission (generally wide, or specifically in two or more WHO regions);
- The emergence of a **new recombinant flu or other emerging virus**, capable of sustained transmission in humans;
- The relevant, more than usual, **number of cases** of the disease, with its **health and socioeconomic burden** (with the difficulty of defining in a quantitative and unequivocal way what “relevant” or “more than usual” means);
- The **severity/lethality** of the disease (see above).

The definition of a pandemic is therefore a source of misunderstanding in communication, as was shown when the A(H1N1) influenza virus emerged in 2009.

WHAT IS THE ROLE OF COMMUNICATION IN EPIDEMICS AND PANDEMICS?

In the 2009 crisis, communication proved to be a weak point, which could have put an effective response at risk, had the pandemic been as serious as it was thought it might have been.



The European Centre for Disease Prevention and Control (ECDC) analysis was that in 2009 the pandemic’s “...main challenge was in dealing with the perception and communication of risks. In the future, those involved in risk communication need

to develop ways of better involving the scientific community and civil society. Their aim must be that risk is properly understood and trust maintained.”¹

Previous related EU-funded projects, i.e., TELL ME and ECOM, have studied in-depth what went wrong during 2009 A(H1N1) pandemic, showing that in that case communication:

- Was mainly top-down, involving neither population nor healthcare professionals;
- Did not succeed in dealing with uncertainty, notably in the first phases;
- Lacked in flexibility, since their contents were not modified when the pandemic proved to be milder than it was supposed to be in the beginning;
- Did not guarantee transparency, allowing rumours and charges of conflict of interest between health organisations and the pharmaceutical industry.

A legacy of the 2009 pandemic was therefore a decreased perception of risk about pandemics in the general population, and this idea soon widened to all infectious diseases².

The coincidence with the global financial, and then more widely economic, crisis, occurring in those same years, shifted the focus further from health issues to socio-economic threats.

As a result, at the moment, many people in Europe and the USA continue to think that in 2009 the WHO cried wolf, driven by the pharmaceutical industry, that the flu is a trivial disease, and that pandemic flu is not a serious threat.

The loss of confidence in international and national health authorities had a strong impact on seasonal flu vaccination too, adding to growing mistrust towards other vaccinations (measles, polio, etc.) for different reasons, in different parts of the world.

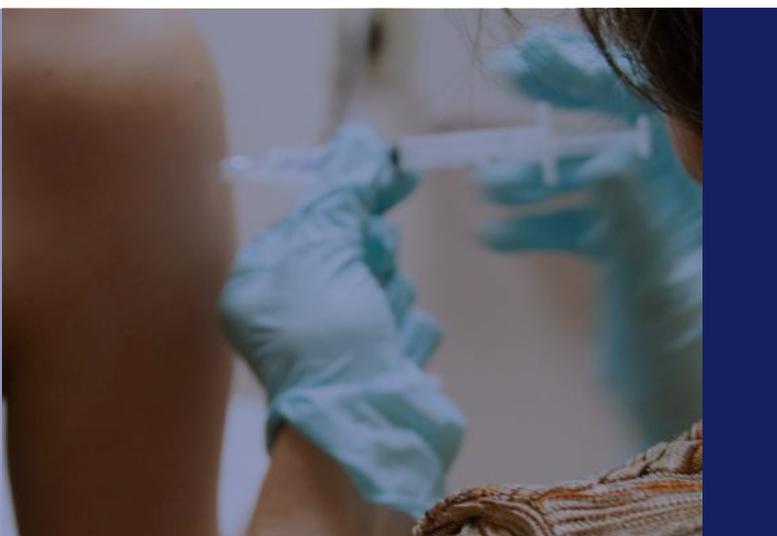
WHY IS THE THREAT OF EMERGING DISEASES GREATER TODAY THAN IT USED TO BE? ARE WE BETTER PREPARED?

In a globalised and interconnected world like the one we live in, viruses and other agents of infectious disease can spread much more quickly and easily than they used to. The same happens not only with information, but misinformation as well.

The recent response to Zika showed that the world is better prepared for emerging diseases than it was in the past, but a lot must still be done in the field

- **Why are participatory governance, ethics, gender, communication, open access, and other non-medical issues like these, relevant in these cases?**

Research has shown that these issues relating science and medicine with society are very relevant in the spread of diseases. Nowadays people are less willing to blindly accept orders from authorities; they want to understand what is happening to them and their families, and have their say. Two-way communication is therefore essential, but needed also to understand which attitudes, fears, or practical difficulties the public or some specific groups are facing during an outbreak. Open access helps a fruitful exchange among scientists, accelerating a response. Cultural and ethical issues, e.g., the risk of stigma, can also have a strong impact on the spread of a disease.



1 European Centre for Disease Prevention and Control. The 2009 A(H1N1) pandemic in Europe. Stockholm, ECDC. 2010.

2 Frieden T et al. Why global health security matters to US. CNN World, 5th May 2014. <http://globalpublicsquare.blogs.cnn.com/2014/05/05/why-global-health-security-matters-to-u-s/>

WHAT DID HAPPEN DURING THE 2009 A(H1N1) PANDEMIC FLU?

Public attitudes towards epidemics and pandemics changed deeply after the 2009 A(H1N1) pandemic. “National pandemic plans were usually based on a single scenario that was more severe than the actual 2009 pandemic, and that was extrapolated from the severity of previous pandemics and the possibility that H5N1 (avian flu, NDR) would cause the next pandemic”³. This brought about a key misunderstanding among stakeholders and the general public. Declaring a pandemic was necessary to start the implementation of preparedness actions (like the production of vaccines) and, rather than implying severity, it only pertained to the wide geographic spread of the new strain of flu virus. Media and common people, however, interpreted this as a declaration of an impending catastrophe. The milder-than-expected evolution of the pandemic was taken by many as a proof that the declaration had been driven by economic interests, and trust was impaired towards authorities in many countries. This is considered one of the roots of the current hesitancy towards vaccines.

A lesson from the A (H1N1) pandemic is, therefore, that flexibility is crucial. While most plans were prepared in view of a severe flu pandemic, it has become clear that preparedness should cover a broader range of challenging emerging diseases, as the subsequent Ebola and Zika crises showed.



³ ECDC and WHO Europe. “Key changes to pandemic plans by Member States of the WHO European Region based on lessons learnt from the 2009 pandemic”, 2012



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DBT - FONDEN TEKNOLOGIRÅDET



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