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The handling of international public health emergencies

Report[1]
Committee on Social Affairs, Health and Sustainable Development
Rapporteur: Ms Sílvia Eloïsa BONET, Andorra, Socialist Group

Summary

In recent years, the world has suffered three international epidemics (H1N1, Ebola, Zika) with a huge impact on human rights, including the right to life and the right to health. In an increasingly globalised world, diseases are more likely to spread at high speed.

The world is woefully ill-prepared to handle international public health emergencies, which have the capacity to threaten national and international security and stability, constrain economies and put pressure on health-care systems. This is why the existing worldwide health-system architecture needs to be strengthened with an empowered, well-governed and accountable World Health Organization (WHO) at its apex, and efficient, equitable and resilient national health systems at its foundation.

States must ensure resilient health-care systems through strategies to prevent and deal with outbreaks. To this end, it is necessary to co-operate and co-ordinate at all levels, to finance the necessary investments, to network and to have a mutual exchange of information between all stakeholders.

The international health regulations should be strengthened and better implemented and monitored, while WHO's rapid response mechanism must be reinforced. Any action must be community centred, with up-to-date surveillance and accurate and rapid reporting with a view to proper diagnosis, the best possible treatment, and providing society with reliable information in emergency situations.

1. Reference to committee: Doc. 13708, Reference 4121 of 20 April 2015.

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A. Draft resolution[2]

1. Europe and other continents have seen significant progress in the last decades as regards health. However, in recent years the world has suffered three international public health emergencies (H1N1, Ebola and Zika) with a huge impact on essential human rights, including the right to life and the right to the highest attainable standard of health. In an increasingly globalised world, diseases are more likely to spread at high speed.

2. Today's health security threats arise from at least six sources: the emergence and spread of new microbes; the globalisation of travel and food supply; the rise of drug-resistant pathogens; the inadvertent or intentional release of pathogens; the acquisition, development and use of biological agents by terrorists; and natural disasters followed by epidemics. These major health hazards have the capacity to threaten national and international security and stability, constrain economies and put pressure on health-care systems.

3. The world is woefully ill-prepared to handle international public health emergencies. New ways of working to face international health crises before they happen need to be explored urgently. The existing worldwide health-system architecture needs to be strengthened with an empowered, well-governed and accountable World Health Organization (WHO) at its apex, and efficient, equitable and resilient national health systems at its foundation. Political decisions must be taken in order to change health systems and effectively protect people's health.

4. All political decision makers at all levels (including the Parliamentary Assembly, the European Union and WHO) need to agree to improve international emergency preparedness, including through legislative changes. The Parliamentary Assembly thus recommends that member States work together with these political decision makers to:

4.1. make WHO the lead institution in handling international public health emergencies, with the necessary powers and stable financing to effectively implement and monitor the International Health Regulations (IHR) and reinforce its rapid response mechanism;

4.2. ensure effective co-operation, co-ordination and follow-up between WHO, the European Union, other specialised agencies of the United Nations, the European Centre for Disease Prevention and Control (ECDC) and relevant the international non-governmental organisations (INGOs);

4.3. actively participate in the World Health Assembly with a view to ensuring good governance of WHO, as well as promoting and monitoring reform efforts, including transparency in the composition of expert panels;

4.4. build up resilient health-care systems at the national level, with strategies in place to prevent and handle major public health hazards, including early detection, accurate data collection, availability of diagnostic and treatment tools, and real-time continuous monitoring to improve output according to international recommendations;

4.5. put in place a financial structure for pandemic risk management able to disburse resources of sufficient scale to priority needs, and provide adequate financial support for programmes promoting public health at local, regional, national and international level;

4.6. promote community engagement and mobilisation as essential elements of any action plan to deal with international public health emergencies;

4.7. develop partnerships between the public and private sectors, particularly in the areas of communication, information management systems, logistics, provision of necessary medical supplies and mobilisation of health-care workers;

4.8. create and collaborate with international special health forces of rapid response, including specialists in public health, doctors, nurses and community health workers, who should be adequately protected against risks and specifically trained, ensuring their safe evacuation if necessary;

4.9. facilitate making scientific knowledge and information available on time to all stakeholders, including an open data-sharing system for epidemiological, genomic, clinical and anthropological evidence, from academia to the front line;

2. Draft resolution adopted unanimously by the committee on 15 March 2016.

4.10. promote research and development of medicines, diagnostic kits and vaccines, in a spirit of solidarity, with adequate research ready to be tested during an epidemic, with a view to fast-track authorisation procedures and ensuring that any medicines or vaccines so developed are accessible and affordable, in particular to vulnerable groups, and keeping a reasonable stock following strict security conditions;

4.11. in the case of a public health emergency created by a transmissible disease, carefully design and implement any public health control measures for disease mitigation (such as quarantining, social distancing, border controls and travel restrictions) which could impinge on individual rights and freedoms;

4.12. following a public health emergency, arrange rehabilitation and psychological help in order to avoid further discrimination of survivors or stigmatisation of disabled patients.

5. The Assembly calls on member States to support political actions and legislative changes at world level to promote reducing, at source, risks of zoonotic potential, including food-borne diseases and severe animal diseases.

6. The Assembly recognises the role of the European Directorate for the Quality of Medicines and Healthcare (EDQM) of the Council of Europe as an organisation contributing to quality health care, and promoting and protecting human and animal health. It thus invites its member States and its governing bodies to consider involving the EDQM in preventing and dealing with international public health threats and designing appropriate public health strategies, in particular in the field of medicines, vaccines and diagnostic tools, possibly with the help of a mandatory levy on sales and activities.

7. The Assembly calls on the member States to commit to the international target set by the United Nations of providing 0.7% of gross national income (GNI) as official development assistance, with a view to strengthening basic health systems and enabling the most affected and at risk countries to better withstand future public health emergencies.

B. Explanatory memorandum by Ms Sílvia Eloïsa Bonet, rapporteur

1. Aim and scope of the report

1. Humanity has faced several devastating pandemics. In the 14th century, the "Black death" killed more than half of Europe's population, and smallpox took around 400 million lives before its eradication in 1980. In the last century, within just a few months, a flu pandemic led to twice as many deaths as those lost during the First World War. The recent Severe Acute Respiratory Syndrome (SARS) in 2003, the H1N1 flu pandemic in 2009 and the Ebola outbreak in 2014, and, most recently, the Zika outbreak this year were a wake-up call reminding us that the threat posed by contagious and potentially lethal diseases has not disappeared. A total of more than 28 000 cases of Ebola were related to the outbreak in West Africa, leading to more than 11 000 deaths. The World Health Organization (WHO) has reported around 500 deaths due to Middle Eastern Respiratory Syndrome (MERS), while the Centres for Disease Control and Prevention (CDC) estimate that 284 500 people lost their lives in the H1N1 flu pandemic. These numbers give us an idea of the big incidence of the last pandemics and their enormous impact on the essential human rights of the right to life and the right to the highest attainable standard of health, as well as on other health-related rights guaranteed, *inter alia*, by the European Social Charter (ETS Nos. 35 and 163).

2. In a globalised world where distances are becoming increasingly quick to cover, where poverty and unsanitary conditions are widespread, and where population density is growing, infectious diseases are likely to spread faster than ever. They hence pose a health threat not only for local communities where they are born and start to spread, but also far beyond. In other words, today, an outbreak of an infectious disease is less likely to remain confined to a limited area or to a single country and more likely to gain an international dimension. In addition, migration, urbanisation, population growth and growing pressure on natural habitats mean that increasing numbers of people are also exposed to the transmission of disease from animal-to-human, a phenomenon which was at the origin of Ebola (bats), MERS (camels) and H1N1 (pigs) – while mosquitoes are the vector for Zika. Some experts believe that the next international infectious threat will be another virus, most likely respiratory or airborne, such as SARS, with the potential to spread far and faster, as in the Republic of Korea outbreak in May 2015, with a completely different behaviour pattern to the Ebola epidemic.[3] A single severe flu pandemic could cost US$3 trillion. Indeed, the Organisation for Economic Co-operation and Development (OECD), among others, sees a severe pandemic as a top global catastrophic risk.[4]

3. WHO has prime responsibility for managing international public health emergencies because its primary role is to direct and co-ordinate international health matters within the United Nations system, one of the main areas of work being the preparedness for, surveillance of and response to health issues. WHO has a leadership role in establishing the systems that make up the global defence against shocks coming from the microbial world, with a view to supporting countries to put in place the capacities required by the 2005 International Health Regulations (IHR). It regularly reports on progress and on the strengthening of the systems and networks to ensure a rapid and well co-ordinated response to public health emergencies.

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

i. constitute a public health risk to other States through the international spread of disease;

ii. potentially require a co-ordinated 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.[5]

3. Professor Baron Peter Piot, Director of the London School of Hygiene and Tropical Medicine. Dr Wendy Barclay, Chairperson in influenza virology at Imperial College, London.
4. The World Bank, World development report 2014, Pandemic risk, Olga B. Jonas.
5. WHO International health regulations.

2. Lessons learnt from past experience

5. Health is not valued till sickness comes.[6] The recent Ebola outbreak, the largest and most complex Ebola epidemic ever, suggests that the international community is not sufficiently prepared to manage major health hazards. The Ebola epidemic proved to be an exceptional event that exposed the reality of how imperfect and slow international public health and aid systems are in response to international emergencies.[7] However, the consequences of international public health emergencies are not limited to their specific health-related impact, but have consequences on overall health, including psychological and other diseases. An illness such as Ebola is not easy to diagnose with its non-specific symptoms, common to many widespread diseases (such as malaria or other fevers) – leading to a lot of resources being dedicated to testing for the disease, and to quarantining suspected cases. As the epidemic progressed in Africa, efforts were increasingly dedicated to this emerging disease – and often taken away from others (thus, people died from other treatable diseases, such as malaria, and women died in childbirth).

6. Public health emergencies may also seriously weaken national economies and eventually have a knock-on effect on the global economy. In relation to the economic impact, projections of the impact of the Ebola outbreak imply foregone income across the three affected countries in 2015 of about US$1.6 billion, and more than 12% of their combined gross domestic product (GDP).[8] West Africa as a whole may lose an average of at least US$3.6 billion per year between 2014 and 2017.[9] Much of the economic impact of international public health emergencies goes beyond the epicentre of directly affected countries, because much of the impact is based on fear, as people curtail travel and trade (this was the case during the SARS outbreak in East Asia a decade ago).

7. Economic impacts are also felt in more developed economies, with structured health-care systems capable of treating the patients in epidemics, as travellers put off non-essential travel (hurting the tourism and trade industry) out of fear of contagion, and trade lessons. Related to the latest MERS epidemic in Korea, predictions of the magnitude of the fall in the annual growth of GDP range from 0,1% to 0,8%, mainly depending on the duration of the epidemic, between 1 to 4 months.[10] International public health emergencies can also threaten political stability, as well as national and international security. We have learnt the hard way how important communication between stake-holders and transparency within the community are to avoid panic and misinterpretations. To sum up, public health crises hit all the normal functions of the affected countries and beyond. Even when the crisis is over, survivors may find it difficult to reintegrate into society, due to stigmatisation or disabilities.

8. Ebola has weakened already fragile systems, but it could – and should – be a catalyst for strengthening local as well as global health systems. In the Ebola crisis, after the first patients were affected, health-care workers were also immediately infected. They were already few and far between in the affected countries: Guinea, Liberia and Sierra Leone had a ratio of about one to two doctors per 100 000 people (the United States of America had 245). Doctors were between 21 and 32 times more likely to be infected with Ebola than the general population at the beginning of the crisis,[11] and many of them were amongst the first to die. There were serious gaps in implementing infection prevention and control (IPC). The consequence was that there was a lack of health workers facing the threat from the very beginning. These public health problems affected not only the Ebola-infected patients, but also all those whose access to basic health services was limited or even denied. Thus there was little or no treatment of common or chronic illnesses (such as malaria, resulting in an additional 10 000 deaths during the Ebola epidemic[12]) or obstetric care (resulting in a 75% increase in maternal mortality across the Ebola-affected countries).[13]

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6. Thomas Fuller.
7. Médecins Sans Frontières, Pushed to the Limit and Beyond – A year into the largest ever Ebola outbreak, 23 March 2015.
8. The World Bank, The economic impact of Ebola on sub-Saharan Africa: updated estimates for 2015, January 2015.
9. United Nations Development Group, Socio-Economic Impact of Ebola Virus Disease in West African Countries, February 2015.
10. *The Wall Street Journal,* How MERS Could Affect South Korea's Economy, June 2015.
11. WHO, Health worker Ebola infections in Guinea, Liberia and Sierra Leone, Preliminary report, May 2015.
12. Malaria morbidity and mortality in Ebola-affected countries caused by decreased health-care capacity, and the potential effect of mitigation strategies: a modelling analysis, Patrick G.T. Walker et al., *The Lancet Infectious Diseases*, July 2015.
13. Health-care worker mortality and the legacy of the Ebola epidemic, David K. Evans et al., *The Lancet Global Health*, August 2015.

9. In Europe, the response to imported cases of Ebola was also far from perfect. There were no adapted and harmonised procedures for repatriating affected health workers, and those *in situ* entrusted with their treatment were not adequately trained to handle Ebola cases. This led to anxiety among health workers who feared for their safety. The fact that more than 510 health workers died in the recent outbreak,[14] and that some ill workers from several different countries working in Africa did not have the opportunity to be treated in developed countries, despite the necessary funds having been made available by the United Nations, in turn increased the difficulty to recruit health workers from Europe to help in the crisis. Similarly, in relation to the 2015 MERS epidemic, some patients were affected in Europe, but a lack of information about the disease made diagnosis and treatment unnecessarily difficult.

10. As a European Union agency, the European Centre of Disease Control (ECDC) has the mandate to identify, assess and communicate current and emerging threats to human health posed by infectious diseases, and they did so very well in the Ebola health crisis, mainly providing data to the European Commission. The ECDC has an extraordinary expertise in epidemiology and advises the European Commission and national governments. Part of its main duties is also to strengthen Europe's defences against infectious diseases. However, the ECDC has no executive decision-making powers: these rest with the European Commission or member States. This separation into two entities is not efficient and could delay a quick and proper response in Europe. Indeed, in the United States, the Centre for Disease Control (CDC) has executive decision-making powers, which are also very important in prevention policies. In fact, it seems rather unbalanced that the European Commission has pledged twice the budget for Public Private Partnerships (PPPs) (around €138 million) for pharmaceutical research, compared with the €68 million for humanitarian aid in Ebola-affected countries.[15] Lastly, a promising Ebola vaccine (rVSV-ZEBOV) – the interim analysis indicates the vaccine to be highly efficacious and safe – was tested on almost 8 000 people from Guinea but financed mainly by public and non-profit organisations.[16]

11. Basically, the problem is that all efforts in a public health emergency of international concern are concentrated on handling the disease at the origin of the health emergency. It is understandable that to co-ordinate around 20 000 workers in West Africa with more than 20 million inhabitants, as in the Ebola crisis, is not an easy task and will require excellent co-ordination from the very beginning, and from the top of the health players down to the smallest communities. It is necessary to have a prepared plan to follow, clear definition of roles, leadership and best practices in place as soon as possible. With regard to this last point, natural disasters (earthquakes, flooding, hurricanes, etc.), nuclear accidents and other catastrophic events (such as bioterrorism) with a large-scale impact have similar health-related implications in so far as they tend to paralyse the public health systems of affected countries, in particular due to the huge demand for medical relief. Consequently, the recommendations of this report may be useful for putting in place more resilient systems ready for an adequate response in such different scenarios.

12. It is important to underline that the latest epidemic threats came from animal transmission, where the World Organisation for Animal Health (OIE) has an important mandate, with specific regulations on International Standards for Animal Diseases. This is important in terms of the evolution of diseases, prevention, detection, animal-human relations, trade, food security, etc. In the case of the Zika virus response, the main range of critical activities include, in particular, vector surveillance and control; identification of the people most at-risk, especially pregnant women and women of reproductive age; follow-up and care through pregnancy and post-natal care for neurological complications; promoting access to family planning, public awareness, self-protection measures, community mobilisation and other activities that will ensure a robust, well-targeted, well-co-ordinated and multi-sectoral response. The lack of access of vulnerable people to reproductive health rights, information and services, and their housing and local environments conditions that are breeding grounds for mosquitoes, disproportionately expose them to this virus which was recently declared a public health emergency of international concern by WHO.

13. There are many lessons to be learned from these recent experiences, but probably the most pressing one is that the world needs to better prepare to handle such international public health emergencies.[17] National and regional authorities, international organisations and agencies, including the United Nations, the World Health Organization, the European Centre of Disease Control, the Organization for Animal Health, NGOs and the private sector, all play a vital role in this context. Some of the institutions have lacked a culture of preparedness and rapid decision-making:[18] there is a need for better leadership and quality in the co-

14. WHO Ebola Situation Report, 2 September 2015.

15. Report from the Commission to the European Parliament and the Council on the evaluation of the Union's finances based on the results achieved, Brussels, 26 June 2015, COM(2015)313 final, p. 11.

16. Efficacy and effectiveness of an rVSV-vectored vaccine expressing Ebola surface glycoprotein: interim results from the Guinea ring vaccination cluster-randomised trial, Ana Maria Henao-Restrepo et al., *The Lancet*, August 2015.

ordination between all stakeholders, as well as for the use of expertise and best-known technical procedures in all the organisations. The fact is that the system today does not work well enough. We need to focus on ways to apply the lessons learned in recent epidemics so that nations and regions can prevent the spread of disease and respond more rapidly and effectively to future threats.

3. The importance of prevention

14. Since "prevention is better than cure", measures should be taken to prevent future health threats in the first place. The annual spending required to build and operate systems that meet international standards is ten times less than the expected annual cost of inaction.[19] Mitigation strategies reducing the impact of their underlying drivers are a more cost-effective policy than business-as-usual adaptation programmes. They would save around US$350 billion over the next 100 years if implemented today, particularly in relation to animal-to-human disease transmission.[20]

15. Today's health security threats arise from at least six sources: the emergence and spread of new microbes; the globalisation of travel and food supply; the rise of drug-resistant pathogens; the acceleration of biological science capabilities and the risk that these capabilities may cause the inadvertent or intentional release of pathogens; continued concerns about terrorist acquisition, development and use of biological agents; and natural disasters followed by epidemics.[21]

16. It is necessary to explore new ways of working to face international health crises before they happen, including possibly even new United Nations arrangements, because is extremely difficult to invent them once a crisis has begun. It is necessary to prepare in advance. This is especially relevant in relation to contagious diseases, but also suitable for any health hazard, such as a natural disaster followed by an epidemic.

17. Public health emergency preparedness (PHEP) has been defined as "the capability of the health-care systems, communities, and individuals, to prevent, to protect against, quickly respond to, and recover from health emergencies, particularly those whose scale, timing, or unpredictability threatens to overwhelm routine capabilities. Preparedness involves a co-ordinated and continuous process of planning and implementation that relies on measuring performance and taking corrective action".[22]

4. Why early detection and rapid response?

18. Early detection is necessary to keep diseases from spreading and affecting more people, thus allowing the system to act rapidly: long-simmering risks can be cooled before they boil over. Urgent tasks should include not only detecting, but also characterising and transparently reporting emerging biological threats early through real-time biosurveillance, for example the establishment of monitoring systems which are interoperable, networked information-sharing platforms, and bioinformatics systems that link to regional disease detection hubs.[23] Although it is not possible to eliminate all global health risks, better management is always feasible when a specific health threat emerges. Prevention is also about minimising the impact of existing threats, and protecting health-care facilities and workers from the very beginning with adequate equipment and training, with a view to ensuring the continuity of health-care services also during emergencies.

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17. The Committee on Social Affairs, Health and Sustainable Development organised a very interesting exchange of views in December 2014 on "Handling the Ebola outbreak" (AS/Soc (2014) 48) with the participation of Dr Bruce Aylward, WHO Assistant Director-General, Outbreaks and Health Emergencies, Dr Guenael Rodier, Director of the Communicable Diseases Division of the WHO Regional Office for Europe, and Ms Marie Noëlle Rodrigue, Director of Operations, Doctors Without Borders.
18. WHO, Report of the Ebola Interim Assessment Panel, document A64/10, July 2015.
19. The World Bank, World development report 2014, Pandemic risk, Olga B. Jonas.
20. Proceedings of the National Academy of Sciences of the United States of America, Economic optimization of a global strategy to address the pandemic threat, Pikea et al., November 2014.
21. US Global Health Security Agenda. Toward a World Safe & Secure from Infectious Disease Threats.
22. Conceptualizing and defining public health emergency preparedness, Christopher Nelson et al., *American Journal of Public Health*, 2007.
23. U.S. Department of Health and Human Services, Global Health Security Agenda: Concepts and Objectives, Web 2015.

19. The United States and the African Union signed a Memorandum of Cooperation to support the establishment of a new African Centre for Disease Control and Prevention (ACDC) this year. The United States CDC will provide expertise and advice along with fellowships for African epidemiologists to help to staff the centre, but WHO's Regional Office for Africa should also participate to ensure a co-ordinated and comprehensive response to health challenges in the region.[24]

20. The responsibility for determining whether an event is within the category of the health emergencies of international concern lies with the WHO Director-General, and requires the convening of a committee of experts. 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 public health emergency of international concern, or by other States Parties, to prevent or reduce the international spread of disease and avoid unnecessary interference with international traffic.

21. Worryingly, only 16% of countries reported reaching full compliance with the core International Health Regulations competencies by the June 2012 deadline set by WHO. International health regulations, as one of the key points of awareness and alert of any major public health emergency, must be strengthened to get more global capacity. WHO should also measure and improve the quality of the help provided in the field. However, WHO consists not only of its Secretariat, but also of the member States. Member States are responsible for their own actions and regulations, especially with respect to their obligations under the International Health Regulations.

22. Global health security is considered as an international security priority by the Security Council of the United Nations.[25] Co-ordination with local or international military forces should also be considered depending on the setting, specific conditions and special mandates. Military involvement could be very helpful for rapid response and logistical help, but it can also affect the stability of the affected communities and countries.

5. How to better handle future public health emergencies?

23. The two principal strategies to contain public health emergencies are public health interventions and medical treatment (when available). I propose that measurable steps should be focused on preventing epidemics, whether naturally occurring, intentionally produced or accidentally caused. This effort will support existing agreements under the WHO's IHR, the OIE Animal Health Codes and the Codex Alimentarius International Food Standards, with the correct communication between them, and complement existing multilateral efforts in this area. However, I believe that it is necessary to find new approaches that go beyond institutional isolated duties. Real leadership is needed. The international community should decide which organisation should be in charge, probably under the United Nations' supervision, but also how the co-ordination between different actors should be put in place. An action plan should result from analysing and implementing the best quality co-ordination between all stakeholders, including governmental institutions and non-government organisations. The United Nations Secretary-General's High-level Panel on the Global Response to Health Crises may be helpful in addressing the future management of health crises. Developing an interconnected global network of Emergency Operations Centres and a multisectoral response to biological incidents with trained, functioning, rapid response teams, with access to a real-time information system and the capacity to attribute the source of an outbreak at local, regional, national and international levels is essential.

24. The IHR system must be improved, but also spread to all countries and properly implemented with adequate management. I think that it may be necessary not only to have international law obligations for all countries to report any suspected public health emergencies, to promote early communication, including potential sanctions when the IHR are not followed, but also new innovative financing mechanisms such as insurance triggered to mitigate adverse economic effects. Also to introduce disincentives to discourage countries from taking measures that interfere with traffic and trade beyond those recommended by WHO.[26] I consider that it will be necessary to find the quickest procedure to determine public health emergencies of international concern by WHO, through emergency committee meetings starting to make urgent recommendations as soon as possible, but in as transparent a way as possible in the circumstances and with no undue influence from those who stand to gain from the declaration of an international public health emergency. Training and deploying an effective biosurveillance workforce, with trained disease detectives to

24. The African CDC and WHO AFRO, *The Lancet*, Editorial, April 2015.
25. In its Resolution 2177 (2014), the United Nations Security Council called Ebola a threat to international peace and security.
26. World Health Organization, Report of the Ebola Interim Assessment Panel, 7 July 2015.

do the contact tracing and finding the index case from the very beginning is crucial, as is developing and deploying novel diagnostics and strengthening laboratory systems capable of safely and accurately detecting all major dangerous pathogens with minimal bio-risk. International collaboration of a network of laboratories has demonstrated very good results in the case of SARS.

25. The IHR could be changed to get a quicker alarm call through an intermediate level of public health emergency of international concern to alert us to the appearance of a new disease or public health threat. I share the WHO external expert panel's opinions after the Ebola crisis in 2015 about the importance of having close interagency co-operation, mainly with the broader United Nations and humanitarian system, like the level three of humanitarian emergencies, to have an adequate response. The IHR require States to keep information confidential and anonymously processed as by national law, protecting the identity of the persons concerned, even when the information should be disclosed early. Public health control measures for disease mitigation to protect the public, such as quarantining, social distancing, border controls and travel restrictions which could impinge on individual rights and freedoms should be carefully examined in every new epidemic, not only because personal freedom and the public good need to be balanced, but also because badly thought-out or badly applied measures can be counterproductive (for example leading to infected persons hiding and infecting more people). Also, I think that the effectiveness of these measures will change depending on the setting and the future pandemic strain.

26. In order to have resilient health systems which are prepared for an effective response, while maintaining core functions when a crisis hits, with the goal of protecting human life and producing good health outcomes, in both good times and bad, I consider it necessary for the systems to have awareness, to be diverse, self-regulated, integrated with all actors, including communities as the central point, and also to be adaptable to new possible situations.[27] Public health is all about trust, and WHO needs to further reinforce its position in the trust of the international community.[28] To lead the world through a future international public health emergency, WHO may consider a reform to be ready for future crises with the best governance, improved transparency and getting staff employed with the best expertise for the tasks; this may include not only more stable and higher funding, but a more resilient structure, with flexibility and adaptability to new scenarios. For this purpose, like in every hospital if an emergency arrives, some staff should stop their usual activities and start working on the emergency. It is this emergency health culture that should be engaged in all organisations. This should include a contingency plan involving human resources that could change their duties in case of necessity.

27. Added to this, the national health budgets in developed countries should be stocked up, but also WHO's programme budget. Nowadays, less than 25% of WHO's programme budget is financed from assessed contributions, while the remainder comes from voluntary funds. If more of WHO's budget were stable and under WHO's full control, a wide strategy to improve public health in many countries could be developed, with an emphasis on public health emergency preparedness and far greater resilience in crisis situations[29]. Financing the programmes should be directed by public interest. In addition, essential funding should be secured through partnerships, ready to react the moment an epidemic breaks out. This is inexistent at the moment. The World Bank Group (WBG) sees this as one critical part of rebuilding the financial architecture for pandemic risk management. The WBG is developing a global Pandemic Emergency Financing Facility (PEFF) that will disburse resources of sufficient scale – swiftly – to priority needs.[30] Also, I propose a parliamentary representation of the member States on the World Health Assembly, to oversee the function of WHO, because they represent all society and the legislative power of the different member States. This could help to fortify the system.

28. The weakness of the current global response capacity to international public health emergencies may only be overcome through a structured system which is capable of mobilising the necessary financial, logistical (provision of medical supplies, their transportation to affected countries, ensuring safe evacuation procedures for affected health workers, etc.) and human resources (namely recruitment and deployment of experts, including doctors, nurses and other health workers) within a short period of time. Something like the White Coats initiative,[31] as a special health-care force ready to go where necessary as necessary, would be a boon in public health emergencies. It is also important to remember that governments should keep air links

27. What is a resilient health system? Lessons from Ebola. Margaret E. Kruk et al., *The Lancet*, May 2015.
28. WHO will lead and who will pay? The World Health Organization, Ebola and the future of global health, Andreas Vilhelmsson, Public Library of Sciences, May 2015.
29. Strengthening and reforming WHO was also supported by Dr David Nabarro, the United Nations Secretary-General's Special Envoy on Ebola, in his exchange of views with the committee in June 2015.
30. World Bank Group Statement for the 68th World Health Assembly, May 2015.
31. German Chancellor's proposals for crisis management, White helmets against Ebola, January 2015.

open to allow help to arrive rapidly. Primary health-care centres spread throughout the countries, with the adequate ratio of health-care workers serving as sentinels to alert us about new problems from the very beginning, could also help. Health-care accessibility is, in fact, an important pillar in the detection and rapid response network.

29. Other crucial elements for success will be: improving global access to medical and non-medical countermeasures during health emergencies; strengthening the capacity to produce and to procure personal protective equipment; providing adequate training including test and drills; having quicker research promoted by public interest and more effective programmes for vaccination against epidemic-prone diseases, nosocomial infection control and new medications. Fast-track procedures of authorisation for treatments, drugs and vaccines should be studied for international public health emergencies. Some research should be focused on the use of volunteers who have overcome a contagious disease and could thus be very helpful to communities in an outbreak. The sharing of scientific information as well as of accurate data is important for public health management.

30. To support diagnostic research and biosurveillance activities, including identifying, securing, safely monitoring and storing dangerous pathogens in a minimal number of facilities, should be included in an action plan.[32] Other necessary measures include stopping the emergence and spreading of antimicrobial drug-resistant organisms and emerging zoonotic diseases, strengthening international regulatory frameworks governing food safety and promoting the responsible use of anti-infective drugs in all settings.[33] The EDQM, as a leading organisation contributing to the realisation of the basic human right of access to good quality health care and promoting and protecting human and animal health, should play a role in the Council of Europe's development of a better strategy against international public health emergencies.

31. In order to deal with potential health hazards, it remains imperative to deliver vital public services and emergency supplies to cover the most urgent needs in time. It is deemed essential to send experts to the affected countries, with special requisites, including trained doctors, nurses and community health-workers coming from several countries, registered in a co-ordinated system, with special agreements about the necessary procedures in case of necessity, giving them the opportunity to come back to their former duties without any disadvantage. Also, it is crucial to organise all logistical support, including airlift operations and the deployment of ships to transport emergency supplies. Co-ordination with local or international military forces may be necessary. If governments fail and national health systems collapse during a crisis, due to lack of emergency funding and rapid response, all countries will pay a higher price afterwards.

32. For several contagious diseases like Ebola, special protection for health-care workers should be provided. The remarkable group of doctors and nurses who risk their lives to save those of others in poor countries around the world should be recognised, but it should also be mandatory to provide them with adequate and safe working conditions. In addition, in the case of contagious diseases affecting health-care workers, as in the Ebola outbreak, evacuation to a properly equipped hospital for international health-care workers exposed to or diagnosed with the virus has to be guaranteed.

33. There are cases of countries not having the essential facilities because of their weak health-care standards, and there are also other very developed, but small countries, with no highly specialised facilities for certain new diseases due to their size. In order to increase efficiency, such countries should have access to the highly specialised units of neighbouring countries, in accordance with international health agreements and rules.

34. The private sector cannot do much to control the spread of a disease like Ebola, MERS or other public health threats in a public health emergency of international concern, but it can collaborate in certain fields like logistics, communications and the development, production and stockpiling of drugs and vaccines. Cooperation between public authorities and the private sector is therefore of the utmost importance and measures should be taken to promote prevention and public health interest.

6. Conclusions and recommendations

35. This report aims to help institutions develop essential institutional capacity and better working systems to ensure that national, regional and international institutions find the right way to fulfil the responsibilities they have to their citizens. Member States of the Council of Europe should put in place a robust action plan, with a

32. U.S. Department of Health and Human Services, Global Health Security Agenda: Concepts and Objectives, Web 2015.
33. US Global Health Security Agenda, Toward a World Safe & Secure from Infectious Disease Threats.

timetable of all concrete actions and tangible improvements to be taken on national, regional and international levels. A sustained commitment from the global coalition of actors working in a co-ordinated manner must be determined to prevent tomorrow's diseases, with a strong public-health leadership. The tragic Ebola epidemic is an opportunity to transform the existing worldwide health-system architecture into a purposeful, organised system with an empowered WHO at its apex and enduring, equitable national health systems at its foundation. This system would be designed not only to provide security against epidemic threats, but also to meet everyday health needs, thus realising the human right to the highest attainable standard of health.[34]

36. The Millennium Development Goals targeted 80% health coverage; the attainment of this goal should be implemented and monitored. Important principles like helping people and their communities must be at the centre of any response. National authorities should be directing the response with the help of intergovernmental bodies, and they should never feel that they are losing control of the response; proper co-ordination will be vital for all actors to have maximum impact. Member States should enable the response to be implemented seamlessly across borders and boundaries.[35]

37. The necessary funding should be in place and available when needed. Also logistics and human resources which can be ready in a short period of time are fundamental pillars of a resilient structure for rapid response. Add to this the best known technical procedures which should also all be in place, including high quality scientific advice, with research protocols ready to start. Data disclosure should not be delayed by journal publication timelines. Today the world has an increased global interdependence and shared vulnerability.

38. Robust, early, and evidence-based action is necessary. There needs to be an action plan to store the necessary diagnostic tests, drugs and treatments for a disease, even when there have not been cases for many years. This could also prevent or address threats of bioterrorism using old, known microorganisms. An ethical approach ought not to overwhelm the provision of what is efficient. In addition, communities' cultures and idiosyncrasies should be studied to break transmission patterns. It is also necessary to develop good management procedures, a constant and rigorous evaluation or quality control which can provide crucial feedback that might be beneficial for the continuous improvement of the system, and for identifying the effective course of action when required.

39. Adapting legislation to ensure effective co-ordination and collaboration among stakeholders both in the preparatory phase and in an acute crisis is necessary. Fostering multisectoral collaboration among governmental or intergovernmental agencies for health, environment and agriculture, as well as with NGOs, is indispensable. Leadership and action co-ordination will be absolutely imperative at national, regional and international level. Public health and epidemiology analysis should be integrated with response capacity and accuracy of decisions. A more centralised global approach to epidemics is needed. After all, we do not know when the next pandemic will strike. We cannot eliminate all global health risks, however we can make our economies and societies more resilient and thus better equipped and prepared to minimise the impact of the threats we face. Solidarity will be needed to achieve the goal of a productive, prosperous, healthier and safer world.

34. A retrospective and prospective analysis of the west African Ebola virus disease epidemic: robust national health systems at the foundation and an empowered WHO at the apex, L. Gostin and E. Friedman, *The Lancet*, May 2015.
35. Dr Nabarro's speech, 2015.