Risk communication in times of crisis

Pitfalls and challenges in ensuring preparedness instead of hysterics

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In 2013, a 2-year-old boy in Guinea in West Africa was infected with the Ebola virus. In the following months, the virus spread quickly, eventually reaching the USA and Western Europe and causing the largest Ebola epidemic to date. For risk communicators, the epidemic is an interesting case study for risk communication in both African and Western countries during a crisis. It raises intriguing questions: Was the public efficiently and appropriately informed during the outbreak? Can risk communication serve as a preventive measure to avoid panic and to persuade populations of necessary health measures? Why did the first Ebola cases outside Africa trigger exaggerated and even hysterical media reports in the USA and Spain? Which countries provided reliable information to the public through adequate communication, including on scientific uncertainties?

“The experience from the Ebola epidemic [...] show that communication in times of crisis is more efficient if the public has trust in the competent authorities and experts”

Globalisation has created unprecedented freedom to travel to other countries, to experience foreign cultures or to buy exotic products from local markets and supermarkets. On the downside, it has also enabled infectious agents to quickly spread around the globe, as has happened in the past 10 years with severe acute respiratory syndrome (SARS), H5N1 avian influenza and Ebola. The high mortality rate of some of these diseases and the sometimes-exaggerated media coverage of their spread has frightened people at times. On the other hand, communication by public institutions and experts—and by the media—has played an important role in adequately presenting the risks of various outbreaks and preventing the public from panicking. The experience from the Ebola epidemic—and the preceding cases of SARS and H5N1—shows that communication in times of crisis is more efficient if the public has trust in the competent authorities and experts. This trust has to be built up before any crisis emerges by providing comprehensive, transparent and easy-to-understand information on risks and the current degree of scientific uncertainty.

The Ebola outbreak in 2013 was most likely caused by a zoonotic transmission of the virus from a bat to a 2-year-old boy in December 2013 in Guinea [1,2]. On 23 March 2014, Guinea’s Ministry of Health officially informed the WHO about the outbreak. The virus quickly spread in Guinea and Sierra Leone, whereas there were few signs of the coming epidemic in Liberia as of July 2014. On 8 August 2014, the WHO publicly announced that the Ebola outbreak in West Africa had been underestimated and pronounced it a Public Health Emergency of International Concern (PHEIC). In early September 2014, the situation had deteriorated to the point that the WHO recommended “unconventional interventions” to stem the outbreak. In Guinea and Sierra Leone, the health system had collapsed and newly opened treatment centres filled up quickly with new patients. On 18 September 2014, the UN Security Council announced the United Nations Mission for Ebola Emergency Response (UNMEER) to provide help to Guinea, Liberia and Sierra Leone. In the same month, the first person infected with Ebola outside Africa was diagnosed in the USA.

“When the CDC publicised the case of the patient in Dallas at the end of September, it triggered a wave of media reports and political posturing”

To date, more than 28,000 people have contracted Ebola and more than 11,300 people have died, but the epidemic has nearly abated (Fig 1). As of June 2015, the number of patients infected with Ebola outside Africa was 21. Ten patients have received treatment in the USA, and the rest were treated in Spain, Germany, the UK, Italy and Switzerland. Two patients have died in the USA and one each in Spain and Germany.

The incubation period for Ebola is three weeks, which makes outbreaks difficult to control even under optimal conditions, as infected but symptom-free persons move around and travel. In addition, the affected West African countries lacked nearly everything they would have needed to efficiently handle the epidemic. They had insufficient laboratory capacity for quick and reliable diagnosis, insufficient medical and nursing staff, inadequate hygienic conditions and a lack of bed capacity and isolation facilities, technical equipment, protective gear for nursing staff and financial resources. Moreover, the affected countries did not have any experience with...
treat against Ebola infections, and both nursing staff and the general population had no knowledge about the transmission paths of the virus. In addition, patients who were already suffering from other illnesses had hardly any chance of getting adequate treatment. As a consequence, maternal and infant mortality increased during the Ebola outbreak.
Specific cultural and social factors created further obstacles to controlling the epidemic in West Africa. The disease quickly spread within densely populated urban areas and large numbers of infected people crossed national borders. Moreover, parts of the West African population initially repudiated treatment and helpers were threatened. In the early stages of the epidemic, admission to an Ebola treatment centre was seen as a disruption of familial connections in combination with detainment before an inevitable death. Traditional burial practices also played a role in the quick spread of the disease, as victims carrying a heavy viral load were customarily washed, dressed in new clothes and buried by their relatives, who ended up infected as a result. This practice was eventually declared illegal by the governments of the affected West African countries and, where possible, replaced by safe burial practices.

There is a fine line between providing reassurance that everything is under control and perpetuating a false sense of security

The first patient diagnosed with Ebola outside Africa was Thomas Eric Duncan, a 42-year-old man from Liberia who had contracted the virus in his home country when he helped a pregnant woman suffering from Ebola into a taxi. The pathogen was only diagnosed on 29 September 2014 after he had travelled to the USA to visit his family in Texas. Duncan died on 8 October at Texas Health Presbyterian Hospital in Dallas. Several Ebola patients were also treated in Spanish hospitals. The first two patients who had contracted Ebola in Liberia and Sierra Leone were flown out to Spain, but died three and five days later, respectively. A Spanish nurse contracted the infection when caring for one of the patients, a 69-year-old clergyman who had worked in Sierra Leone. It was the first case of a human-to-human Ebola transmission outside Africa. In the UK, a female health worker was diagnosed with Ebola on 29 December 2014 after voluntary work in Sierra Leone. After strict quarantine and monitoring measures, the UK was declared “Ebola-free” after her recovery and after all contact persons tested negative in March 2015.

Worldwide, countries reacted differently to the Ebola crisis. Canada, Australia and Saudi Arabia refused to allow the citizens of West African countries to enter. Some European countries, including the UK, increased border controls and conducted health checks by customs officials, while other EU countries including Germany dispensed with border control measures, as the Federal Ministry of Health considered the risk that the disease would spread via air travel to be very low. In the USA, the Centers for Disease Control and Prevention (CDC) issued a Level 3 travel warning, advising people not to travel to West Africa unnecessarily.

Western governments and government institutions quickly began to provide relevant information about Ebola to the public. In July 2014, the CDC issued general and target-specific information for healthcare workers, airline crews and airline cleaning personnel as well private and business travellers. The situation in the USA intensified when the media began reporting on Duncan after he developed symptoms of the disease. The CDC announced that it was unlikely that he had passed on the disease to fellow travellers but set up a hotline for people worried that they may have been exposed to the virus. It also issued a statement to the effect that it knew exactly how to stop the spread of the virus “We do know how to stop Ebola’s further spread” [http://www.cdc.gov/media/releases/2014/s930-ebola-confirmed-case.html].

UNMEER and various US agencies also published information encouraging Africans living in the USA to reach out and inform the people in West Africa directly. The pamphlet “Guineans in the US: Be a Hero” urged Guineans living in the USA to tell their friends and families in Guinea how to avoid contracting the disease and how to act in case of an infection (Fig 2). In cooperation with Sierra Leone’s Ministry of Health and Sanitation, similar information was compiled to inform travellers, people suffering from Ebola, their relatives and nursing staff. Another flyer informed people “How to talk with your children about Ebola”.

The WHO began to regularly publish information about the West African outbreak on their website at the beginning of August 2014. At the 68th World Health Assembly in May 2015, measures were suggested for a quicker response to emergency situations to ensure more effective coordination, to actively involve the public and to improve public relations. Shortly before the 68th World Health Assembly, the WHO published an interim report of an independent expert committee. In a statement released in October 2014, the WHO considered the probability that the Ebola virus would spread in Europe as very low, but asserted that sporadic cases may occur as a result of international travel.

The European Centre for Disease Prevention and Control (ECDC) communicated about the outbreak of Ebola in West Africa through regular “rapid risk assessments”. In addition, the European Commission reported in March and April 2014 on new emergency aid programmes for West Africa. The personal message released by Toni Borg, Commissioner of Health, was written in the first person singular and its tone is deliberately emotional. In addition, the European Food Safety Authority (EFSA) published a scientific report on the risk of Ebola transmission through bush meat illegally imported from West and Central Africa in November 2014, followed by a report on the risk of virus transmission from pets to humans in December 2014, and on the risk of Ebola transmission through the consumption of raw fruits or vegetables imported from African countries.

The heated arguments between political parties in the USA about the security of America in the face of the Ebola outbreak [...] are reminiscent of the fear of AIDS many years ago

In Germany, the Robert Koch Institute (RKI) published the so-called Framework Concept for Ebola Fever with the subtitle “Preparation for Measures in Germany” [http://www.rki.de/DE/Content/InfAZ/E/Ebola/Rahmenkonzept_Ebolafieber.html] after a patient was flown to Germany for treatment in August 2014, which itself was announced via a press conference on the same day. The Framework Concept provided information and recommendations for disease management and adjusted existing crisis reaction plans to reflect the present risk.
Guineans in the US: Be a hero

Tell your family and friends in Guinea

Do NOT touch sick people, or their blood or other body fluids.

Don’t touch the body of someone who has died of Ebola.

Bury all dead bodies safely.

Call 115 in Guinea if you have symptoms of Ebola.

Separate sick family members.

Get care early if you develop symptoms.

Health workers in the treatment center are there to help you.

You CAN survive Ebola. Get treatment early.

Ebola survivors are safe to be around. Support them in your community.

Together we can get to zero!

Figure 2. Information material on the issue of Ebola and reduction of the risk of infection through behavioural changes for persons from Guinea in the USA. http://www.medbox.org/poster/guineans-in-the-us-be-a-hero/toolboxes/preview
situation. Similar to the CDC, the RKI also published information, recommendations and training material for specific target groups such as airport staff, helpers returning from Africa, health authorities, physicians, nursing staff and the public.

The media began to cover the Ebola epidemic in West Africa in early 2014 after it became clear that the virus was quickly spreading over national borders and into urban areas. The US media also began to address misleading reports and warned of the usual rumour mills and conspiracy theories as shown, for example, by an article in the Washington Post on 20 July 2014: “There is no such thing as Ebola” [https://www.washingtonpost.com/news/morning-mix/wp/2014/07/18/there-is-no-such-thing-as-ebola/]. Nonetheless, the mainstream media could not resist engaging in fear mongering. In a comment in the New York Times on 12 September 2014, Michael T. Osterholm, Director of the Center of Infectious Disease Research and Policy at the University of Minnesota, adumbrated a scenario that should keep Americans awake at night: that the Ebola virus could mutate and become airborne, and through air traffic spread worldwide to other major urban centres (“What we’re afraid to say about Ebola?”). His statements were intended to foster understanding for the government’s measures, but were perceived by the public as alarming. Another article in The Washington Post on 21 September 2014, “The wrong reaction to Ebola” lamented the suggestions made to Western audiences by dismal images of people wearing whole-body protective suits transporting corpses in Africa (Fig 3). The Post argued that the press kept referring to the “killer virus” and “poor Africans”, and that it was therefore not surprising that “such diseases” affected “such people”. The author, himself from Sierra Leone, was critical of the absence of the humanitarian context in the press: reports on what happened to individual families in Africa or helpers who infected themselves, and how these people survived.

When the CDC publicised the case of the patient in Dallas at the end of September, it triggered a wave of media reports and political posturing. Politicians publicly discussed whether the borders should be closed and accused President Obama of not taking action. Fox News broadcast a judicial authority employee saying: “These are people like the person in Dallas, who vomited everywhere, who Lord knows what he did on the airplane and in the Dallas airport”. [http://www.foxnews.com/transcript/2014/10/06/is-obama-doing-enough-to-prevent-ebola-outbreak-in-america/]. This statement is not only disparaging but also factually incorrect,
since Duncan was still symptom-free on the flight and thus not capable of transmitting Ebola.

After Duncan died on 8 October 2014, the US media coverage of the Ebola epidemic became hysterical and focused on other infected persons in the USA and the potential that the disease could spread across the country. Comparisons with the number of Americans dying of shootings or comparisons of the low risk of catching the Ebola virus compared to influenza, chickenpox and measles were only helpful to a limited extent. The media then began to throw doubt on the ability of the Dallas hospital that had treated Duncan, the government and institutions such as the CDC and the WHO to handle the Ebola crisis. Some states, for example New York, passed new regulations to the effect that helpers returning from Africa were quarantined at home and subject to strict monitoring by health authorities. Such restrictive measures were perceived by those affected as a deprivation of liberty and as stigmatisation.

The Spanish media coverage also became hysterical after the death of a nurse in October 2014; she had contracted Ebola from a patient in a Spanish hospital. She became infected because she did not put her protective gloves on correctly when treating the patient, so some observers blamed her for her infection, rather than casting her as a victim of the disease. The Spanish authorities ordered the disinfection of her home and, to be on the safe side, arranged for her dog to be put down; the government was later criticised for these exaggerated measures that did little to quell the public’s fears. An editorial in *The Spain Report* from 11 October 2014 described the October 2014 press conferences about the infection and the death of the nurse as “Spain’s chaotic Ebola death watch”: the country’s defence minister spoke at a the press conference before and contradicted the health minister who stated that the treatment of two Ebola-infected missionaries in Spain did not pose “any risks whatsoever” (https://www.thespainreport.com/articles/317-141011122759-span-s-chaotic-ebola-death-watch). This example demonstrates how and why, in times of crisis, statements can differ. There is a fine line between providing reassurance that everything is under control and perpetuating a false sense of security.

Despite sensationalist articles such as “How the deadly epidemic destroys the body” (Bild, July 2014), the German press remained rather calm and also covered the impact of Ebola on the people in West Africa. *Die Welt*, for instance, published an article by German paediatrician Joachim Gardemann about his work to help infected children in Sierra Leone. Headlines such as “The courage of survivors: healed Ebola patients are immune to viruses and can safely help others” in the *Berliner Morgenpost* in November 2104 contributed to overall neutral coverage. The public was informed through interviews with German scientists about how the virus is transmitted, how people can protect themselves, and why Ebola patients were flown to Germany for treatment (*Hamburger Morgenpost*, July 2014) to reassure helpers that everything was being done to help them should they contract the virus.

The UK was explicitly praised by the WHO for its exemplary management of the Ebola crisis. Not least owing to statements by scientists and public institutions, there was comparatively little media hysteria. The *Daily Telegraph*, which covered the epidemic in a neutral and responsible way, reminded the British public that instead of engaging in a witch-hunt against British helpers who had contracted Ebola, they should honour their work to fight the disease in Africa. This open debate was held at a very early stage and it involved a discussion that sending fewer experts and helpers to Africa would only increase the likelihood of a worldwide Ebola epidemic. There were of course concerns among the population and criticism of the policies adopted by the health system. However, the competent reports on Ebola in the media appeared to have had a more positive effect.

The heated arguments between political parties in the USA about the security of America in the face of the Ebola outbreak, as well as personal attacks on President Obama, ostensibly due to his unwillingness to employ restrictive measures, are reminiscent of the fear of AIDS many years ago. People infected with HIV were refused entry into the USA from 1987 onwards; a policy that was only abolished in 2010. While the ban was formally revoked under George W. Bush in 2008, the necessary government decree was still missing at that point. In Germany, the so-called Bavarian List of Measures to combat AIDS from 1987 contained restrictive measures and portrayed AIDS-infected people as perpetrators rather than victims. The opposing side, which ultimately prevailed, stressed the need for providing adequate information to the public to quell fears and hysteria and to inform the public about efficient countermeasures, such as using condoms.

The outbreak of MERS—caused by the Middle East respiratory syndrome coronavirus—in South Korea in the summer of 2015 demonstrates the importance of quick and transparent communication. Up to July 2015, 186 persons contracted the virus, 36 of whom died. The index case had returned from the Arabian Peninsula and, as is customary in South Korea, went to several hospitals to get a second and third medical opinion, which enabled the virus to spread within a relatively short time. According to the WHO, doctors recognised the first cases too late, and patients infected with MERS in the early stages spent lengthy periods of time in crowded emergency departments. In addition, visitors and relatives of patients typically stay in the patient’s room in South Korea, which also helped the virus to spread quickly.

According to the WHO, medical staff and the public knew too little about MERS at the beginning of the outbreak, allowing the virus to quickly infect people and spread owing to the lack of simple hygienic measures in local hospitals. There was initially some hesitation in South Korea in naming hospitals where MERS patients were receiving treatment. What was initially intended as a measure to protect the institution and/or its patients and their privacy ultimately proved to be a communication error: the lack of transparency led to speculation and scaremongering. The unfortunate behaviour of patients and their relatives’ that was allowing MERS to spread was ultimately counteracted by providing factual information on the virus and concrete measures.
instructions on how to prevent spread of the disease.

In May 2015, the WHO published a paper by an independent panel of experts who assessed the measures to control Ebola (Ebola Interim Assessment Panel, 8 May 2015). The timing of the WHO’s declaration of the situation in West Africa as a public health emergency of international concern was unanimously portrayed as too late. One reason for this delay may have been the public criticism levelled at the WHO for announcing a PHEIC for the pandemic Influenza H1N1 in April 2009. The extent of this H1N1 outbreak was smaller than initially expected. Another criticism was the lack of cooperation between the WHO and local communities during the first months of the Ebola outbreak. There was a lack of clear instructions on site as to how to deal with victims to prevent the disease from spreading across the country. Traditional and cultural customs—such as the form of interment typical in West Africa—should have become known at a much earlier stage and comprehensible information on how these practices contributed to the spread should have been provided.

People make decisions not for apparently irrational reasons, but because they assess risk individually on the basis of various criteria. In terms of how the public perceived Ebola, the context and connotations in the media coverage were therefore important factors. Was Ebola described as a research, a medical or a social/political issue? Due to the high number of media reports worldwide, the analysis is complex and not conclusive although some surveys provide data on the public’s perception and reactions.

An online survey of 212 people conducted in the USA in November 2014 found that lower risk perception is linked to better knowledge about Ebola [3], which, according to the psychological literature, is not a typical mechanism. The authors of the survey therefore advocate publishing adequate information in order to prevent panic. The interviewed persons who described themselves as well informed about the disease mentioned the Internet as their main source of information. The respondents saw their personal risk of contracting Ebola lower in the USA than in Europe. The risk was perceived to be highest in Africa itself.

An online survey undertaken in Israel between September and November 2014 with 327 respondents (21.8% healthcare professionals and 78.1% general public; 77.7% of the total number held academic degrees) asked people about their knowledge and risk perception in relation to the Ebola outbreak in West Africa [4]. The survey deliberately selected a country, which, at the time of the interviews, had not (yet) been affected by the outbreak. In terms of knowledge about Ebola, there were no statistically significant differences between healthcare workers and the public. As many as 25.4% of respondents expressed the erroneous view that the Ebola virus is airborne. Nor did the survey find any statistically significant associations between information on Ebola and worry levels. More than half of respondents in Israel wanted information about Ebola from the Health Ministry, including uncertainty. More than half of the respondents felt that the information on Ebola provided by the Health Ministry and Ebola prevention was insufficient.

Resilience of all affected parties in crisis situations can only be achieved if lessons are already learned from past mistakes in crisis-free situations.

As part of an online survey with 974 participants in November 2014, the German Helmholtz Centre for Infection Research analysed knowledge and risk perception regarding Ebola [5]. Only 3.9% of respondents could answer factual questions about the transmission of the virus correctly. About 74% thought the virus was airborne but could not be transmitted through direct contact with bodily fluids or via the mucosa or injured skin. In addition, 74% held the view that it is possible to contract Ebola from persons who are as yet symptom-free. Almost 20% of those who believed that the Ebola virus is airborne consequently stated that contracting the virus on public transports was possible. About 7% of respondents modified their everyday behaviour as a result of the Ebola problem: almost 69% avoided contact with Africans in public, and 26.6% stopped using public transports. If an Ebola patient from Africa was treated near them in a hospital, 87% of all respondents said they would change their behaviour. About 75% would pay more attention to hygiene, for example in the form of washing their hands more frequently, while 16.4% stated they would stop using public transport in that situation. About 30% said they would refrain from visiting friends treated in the same hospital.

These studies on risk perception show the complexity of the communication needs of both the general population and healthcare professionals in times of crisis and before. The expectation for public institutions to provide intelligible, comprehensive and transparent information is high. It is also clear that a continuous supply of supporting information on scientific uncertainty is not perceived as a deficit on the part of those providing the information, but rather as a sign of competence. This is the more important insight, as the communication strategy of information providers in crisis situations has a major impact on media coverage.

Balancing prevention through the provision of adequate and timely information to the public and the risk of panic resulting from such information is always a deliberate act. Institutions such as the CDC or the ECDC make it possible to transfer authority and hence responsibility to these superordinate institutions. Doing so offers advantages, especially with regard to unpopular measures. Even if regulatory responsibility remains in the remit of individual states and governments, superordinate institutions such as the CDC can take over the management of information, thus giving them the status of a central reference authority.

The concept of transparency and education to prevent the further spread of epidemics is, in this context, opposed to the concept of a restriction of personal freedom by the government with the same justification. Careful consideration of traditional cultural customs and a communication strategy adapted to these customs facilitate the acceptance of measures and behavioural change within the population. Reports of survivors were of great importance in terms of accepting the necessary health measures in Africa. There is no doubt that efforts to change the behavioural patterns in West Africa with regard to traditions, the care of sick relatives and their dignified interment
are important. However, it is also imperative not to try to replace “incorrect” with “correct” behaviour by slogans such as “tradition kills”. Rather, efforts must be made to understand and respect national customs and mores and to change them cautiously together with the local population, always providing justification in the process. The organisation ASEOWA (African Union Support to Ebola Outbreak in West Africa) got survivors to tell their stories: for example, how they had contracted the disease during a traditional interment of a relative, how they received medical attention in Ebola Treatment Units (ETU) and what impact that had. Statements such as “the ETU is not a place where people are left to die” or “the health workers took care of me like a baby” and “they spoke to me warmly and gave me hope” help to abate the fear of ETUs that people in the affected areas typically feel.

It is advisable for the media to portray infected people as victims who were unfortunate to contract the disease and who now need all the medical care they can get, rather than perpetrators who are said to have brought the misfortune on themselves, for example by not wearing the required protective suit, and are now spreading it. In the case of the Spanish nurse, the media repeatedly emphasised that she was to blame for contracting the disease.

The increasing public criticism of the WHO was not counteracted by any proactive communication from the WHO to regain the public’s trust, according to the external panel of experts. As regards the development of a vaccine, the panel argues that the WHO did not have any real strategy before August 2014. Instead, a series of ad hoc decisions were taken. It was not until mid-September 2014 that the organisation UNMEER (United Nations Mission for Emergency Ebola Response) was formed, for example: it was only partially successful in the affected countries. The organisation Doctors Without Borders regarded the lack of medication and vaccines as a fundamental problem in the crisis, in addition to all the management mistakes made, the under-funded health system in West Africa and all the information deficits regarding Ebola itself. The organisation also stated that it was simply not possible to make up for decades of underfunding and lack of research and development within such a short period of time.

Peter M. Sandman und Jody Lanard, who had previously analysed the risk communication during the outbreak of verotoxin-producing E. coli in Germany in 2011, also assessed the Ebola outbreak from the same perspective. In their view, the first diagnosed case in Dallas in particular constituted a missed opportunity to explain to the public the potentially far-reaching consequences of Ebola. Rather, the case was used to discriminate against those affected by the disease and portraying them as culprits (http://www.psandman.com/articles/EbolaList.htm). Sandman and Lanard also emphasised the serious errors made in the treatment of the patient in Dallas: he was initially given medical treatment but then sent home; his family was kept in quarantine in the potentially contaminated apartment for several days; mistakes were made in implementing measures at the hospital that meant that at least two nursing staff contracted the virus, presumably while caring for the Ebola patient. Sandman and Lanard strongly support providing full information to the public to ensure people take responsibility, rather than turning a blind eye or passing judgement. They also emphasise the need for communicating scientific uncertainty.

Linda Rosenbaum is interested in the issue of communicating scientific uncertainty and has stressed that projecting overconfidence in relation to the Ebola patient in Texas in particular was a serious mistake made by the CDC [6]. The hospital was forced to admit errors, and the population was convinced that public institutions had deceived them about the real risk. Confidence in the ability of the government to protect the population evaporated when the impression arose that even CDC experts and the hospital in Texas were incapable of controlling the situation. The CDC communicated that the nurses had possibly become infected due to their failure to comply with standard instructions. When it transpired later that no such instructions had ever been issued, this only exacerbated the situation. The strategy adopted during the outbreak in Great Britain and Germany, whereby trustworthy persons directly involved in the crisis—such as attending physicians at hospitals and scientists conducting relevant research—gave their views in personal interviews was an important success factor in ensuring effective communication and in preventing rumours.

SIDEBAR A: Success factors in risk and crisis communication

- Timely establishment of various closely cooperating teams within public institutions with a clear mandate: operational teams, observer teams, strategy teams, press teams, consultancy teams involving independent external experts for continuous quality control of all procedures
- Drafting understandable concrete instructions on preventive measures for various target groups (nurses, physicians, relatives, flight attendants, etc.) through different media by trustworthy public institutions
- Open and timely communication of scientific uncertainties (including where applicable, different expert opinions) with repeated and up-to-date assessment of the personal risk in everyday situations instead of negating risks and communicating an unrealistic sense of security
- If possible, complete, non-selective information from public institutions and transparent communication of mistakes which may have occurred including what has been learned for future measures
- Personal accounts by people who have been affected in various ways (helpers on site, victims’ relatives, people who have survived the disease, etc.) to reach people both at the rational and emotional level
- Carefully taking into account cultural backgrounds instead of premature compulsory measures and building trust by means of categorisation of patients as victims rather than stigmatising them as perpetrators
- Adequate and acceptable comparison of the current personal risk of contracting the disease with other known risks as well as information on behaviours that minimise or increase risks
- Contrasting bad events compared to good non-events: encouraging portrayal of the number of unfortunate sick persons in one’s own country compared to the number of those not infected and healed
journalism, scientists and public institutions will always be confronted with provocative questions, which may trigger imprudent responses. The interest in objective, transparent and comprehensive reporting is often opposed to the economic interest of publishing houses. However, public institutions are well placed to provide trustworthy information, especially if expert teams are formed specifically to handle the crisis, and if these teams are given different responsibilities with regard to operational procedures, communication strategies and media work. Consultant teams consisting partially of external experts are also helpful in ensuring consistent quality control from the outset rather than only in response to medical or communicative problems.

The Ebola outbreak in West Africa led to panic in the affected countries themselves, especially at the beginning of the outbreak when the extent of knowledge among all parties was minimal. This became clear, for example, when patients suffering from Ebola were hidden and helpers faced resistance from the local population. The rest of the world reacted with fear rather than panic. At no time during such an outbreak situation should the impression be created in any country that Ebola is a distant third-world disease that has no relevance to people elsewhere. Rather, the goal should be to establish trust at an early stage, both in the affected areas and also in one’s own country to secure acceptance for measures that may become necessary in the future. This requires great efforts on the part of those institutions whose task it is to generate communication preparedness [7]. Resilience of all affected parties in crisis situations can only be achieved if lessons are already learned from past mistakes in crisis-free situations. The Ebola outbreak in West Africa will, in all likelihood, not be the last zoonosis to spread around the globe rapidly. Highly pathogenic, airborne and easily transmissible and mutable viruses with much greater infectious potential than the Ebola virus will continue to pose great challenges for the medical profession and societies at large. If public institutions and the media engage in proactive risk communication by admitting uncertainties and thus building trust, they can make a significant contribution to preventing the hysteria seen in the USA and Spain as described here.

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Conflict of interest
The author declares that she has no conflict of interest.

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