The outbreak of Ebola virus disease (EVD), officially declared by the Guinean authorities on March 23rd 2014, took not only the country’s health personnel by surprise, but also its population and decision-makers.

The advent of a major crisis on feverish soil
In view of the gravity of this disease, which had already resulted in very high fatality rates during earlier outbreaks in other African countries, the Guinean health system was neither prepared nor did it have the epidemic surveillance or management systems necessary to bring it rapidly under control. The first cases occurred as early as the end of 2013 but, because of the limitations of our national health system, the confirmation and declaration of the outbreak came late. Furthermore, because of our cultural environment, the population initially believed that this mysterious illness only killed people living in the country’s forest regions (Macenta and Gueckedou). In fact, the outbreak was only taken seriously by the health services when it claimed the life of a hospital director. By August 19th 2015, there had been a total of 3,791 suspected, probable and confirmed cases and 2,525 people had died of the disease. A comparison of the number of deaths and the number of confirmed cases shows a fatality rate of 62%. Among health care workers, this rate reached 54%, with 218 confirmed cases and 114 deaths.

Guinea’s health situation was difficult even before the outbreak occurred. According to World Bank figures for 2012, life expectancy in Guinea is estimated at 56 years, with 55% of the population living below the poverty threshold. The gross mortality rate is 10.09 per thousand and the gross birth rate is 34 per thousand, giving a natural increase rate of 2.38% and a total fertility rate of 5.1%. The maternal mortality rate is estimated at 724 per 100,000 live births, with an infant and child mortality rate of 123 per thousand and an infant mortality rate of 67 per thousand. The incidence and prevalence of communicable diseases are very high: 44% of first contacts for malaria, 178 smear-positive pulmonary tuberculosis cases per 100,000 inhabitants and 1.7% for HIV/AIDS. As for meningitis, cholera and measles, they are endemoeptic. There has been a sharp increase in non-communicable diseases, such as type 2 diabetes and arterial hypertension, and they now account for 14% of hospital deaths. Malnutrition rates are also high, with chronic malnutrition affecting 30% of children and its acute form affecting 10% of them. Lastly, only 75% of Guinea’s population has access to safe drinking water (92% in urban environments against 65% in rural environments), and 21% of this total population (35% in
urban environments and 11% in rural environments) use non-shared improved sanitation facilities, with 25% practising open air defecation.

This situation says a lot about the fragility of the country’s health system. In terms of health care and services, for example, in 2012 only 45% of births were attended by skilled health personnel, a mere 37% of children were fully immunised and just 47% of the population disposed of an insecticide-impregnated mosquito net. There is also a severe imbalance in the distribution of health workers between urban and rural areas, as indicated by human resource management data of health personnel, with only 17% working in rural areas where 70% of the population is concentrated. Furthermore, because of poor coverage by medical establishments, 50% of the population has to travel over 5 km to reach a health centre. It should be said that only 1.75% of the national budget is spent on health. In other words, 63% of the 26 dollars of annual health expenditure per capita is paid by households, 28% by international partners and only 9% is covered by the state. And finally, because our national health information system is not always computerised, our data gathering is never up-to-date. In this general context, the EVD outbreak again highlighted weaknesses specific to this kind of crisis, but it also enabled us to consolidate a few gains that we must now capitalise on.

### Technical, institutional and financial weaknesses

Technically-speaking, our surveillance capacity was poor even before the Ebola outbreak. This was due to a number of factors, including inadequate availability of human resources (both in quality and quantity) and poor communication logistics (Internet, telephones and other technological means of communication); a lack of support in terms of crisis and disaster preparedness – our traditional aid partners being more focused on the response – ; logistical problems with transporting patients (delaying life-saving treatment and so increasing mortality) and insufficient EVD diagnosis laboratories, meaning patients had to be transferred over long distances. Failure to communicate effectively with the communities is another item to add to this list of inadequacies. As a result of this, people had a poor perception of the strategies presented to them by the health services and their partners, and pockets of resistance sprang up across the country.

At the institutional level, weaknesses identified at the start of the epidemic persisted. Such is the case of the national bodies charged with managing the epidemic, incapable of providing sufficient resources to implement the strategies and activities that our partners were helping us develop. At the same time, some of these partners were reluctant to work together as they were intent on leading the response in order to extend their influence internationally. The matter of whether to incorporate the mobile biomedical analysis laboratory provided by the Russian Federation into the response arsenal is a prime example of this: Médecins Sans Frontières (MSF) demanded that prior approval be obtained from WHO, although this had not been considered necessary for the first laboratories brought into operation in the field. This kind of friction was due in part to the Guinean government’s difficulty in imposing its leadership. This was also a factor in the delay in opening the treatment centres in Macenta, Coyah and Forecariah, MSF considering that, given the resources at its disposal, it was not pertinent for it to go ahead with this, despite the risks posed by the Ebola outbreaks in Liberia and Sierra Leone. In this regard, the National Health Crisis Committee had considerable difficulty controlling the international statements made by NGOs, in particular MSF, which complicated things for the authorities and did nothing to reassure Guinea’s investors: remember the disarray caused in the mining and airline companies?
Other institutional inadequacies need highlighting, such as the lack of engagement by various components of Guinean society – notably politicians – when the epidemic was first announced and during most of its management. The decentralisation of the response that would have permitted to involve all the stakeholders at every level of the health system (regions, prefectures and others) was lacking too. The international community was also slow to mobilise, with an overly-long delay between the announcement of its intent to intervene and the actual rollout of its response. Once engaged, the different partners all had their own procedures for managing emergency situations and working with the national counterparts, which did little to facilitate things. But one must immediately admit that a lack of interaction between the epidemic’s management body – the National Ebola Coordination Committee – and the national authorities at the highest level generated a perception gap and prevented the development of a sufficiently shared vision of the response. This discrepancy occasionally caused misunderstandings or differences of opinion within the epidemic’s management body, which was supposed to be reconciling strategy and technical implementation rather than playing a technical role. Furthermore, the lack of rapport between the Health Ministry and the National Ebola Coordination Committee led – among other things – to the Ebola epidemic taking precedence over other health problems that were claiming far more victims. In fact, all the money was directed towards the EVD response, a policy which only served to worsen the overall financial situation of the health system.

On the subject of finance, other weaknesses must be mentioned but just two of them will be indicated. The Guinean government’s low financial and material contribution had a negative impact on the leadership of national response and state-run bodies from the moment the epidemic was declared. Furthermore, with regard to funding for the response, the partners showed a prejudicial lack of transparency towards the national bodies tasked with managing the epidemic and the Guinean authorities. Indeed, partners either couldn’t or did not wish to communicate on the funding received and used to finance the strategic priorities defined for the response. Suffice to say that the state contributed 5% or so of the funding provided to manage the epidemic against around 95% for the partners.

**Undeniable advances**

Nevertheless, and notwithstanding this seemingly negative picture, a number of undeniably strong points should also be mentioned which allow to stop… this epidemic. The first of these points is the leadership developed by the Guinean head of state, largely responsible for the rapid creation of the National Ebola Coordination Committee – a body that was given enough authority and rapidly-available resources to circumvent the usual excessively slow procedures. Presidential leadership was also behind national, sub-regional and international initiatives to mobilise the different components of Guinean society – political, religious and other leaders – and the international community, while releasing considerable amounts of funding for implementing the response and strengthening the engagement of all the actors concerned. Similarly, the head of state’s commitment to monitoring and evaluating the strategies implemented and activities rolled out by the National Coordination Committee, partners and the international community fostered the development of real dynamics between all these actors.

The seriousness of the situation also led to the strengthening of certain sectors that had been falling short before the crisis. This was true of communication with the population where improvements helped reduce, and in some cases eradicate, the pockets of resistance that had developed in certain localities. The same goes for the health system’s logistical capabilities which
were much improved by the supply of vehicles, helicopters, as well as the human resources deployed in all the problem areas at regional and even at prefectural level.

MSF’s immediate engagement in the response proved determining and salutary, in particular by the opening of the first treatment centres and by its patient management. And the intervention by the Atlanta Center for Disease Control and Prevention (CDC) opened the way for other hopefully fruitful initiatives, including a project to set up a “CDC Guinea”. This project is currently being developed by strengthening cooperation with the Atlanta CDC, French and Japanese institutions and other international partners recognised for their expertise in infectious disease surveillance. Other partners which provided material and services during the response are now ready to continue their assistance to Guinea. These include the West African Network of Biomedical Analysis Laboratories (RESAOLAB), Connecting Organisations for Regional Disease Surveillance (CORDS), the French Red Cross, the K-Plan company and the Russian Federation. Prospects such as these are strong motivation for strengthening advocacy in support of a larger proportion of national spending on health and for making strenuous efforts to raise the awareness of the population and decision-makers at all levels to obtain greater commitment towards disease control.

**Perspectives to be investigated and implemented**

There is still a crucial need to strengthen the leadership of our national response bodies by clarifying the roles played by the different stakeholders (national and international partners) in the management of the health system. It is also essential to plead for the kind of logistical resources necessary for handling emergency situations and making our response capabilities more effective and efficient. We need to review the way funding is managed in epidemic situations and emergencies to ensure more transparent practices by partners versus the Guinean government. Lastly, it is vital to have the advances made during the management of the Ebola epidemic benefit the whole health system: these institutional, structural, technical and financial gains must help us to integrate the Ebola threat into the health system and thus increase the system’s performance in infectious disease surveillance and all other aspects of its management.

Health sector partners, institutional donors and national authorities clearly all have lessons to learn from this epidemic, and institutional aspects should be reviewed to establish a stronger and more resilient health system. The fact that Guinea had a national body specifically devoted to the management of health crises and disasters proved crucial and salutary, enabling us to organise our response efficiently. This National Health Crisis Committee – the only body put in place by the state for handling this kind of crisis since 2007 and including national-level managers and traditional health sector partners such as WHO, Unicef, UNFPA, MSF, Terre des Hommes, etc. – must be strengthened. We have not talked enough about it in the necessarily limited space available to us in this article, but there is no doubt that it will prove its usefulness in future health crises. Finally, this epidemic has confirmed that the role of politicians is determining and their involvement at the highest level is key to success: the personal involvement of the Guinean head of state in the management of the Ebola epidemic is proof of this.

Finally, we must not lose sight of the fact that the threat has not disappeared and organise ourselves accordingly. Although this epidemic occurred naturally, we know that it could just as easily have been caused accidentally or intentionally. The Biological Weapons Convention is very important in this respect. It is becoming increasingly urgent for as many countries as possible to join this convention in order to make an active contribution to the international debate and be better informed and protected. Developing countries like ours do not have the means to produce
biological weapons, yet because of our low prevention and response capacity we are the most vulnerable to them. In this regard, the international community must be a guarantee for us.

Translated from the French by Mandy Duret

Biography • Aboubacar Sidiki Diakité

Aboubacar Sidiki Diakité is a pharmacist and inspector general at Guinea’s Ministry of Health. He is also a senior lecturer in pharmaceutical law and head of pharmaceutical policy, law and management in the Faculty of Medicine, Pharmacy and Odontostomatolgy’s Pharmacy Department at Gamal Abdel Nasser University of Conakry. He is president of the National Committee for the Fight against Counterfeit and Fraudulent Drugs and Illicit Drug Trafficking, president of the Guinean section of the West African Network of Biomedical Analysis Laboratories (RESAOLAB) and focal point for the Council of Europe’s MEDICRIME convention. He is also president of Guinea’s National Health Crisis Committee which managed the Ebola epidemic from March to July 2014, before the creation of the National Ebola Coordination Committee on which he is now sits as strategy adviser.