



MAKING A DIFFERENCE

THE GLOBAL EBOLA RESPONSE: OUTLOOK 2015

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Cover photo:
1 September 2014, Liberia: Christine Freeman, a 75-year-old woman raises her arms in triumph having been told that she is now free from Ebola and will shortly be discharged.
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FOREWORD BY SECRETARY-GENERAL BAN KI-MOON



The Secretary-General with nurse Rebecca Johnson, a survivor of Ebola, on 19 December 2014, at the Ebola Treatment Unit PTS1 in Hastings, near Freetown, Sierra Leone.
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The West Africa Ebola outbreak has had profound economic, humanitarian, political and security dimensions. At least 20,500 people are known to have been infected; some 8,200 have died. The lives and livelihoods of the people of Guinea, Liberia and Sierra Leone have been severely affected, and they have asked the world to come to their assistance.

This publication tells the story of how the world responded in 2014. It outlines the key steps needed to end transmission of the disease and promote the kind of recovery that leaves the affected countries more resilient and better prepared to address future shocks.

With essential coordination provided by the UN Mission for Ebola Emergency Response (UNMEER), the United Nations system has had—and will continue to have—a prominent role in mobilizing and deploying funds and resources. It is one actor among many. *Making a Difference* reflects the diversity of the global coalition of governments, civil society organizations, development banks and philanthropic foundations that have committed to stop the spread of this cruel disease.

At the heart of the response are the governments and communities of the affected countries. Wherever they have received the material and financial support needed to stop the spread of the virus, the number of new cases has declined. Massive international support has been made available in record time. Assistance has been forthcoming from all regions, but I would particularly like to highlight the solidarity shown by African nations that have heeded the call of the African Union to send volunteers.

Thanks to these efforts, we are now seeing the outbreak evolve into multiple distinct centres of infection, each with its own character and corresponding needs. The global response is evolving accordingly, adjusting so that the right combination of resources reaches people in remote rural settings, densely populated urban centres and locations situated close to national borders. This second phase of the response is designed to consolidate progress and increase intensity in areas where transmission is greatest. The goal is to track down Ebola and care for people who are infected until there are no cases anywhere.

Reaching zero cases and enabling durable social and economic recovery will require sustained commitment from a global coalition of supporters throughout 2015. The commitment must be maintained for however long it takes for success to be achieved. To this end, the World Health Organization and the entire United Nations system will continue to work closely and resolutely with the affected governments and all partners in the global response.

As I said when I visited the region in December last year, the United Nations has stood with the people of Guinea, Liberia and Sierra Leone for years in their quest for development and peace. We continue as a close partner now in their hour of extreme need. We are working together to end this crisis quickly and safely. We would like to be sure that those affected never have to endure such hardship again. And by heeding lessons learned from this outbreak, and strengthening public health everywhere, we can make the world a safer place for all.

INTRODUCTION BY THE SECRETARY-GENERAL'S SPECIAL ENVOY ON EBOLA, DR. DAVID NABARRO

The West Africa Ebola outbreak is extreme and unprecedented. It has brought tragedy into the lives of thousands of families, and caused millions more to fear infection. The consequences have been experienced most intensely by the people of Guinea, Liberia and Sierra Leone, but the anxieties about the wider impacts of this infection have resonated around the world. The outbreak has provided a stark reminder of our global connectivity, our collective fragility and the importance of international solidarity in the face of disease threats.

In the three most affected countries, Ebola has dominated local and national government activity for much of 2014. The outbreak has reduced or halted economic growth and dramatically altered how societies function. It has restricted freedom of movement and people's ability to engage in normal social interaction. It has influenced how business is conducted, when fields are tended, whether markets can open normally and how families worship. It has had a direct impact on the availability of basic health care and schooling for children.

Thousands of people are involved in the response: patient attendants, nurses and doctors, those who move the sick to hospitals and those who bury the dead. Many are volunteers from abroad; but most are from the affected countries. All are working relentlessly, often under difficult and dangerous conditions, with few opportunities to rest and recharge.

A comprehensive response that rapidly ends this outbreak is important for two reasons. First, it is essential for the social and economic well-being of the people of West Africa. Second, it shows whether the international community is able to tackle and contain such global health threats.

Ending the outbreak will not be easy because the disease is being transmitted in three countries with a collective land area greater than the United Kingdom. They have limited infrastructure, borders are porous, and deep-seated cultural traditions facilitate the spread of the virus.

Our experience of this outbreak so far has repeatedly taught us an important lesson. Success can only be achieved if communities themselves understand the nature of the outbreak and act in ways that reduce their likelihood of becoming infected. The elimination of the virus will only be achieved if those who are assisting with the response work under the supervision of national authorities, work closely together and ensure their



Visiting Bamako on 3 December 2014, the UN Secretary-General's Special Envoy on Ebola, Dr. David Nabarro, assessed that a "very powerful effort" was under way to stop the spread of the virus in Mali. "There is a big engagement of the whole population... the whole of society. The government itself is working very effectively, particularly at the frontiers," Dr. Nabarro said.

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efforts are offered in synergy. This calls for seamless coordination between actors, whether they work in villages and townships, at the level of local government areas, in the national capitals or at the international level.

Success is more likely if there is a continuous supply of needed resources in the right place and at the right time. Finance, skilled people and equipment must be put at the disposal of communities, civil society organizations and governments. Transmission is reduced most rapidly if all concerned respond to any changes in the outbreak by adjusting what they do quickly, collaboratively and in unison. This ability to adjust—together—is a vital element of the response going in to 2015.

National governments are leading the responses. With the support of the international community, their populations are turning the tide. Despite unexpected set-backs and uneven progress, the overall number of new cases each day is declining. There are clear signs that the strategy to stop the outbreak is succeeding.

The Special Envoy and the Global Ebola Response Coalition

To be effective, the global Ebola response needs to be as dynamic as the outbreak. To support the evolution of response strategies, the office of the United Nations Special Envoy on Ebola will continue to convene an active Global Ebola Response Coalition that provides a platform for the exchange of information on actions needed to stop the spread of Ebola and promote swift recovery.

The coalition will help to ensure mobilization of effective people to support the response—helping communities to be confident that they are able to own, act on and end the outbreak; establishing platforms that enable responders to access useful, reliable and timely information; ensuring effective systems to organize functioning local-level coordination; and seeking means to ensure support to responders with a special focus on helping them reduce the risk of ill-health. The Coalition will also contribute to thinking about ways to improve systems for responding to future international health crises.

Coalition partners have the authority and responsibility for public health actions: they recognize that maintaining an effective Ebola response requires continued focus and shared accountability for results. In recent weeks they have sought to align their efforts while supporting a response that is of sufficient scale and quality to end the outbreak.

The Ebola Envoy will work with Coalition partners on five areas during the 2015 response phase:

- First, the Envoy will continue to analyze the flow of resources into the response, establishing what is needed and where, as well as what has been disbursed and to what impact. A revised Overview of Needs and Requirements for the UN system and partners is being prepared with the Office for the Coordination of Humanitarian Affairs. This will be synchronized with government-led Ebola Recovery Assessments coordinated by the UN Development Programme. The Secretary-General's Ebola Trust
- Fund is a critical financing mechanism, offering flexibility and responsiveness to address new and existing priorities. Maintaining this flexibility while directing available funds to where they are most needed is the core benefit of the Fund. The high demand for resources available in the Trust Fund from implementing partners indicates the perceived value of this instrument and the need for continued generosity from contributors.
- Second, as the capacity of the Coalition partners to collect data increases, it is imperative that they are promptly analyzed and information is made available to all relevant partners. Where data standards exist, they must be followed. The Ebola Envoy will promote the development of standards for Coalition partners to collect and share useful data.
- Third, as survival rates increase and new therapeutic tools become available, responders will be enabled to efficiently share and consider new insights, methods and techniques. The Envoy will invite Coalition partners to share their clinical experiences.
- Fourth, key innovations in vaccines, diagnostics and therapeutics may have profound implications for financing, planning and implementing the response. The Envoy will assure that knowledge of these developments is widely shared among Coalition partners.
- Fifth, the story of the Ebola outbreak is becoming more nuanced and complex. The Envoy will encourage the communication teams of coalition partners to develop narratives, to share them and to disseminate their experiences widely. This will encourage a wider appreciation of the response and greater trust in the responder community.

As the outbreak evolves, the needs of Coalition partners will also evolve. The Envoy will seek to continuously understand these evolving needs and support the efforts of Coalition partners to meet them.

What has happened? Between early June and mid-September 2014, the number of cases of Ebola in Guinea, Liberia and Sierra Leone was growing exponentially, doubling approximately every three weeks. It was clear that a massive response was needed to build on the early and continuing efforts of Médecins sans Frontières and the Red Cross and to get ahead of the virus by reducing the number of persons infected by each person with the disease to a ratio of less than 1.0. This would be achieved most rapidly through scaling up three activities: mobilizing communities to be at the centre of the response; ensuring that those with the disease were able to rapidly access effective treatment (instead of remaining at home or travelling around infecting relatives and neighbours); and providing a rapid, safe and dignified burial to those who died to minimize the risk of others being infected through funeral rites.

These elements—changed behaviour within communities, fully staffed units for treating people with Ebola, and ensuring safe and dignified burials—have been the foundation of the response since May 2014, and have been stepped up dramatically from mid-September. By 14 December, the number of beds in Ebola treatment centres was over 2,000, compared to less than 350 in mid-August, when patients were being turned away because of lack of capacity. The number of available beds now exceeds the number of Ebola patients recorded each week, though treatment capacity is unevenly distributed in all three most affected countries. The average delay between the onset of symptoms and starting treatment has dropped to four days, thus reducing opportunities for transmission. Many households and communities have been reached by social mobilization agents, and their religious and traditional leaders have been trained on the disease and how to control it. Capacity to carry out safe burials has increased considerably. By 14 December, approximately 250 burial teams, each with adequate funding, transport and protective equipment, were covering all but a small number of districts (compared with approximately 20 in early August).

There is strong evidence that when comprehensive measures to interrupt transmission have been undertaken—including careful case finding and contact tracing—they have had a dramatic effect in bringing the incidence of transmission towards zero. The overall disease reproduction rate fell from around 1.4 in September to below 1.0 in December. The epidemic curve has reached a plateau and is starting to decline in some places. As the response advances, there is increased emphasis on the provision of non-Ebola health services, safety nets for those made poor by the outbreak and its control, food security and preparing for recovery. Actions are also under way to improve preparedness in countries that are currently Ebola-free, especially those that border on the three most affected. Senegal, Nigeria and Mali have taken steps with the support of the international community to treat isolated Ebola cases as they occur and to prepare themselves to prevent wider outbreaks.

Detailed epidemiological analyses suggest that there are several micro-outbreaks, each with varying intensity, each at a different stage of evolution, and each with the potential to flare up unexpectedly if not properly managed. Geographic patterns of transmission are shifting, with cases now spread over a wider geographic area.

“Detailed epidemiological analyses suggest that there are several micro-outbreaks, each with varying intensity, each at a different stage of evolution, and each with the potential to flare up unexpectedly if not properly managed.”

“ We have not taken sufficient account of community involvement in the crisis, especially in the aspect of compliance with customs. This disease interferes with some of our customs, such as burial rites, group meals, etc. It was therefore necessary to have community participation. At first it was too professional and actions were misinterpreted and led to violence. Now that we have corrected this, we are reducing the reluctance. If we had done that since the beginning, we would have taken much less time to make an impact.

Sakoba Keita,

Head of Guinea Emergency
Operations Centre

Although capacity to treat those who are infected and to stop transmission is on the increase, utilization has been uneven. Many deaths are still unreported, and communities in some areas are still reluctant to adopt safe burial practices or seek treatment. The virus is lurking close by and in coming months it may make a comeback if we become complacent and let down our guard. It is always possible that it will be re-introduced into places from which it has been eliminated. The response must therefore be adjusted carefully and quickly to the realities of each community and location, as well as to information about the incidence of infection. Communities must be encouraged to own and lead the response: we must be ready to support them, responding quickly to flare-ups, detecting the emergence of new chains of transmission quickly and enabling them to be contained before they escalate.

DIFFERENT STAGES OF THE OUTBREAK

What kinds of adjustments are needed and how are they implemented? The first step in making adjustments is to distinguish between different stages of the outbreak that are being seen in the 60 or so districts, counties and prefectures of the affected countries. Identifying the particular stage in any one district helps all concerned to work out the most effective response, the precautions that they must take, and how to ensure that actions in each location are aligned for the best effect.

STAGE 1:

Intense transmission: Numbers of new cases are increasing day-by-day, illness is widespread and those who have Ebola are unable to quickly access effective treatment. There is more fear than understanding of the disease. This is the situation that was faced in many parts of the affected countries in September 2014. It requires rapid scale-up of facilities, resources and personnel to isolate, treat and bury safely.

STAGE 2:

Slowed transmission: Numbers of new cases each day are constant or starting to reduce: this may be associated with community engagement, accessible treatment, new cases being quickly detected and contacts being traced. The response can be adjusted at any time if there is a sudden increase in transmission.

STAGE 3:

Getting to zero: Numbers of new cases each day are approaching zero. Those involved in the response should be confident that they know most of the chains of transmission and that any new cases come from known contacts; there are very few unexpected flare-ups.

STAGE 4:

Maintaining zero: Numbers of new cases remain at zero over a period of several weeks. Transmission is stopping in an increasingly wider area and re-introduction is prevented through vigilant action by communities and surveillance-based health systems; revival of health services and the recovery of economies and societies is advanced.

Some areas of western Sierra Leone and parts of Guinea are still experiencing intense transmission, and not all people with Ebola are accessing treatment. Slowed transmission is now seen in other parts of Sierra Leone, most of Liberia and parts of Guinea. In some parts of Liberia, communities are “getting to zero”, although there are continuing anxieties about re-importation—including across the borders between countries.

FIVE KEY REQUIREMENTS FOR SUCCESSFULLY ADJUSTING THE RESPONSE

There is just one goal: ending the outbreak. The initial response in 2014 with its focus on behaviour change, treatment beds and safe, dignified burials led to a reduction in numbers of cases. The 2015 phase of the response focuses on finding and tracing all chains of transmission, treating all those who are infected, and achieving zero cases throughout the region. It also focuses on the safe resumption of services essential for living, on strong national capacities for health security, and on ensuring that societies can respond to future outbreaks.

Throughout the three countries, responses are now being adjusted according to different stages of the outbreak. They require well-performing, flexible and rapidly deployable resources. There are five key requirements for the 2015 phase to succeed and contribute to reaching the single goal of zero cases throughout the region.

REQUIREMENT 1:

Useful real-time information and data: The use of live and real-time data can facilitate an understanding of on-the-ground requirements. Affected communities need to be able to access public health services staffed by people expert in case finding, supportive treatment, contact tracing and surveillance. Getting these services to where they are needed calls for reliable up-to-date information based on careful analysis of available data about the state of the outbreak, its progression within each locality, responses under way, gaps that must be filled and resources that can easily be redeployed.

REQUIREMENT 2:

Building trust: Members of the affected communities are the primary source of information about the evolution of the outbreak and they are the primary actors in the response. Building trust between responders and communities is critically important. The collective experience to date is that, without full community engagement, people who are ill will not come forward for diagnosis and treatment. Contacts will refuse daily check-ups to see if they themselves become ill (indeed, they are likely to run away and hide). Unsafe funerals will take place and lead to new chains of transmission. People will be scared and resist control measures. The response works when communities—through their leaders—are in a position to “own” both the outbreak and the response, to plan for themselves and to implement their plans.

REQUIREMENT 3:

Skilled people where they are most needed: To date, external support has been concentrated on medical teams to staff Ebola Treatment Units.

“The challenges going forward are threefold. One is to stop exponential increase, wherever it pops up. Two is to get to zero by tracing every strain of transmission. Three is to strengthen places not prepared in and around the affected countries.

Tom Frieden,

Centers for Disease Control and Prevention

These are still necessary but now they need to be supplemented by people with complementary skills deployed in each locality, staying there for weeks at a time and able to adjust services in response to communities' needs. Those working in each district should be able to ensure that the right services are provided when and where they are needed.

They need to be able to:

- negotiate with and establish trusting relationships between communities and responders;
- find out what is happening with regard to the outbreak;
- undertake data analysis and epidemiology;
- establish accepted and efficient systems to coordinate responders;
- establish and maintain contact tracing and surveillance systems;
- ensure that people receive the best possible care—for Ebola and other health and livelihood challenges;
- identify gaps in essential services and make sure they are promptly filled;
- sustain the ability to react rapidly when information about flare-ups is received.

REQUIREMENT 4:

Effective coordination: Well-organized systems for coordination are needed at the local level to enable all involved in the response to adjust their actions in line with available information. Responders should be coordinated in ways that enable professional teams to be assembled at district level and to ensure that services get to where they are needed. Led by national governments and supported by international experts, the coordination service should apply to all responder organizations working in each community and location. In the coming weeks, more teams will be established in each local government area—over 60 teams in all. The United Nations system—working through UNMEER and engaging with affected governments and international partners—has a central role to play in ensuring coordination and alignment of the international response.

REQUIREMENT 5:

Supporting the responders: All involved in the response need coordinated logistical, human resources, communications, material and financial support to mount an effective, flexible and decentralized response. It is essential to offer continued support to the responders, paying particular attention to their comfort and safety, as they continue to offer services for people with Ebola. That entails strong logistics support and protocols both for the prevention of infection and for ensuring that those who become ill—either with Ebola or with other conditions—can access optimal care.

In conclusion...

Ebola has presented the world with an unprecedented challenge, and a unique opportunity. It has revealed flaws in our international and regional public health mechanisms, and the limited capacities within nations to deal with shocks. It has also drawn together an unprecedented coalition that, if it stays focused and committed, will help the Ebola-affected countries to tackle the outbreak and build back better health systems. It will contribute to systems that enable us to be safer and better off in the face of disease threats.

It is never easy to appreciate where we have come from and where we are headed when we are in the midst of a long and uncertain journey. This is especially the case when matters are as challenging and difficult as this Ebola outbreak. The following sections of this *Outlook* take us back to the beginning of the outbreak and provide perspectives from partners in the Global Ebola Response Coalition on their role, both now and going forward. I am grateful for their contributions and hope all readers will find the *Outlook* a useful resource as we work together on the 2015 phase of the response.

Unloading of PPEs donated by the
Government of Japan to UNMEER.
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PART ONE

FACING THE CRISIS

In December 2013, in the remotest reaches of Guinea, close to the border with Liberia and Sierra Leone, a two-year-old infant named Emile Ouamouno fell sick with a fever, severe headache and bloody diarrhoea. Within days he died, followed by his three-year-old sister, Philomene and his mother, Sia. What no-one realized until too late was that Emile and his family had been infected by Ebola—a virus that has not before been reported from the region.

By March 2014, the World Health Organization (WHO) had become aware of the emergence of a communicable disease in Guinea characterized by fever, severe diarrhoea, vomiting and a high fatality rate. Laboratory tests revealed the cause as a new strain of *Zaire ebolavirus*. On 28 March, there were 103 suspected and confirmed cases of Ebola in Guinea, with 66 deaths. A WHO spokesperson told reporters in Geneva that the outbreak—for which there was no known cure or treatment—needed to be watched very carefully. “A lot of those cases still are only suspect cases,” he said. “Local health authorities will report any number of syndromic cases that resemble Ebola but turn out not to be. So we don’t expect all of these cases to end up confirmed in the end. However, on the other hand, there are probably other cases out there which we don’t know of yet. So this is an extremely fluid situation.”

So it proved. By 1 April, just three days later, the number of cases in Guinea had jumped from 103 to 122, with 80 confirmed deaths. However, there seemed no reason to assume that this outbreak would differ from previous recorded instances in the Democratic Republic of the Congo, Sudan and Uganda, which had been successfully contained. This time, however, instead of burning out, the outbreak became a wildfire: the virus became ingrained in people’s lifestyles and found ways to spread within and beyond the affected areas.

Because of the nature of the Ebola virus, healthcare workers are most vulnerable, and have been hardest hit. A total of 838 health-care workers are known to have been infected with Ebola up to 4 January 2015, 495 of whom have died.

Ebola is a cruel and unforgiving disease. The sicker the victim, the more infectious he or she becomes, posing a grave threat to health workers, care givers and local healers. Of the first 15 recorded deaths, four were health personnel. The greatest viral load is carried by the recently deceased so those who participate in funeral rites faced particular risks. Throughout the region, communities still practiced traditions handed down through generations—including ritually washing and touching the dead prior to



The West Africa Ebola outbreak emerged in a region where diseases which present similar initial symptoms are prevalent, such as typhoid, malaria and Lassa fever. With trained medical personnel and healthcare facilities scarce, accurate diagnosis is problematic and deaths that might otherwise be preventable are still common. By March 2014, the Ebola virus had reached the Guinean capital, Conakry. The outbreak appeared under control several times, only to re-emerge. During May, Ebola had spread to the districts of Kenema and Kailahun in Sierra Leone, and in June cases were reported in Lofa district in Liberia. Speaking to the media in December 2014, Dr. Margaret Chan, Director-General of WHO said: "It is fair to say the whole world, including WHO, failed to see what was unfolding. Of course, with the benefit of hindsight, if you ask me now... we could have mounted a much more robust response."

burial. Each of the growing number of funerals presented an opportunity to generate new chains of transmission, more funerals, and more opportunities for the outbreak to spread.

As the weeks passed, the number of cases grew and the reach of the virus expanded, crossing the border into Liberia and Sierra Leone, exploiting the traditions of close-knit communities who come together to bathe the dead, honour their passing and provide a dignified ceremonial passage to

“What we need to learn for the future and for the entire world—something that we are very, very much lacking—is early response. Early response was lacking in this outbreak. Ebola has been known for more than 30 years in the African region. It wasn’t a strange disease, the United Nations knew, the US government knew what Ebola was. From the very beginning they knew this was a terrible disease with high fatality, with international consequences. The response should have been more robust, more effective, more timely. Don’t pretend these countries have capacity unless we are sure these countries have the capacity.

Tolbert Nyenswah,

Liberia Incident Manager

the afterlife. No longer confined to sparsely populated rural areas—as it had been in earlier recorded outbreaks—the virus jumped to the densely populated towns and cities of Guinea, Liberia and Sierra Leone.

By the beginning of July 2014, despite the combined efforts of Ministries of Health, WHO and front-line partners such as Médecins sans Frontières and the Red Cross, Ebola was firmly entrenched in all three countries, with reports of more than 750 cases and 445 deaths. At a two-day emergency ministerial meeting on Ebola, convened by WHO in Accra, Ghana, delegates declared the outbreak a serious threat to all countries in West Africa and beyond and called for immediate action. Health Ministers pledged to strengthen surveillance to detect cases of Ebola and to boost local community engagement, among other priorities, to rein in the unprecedented outbreak. They expressed concern about the social and economic impact of the outbreak and stressed the need for national leadership, enhanced cross-border collaboration, coordinated action by all stakeholders, and community participation in the response. WHO established a sub-regional control centre in Guinea to act as a coordinating platform to consolidate technical support to West African countries by all major partners and to assist in resource mobilization.

On 9 July, the United Nations Security Council expressed its deep concern over the Ebola outbreak and conveyed to the international community the need to provide prompt assistance to prevent the spread of the virus. On 1 August, Dr. Margaret Chan, Director-General of WHO, met with the presidents of Côte d’Ivoire, Guinea, Liberia and Sierra Leone in Conakry, the Guinean capital, to launch a \$100 million response plan to support an intensified international, regional and national campaign to bring the outbreak under control.

The Ebola Virus Disease Outbreak Response Plan in West Africa identified the need for several hundred more personnel to be deployed in the affected countries to supplement overstretched treatment facilities. While hundreds of international aid workers, as well as more than 120 WHO staff, were already supporting national and regional response efforts, it was plain that many more were needed. The greatest need was for infectious disease clinicians and nurses, epidemiologists, social mobilization experts, logisticians and data managers. The plan outlined the need to increase preparedness systems in neighbouring countries and emphasized the need to improve ways to protect health workers from infection.

Describing the outbreak as “fast-moving” and “unprecedented”, Dr. Chan said that “the current outbreak is moving faster than efforts to control it.” She indicated that if the situation continues, the consequences would be catastrophic in terms both of lost lives and socio-economic disruption. There would be a high risk of spread to other countries. With 1,323 cases and 729 deaths recorded, the WHO chief said that accurate and detailed mapping of the outbreak was urgently needed, along with a dramatic increase in public awareness of the facts about Ebola. The outbreak “is not just a medical or public health problem; it is a social problem,” she said, noting that deep-seated beliefs and cultural practices were a significant cause of further spread and a significant barrier to rapid and effective containment. “The hiding of cases defeats strategies for rapid containment.



Red Cross worker filling in daily chart, N'zerekore, Guinea. "Ebola came to Guinea, Sierra Leone and Liberia and found us there, the Red Cross and Red Crescent", said Elhadj As Sy, IFRC Secretary General. "We work and live with communities and will continue to accompany them in addressing the difficult challenges they face." In addition to its ongoing work, including in safe and dignified burials, the Red Cross expanded its commitment to include treatment, in particular opening a new Ebola Treatment Centre in Sierra Leone.

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Moreover, public reticence can create security threats for response teams especially when fear and misunderstanding turn to anger, hostility or violence," she said.

Following the Conakry summit, WHO appealed for support for the emergency response plan. WHO told the press, "we need many more contributions from the international community, from governments, from NGOs, academic institutions, from anyone who can provide us with doctors, nurses, and other public health staff. We need materials. We need money, and this we need quickly and we need a lot of it.... We are looking at hundreds of international staff that we would like to get into region as fast as possible."

The urgency of combatting Ebola was further emphasized on 8 August when WHO declared the outbreak in West Africa an international public health emergency. With the emergence of a case of Ebola in Nigeria, as well as a mounting toll in Guinea, Liberia and Sierra Leone, Dr. Chan told a press conference in Geneva that "this is the largest, most severe, most complex outbreak in the nearly four decades history of this disease." Calling for international solidarity, Dr. Chan said "our collective health security depends on support for containment in these countries."

“Every day, every hour, every minute that passes, or is wasted now extends the period of time in which people will die and in which the virus can be transmitted to other nations. So there is no time to lose, and this has been our first global priority for months now.

Anthony Lake,

Executive Director of UNICEF

This sense of urgency was reinforced on 13 August when UN Secretary-General, Ban Ki-moon, called together the top executives of the United Nations system in New York. The Secretary-General stressed the need for the entire UN system to support the efforts of the affected governments, WHO and international partners. WHO Director-General, Dr. Chan, told the meeting that “more than one million people are affected, and these people need daily material support, including food. The curtailment of air travel to these countries and their isolation from the rest of the world has made it even more difficult for agencies like Médecins Sans Frontières to bring in staff and supplies.”

With some 2,000 confirmed or suspected cases, and more than 1,000 deaths, WHO declared in mid-August that the magnitude of the Ebola outbreak, especially in Liberia and Sierra Leone, was most likely underestimated. Whenever a treatment facility was opened, it was immediately filled with previously unidentified patients. For example, when a 20-bed treatment centre in Monrovia, Liberia’s capital, was opened it was immediately overwhelmed with more than 70 patients. According to WHO, “this phenomenon strongly suggests the existence of an invisible caseload of patients who are not being detected by the surveillance system.” A further reason to believe the outbreak to be more extensive were reports that many families concealed the infected, believing the disease had no cure and that the victim would be more comfortable dying at home. In rural villages, especially, corpses were being buried without notifying health officials, with no investigation of the cause of death and no precautions being taken to prevent transmission of infection to mourners. Under-reporting of cases was also a result of people denying the existence of the outbreak: they sometimes refused to believe that a patient had Ebola and considered that care in a treatment centre would actually lead to infection and result in certain death.

As the outbreak advanced, its impact on societies increased. Schools closed, leaving up to 5 million children without education, and health systems were coming under increasing strain. In Monrovia, virtually all health services had shut down, depriving not only those suffering from Ebola but all who needed care. In response, UNICEF flew in 68 tonnes of supplies to Monrovia in September 2014. The shipment included 27 metric tonnes of concentrated chlorine for disinfection and water purification and 450,000 pairs of latex gloves. Also in the shipment were supplies of intravenous fluids, oral rehydration salts and ready-to-use therapeutic food to feed patients undergoing treatment. This was the beginning of UNICEF’s largest supply effort ever—by the end of 2014 more than 4,000 metric tonnes had been flown in. At the same time, UNICEF was increasing the deployment of communications teams, producing print communications and radio programming to raise public awareness about the outbreak and ways to prevent infection.

On 12 August 2014, UN Secretary-General Ban Ki-moon appointed Dr. David Nabarro as Senior United Nations System Coordinator for Ebola with responsibility for ensuring that the UN system makes an effective and coordinated contribution to the global effort to control the outbreak. Speaking to the media, the Secretary-General called on the international community to respond urgently to the shortage of doctors, nurses and equipment, including protective clothing and isolation tents, saying “We need all hands on deck.”

By early September, WHO was reporting that there had been 4,269 cases and 2,288 deaths in Guinea, Liberia and Sierra Leone. Nigeria had 21 cases and 8 deaths, while Senegal had one confirmed case. In response, Secretary-General Ban asked the UN system to give top priority to fighting the Ebola outbreak. He announced the establishment of a Global Ebola Response Coalition to provide a platform to galvanize the diverse actors



involved in ending the outbreak, and asked Dr. David Nabarro to act as his Special Envoy on Ebola, to provide strategic coordination and to spearhead a robust programme of international advocacy and resource mobilization. Participants in the Coalition include governments of affected countries, regional bodies and major bilateral donors, international financial institutions, international humanitarian organisations, the International Federation of Red Cross and Red Crescent Societies and representatives from across the UN system.

The Secretary-General also announced that he would convene a high-level meeting on Ebola during the opening of the 69th session of the UN General Assembly. At the meeting Mr. Ban welcomed growing signs of global solidarity, including the deployment of physicians, nurses, epidemiologists and other specialists to the region, and called on all countries and organizations to move swiftly to support the governments of the affected countries. The African Union, European Union, individual nations, non-governmental organizations and the UN system all undertook to assist—with Cuba offering 250 health personnel. Mr. Ban also called on countries not to close their borders to people coming from the affected countries, and asked airlines and shipping companies to maintain transport links. He said that “isolating countries risks causing more harm and delaying efforts to stop the Ebola virus rather than preventing its spread.”

By early September, significant offers of cash, equipment and personnel had begun to materialize from governments, non-governmental organizations and the private sector. The United States Agency for International Development (USAID) announced plans to make an additional \$75 million available to the global Ebola response. More than 100 experts, mostly from the United States Centers for Disease Control and Prevention (CDC) were deployed to the region.

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On 16 September, the UN systems presented its Overview of Needs and Requirements (ONR) for the response. The amount requested totalled \$987.8 million for the following six months. Introducing the ONR at a press conference in New York, the UN Secretary-General said that Ebola was “not just a health crisis; it has grave humanitarian, economic and social consequences that could spread far beyond the affected countries. Generous contributions are being announced each day, but we have a lot of catching up to do to provide the health services, food, water, sanitation and supplies that are needed. Every day we delay, the cost and the suffering will grow exponentially.”



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On 19 September 2014, the General Assembly, under the leadership of its President, Sam Kahamba Kutesa, unanimously approved a resolution to establish the United Nations Mission for Ebola Emergency Response (UNMEER). On 29 September, leaders from Sierra Leone and Liberia urged the General Assembly to ensure the United Nations mounted a stronger, better coordinated response “to end this grave threat to our collective survival.”

Foreign Minister Samaur W. Kamara of Sierra Leone said the Ebola outbreak “is the very first example of a world challenged by globally weak infrastructure and surveillance systems for dealing with faster occurrences of animal-to-human, and human-to-human transmissions of highly contagious diseases,” all made possible by quicker transportation, increasing urbanization and dense networks of people moving between rural and urban areas and across borders.

“We have been slow to meet this new challenge because no-one recognized this confluence of trends could emerge with such virulence in West Africa,” he said. Mr. Kamara said that when the virus hit, Sierra Leone was “doing many things right” following a devastating decade-long civil war, with significant progress in health care and literacy and rebuilding infrastructure. “Based on the knowledge we had, based on the advice we were given by our international partners, we mobilized to meet this unfamiliar threat. But the staff, equipment, medicines and systems we had were inadequate and this slowed our effective response.”

While the international community has “finally come around” to see the outbreak as a global challenge, the response must be scaled up and better coordinated, he said. “Our people live in fear and cannot understand the nature of a disease that claims a life and prevents family members from burying their loved ones.”

Liberian Foreign Minister Augustie Kpehe Ngafuan warned of the overall consequences of Ebola, beyond its immediate health impact. “It is a total crisis—it is an economic crisis, a social crisis, and a potential political and security crisis. Indeed its deleterious impact has been very wide and very deep,” he said, causing a 3.4 per cent slide in economic growth and a potential 12 per cent economic decline in 2015.

“To douse the wildfire caused by Ebola, we have been left with inadequate resources, time and personnel to attend to other routine illnesses like malaria, typhoid fever and measles, thereby causing many more tangential deaths,” he added. “An increasing number of pregnant women are dying in the process of bringing forth life. In short, our public health system, which totally collapsed during years of conflict and was being gradually rebuilt, has relapsed under the weight of the deadly virus.”

Two days later, with some 5,000 cases and nearly 2,500 deaths attributable to Ebola, the Security Council convened its first emergency meeting on a public health crisis, declaring the Ebola outbreak a threat to peace and security. Telling the Council that the global Ebola response needed a 20-fold increase in support, the Secretary-General announced the creation of the United Nations Mission for Ebola Emergency Response (UNMEER) with five priorities known by the acronym STEPP: stopping the outbreak, treating the infected, ensuring essential services, preserving stability and preventing further outbreaks. These were to be the guide for bending the curve of transmission and bringing the outbreak down to zero cases.

PART TWO

BENDING THE CURVE

With the Secretary-General's Special Envoy focusing on strategic coordination, UNMEER's mandate was concentrated on operations. Under the leadership of Special Representative Anthony Banbury, UNMEER was tasked with identifying priorities, meeting logistical needs, implementing activities at the request of the affected governments, aligning its support with other actors and delivering effective analysis, reporting and communications. All operational work of the UN system in the three affected countries was to be brought under the coordination of UNMEER. UNMEER would leverage the existing presence and expertise of UN country teams, as well as international partners, including NGOs on the ground. WHO was to be responsible for overall health strategy and advice, while other UN agencies would act in their area of expertise under the overall direction of UNMEER. The World Food Programme (WFP) was tasked with providing logistical support, as well as working on food security, the International Federation of Red Cross and Red Crescent Societies was responsible for safe burials, and UNICEF and the UN Population Fund (UNFPA) would assist with essential social mobilization. Many organizations and governments provided intense support with the provision of treatment facilities, laboratory services, capacity for safe and dignified burials, social mobilization, essential services for communities affected by the outbreak, and actions to prevent disease spread to neighbouring countries.

“ I have never seen a health event threaten the very survival of societies and governments in already very poor countries. I have never seen an infectious disease contribute so strongly to potential state failure.
Margaret Chan,
WHO Director General

UNMEER's deployment began immediately, and by 1 October, the mission had established its headquarters in Accra, Ghana, with country offices in Guinea, Liberia and Sierra Leone. Specific objectives guided the response during the first 90 days of UNMEER's existence. In the initial 30 days, beginning 1 October, the objective was to ensure the rapid build-up of capacities to enable the response—Ebola Treatment Units (ETUs); Community Care Centres (CCCs); trained medical personnel; and the infrastructure needed to ensure continuity of supplies and the smooth flow of information. By the 60-day mark, the objective was to have all major inputs in place, reduce the infection of healthcare workers by 60 per cent, ensure that 70 per cent of Ebola cases were under isolation and treatment, and 70 per cent of burials were conducted safely and with dignity. By the 90-day mark, the ambition was 100 per cent case isolation and safe burial, the establishment of Ebola-free areas, particularly the capital cities, and an overall decline in cases.



As the UNMEER head, Anthony Banbury toured the three affected countries, the WFP Regional Director for West Africa, Denise Brown, highlighted the scale of the challenge. “The virus is running faster than the international community,” she said. Although the outbreak in Guinea appeared to be easing, cases were rising exponentially in Liberia and Sierra Leone. On 2 October, WHO reported 7,470 confirmed, probable or suspected cases, with 3,431 deaths.

As well as the toll in illness and mortality, Ebola was having a major impact on food prices, which WFP had been monitoring along with the Food and Agricultural Organization (FAO). The two organizations responded by launching a programme to assist 90,000 vulnerable households in Guinea, Liberia and Sierra Leone. “Our comprehensive response is part of overall United Nations efforts to save lives and protect livelihoods,” said Vincent Martin, Head of FAO’s Dakar-based Subregional Resilience Hub. “These actions cannot wait,” said Bukar Tijani, Assistant Director-General at the FAO Regional Office for Africa. “The outbreak is already reducing purchasing power of vulnerable households, which means less food on their plates and increased nutritional risks for families already on subsistence diets. Fear and stigmatisation also threaten to reduce agricultural activities, thereby placing food security at risk.”

With commerce badly hit, the three affected countries saw their previously strong economic growth slow dramatically. By the beginning of December, the World Bank was projecting negative growth for 2015 for Guinea and Sierra Leone. In Liberia, where there were signs of progress in containing the epidemic and some increasing economic activity, the World Bank’s 2015 growth estimate was 3.0 per cent—less than half the pre-crisis estimate of 6.8 per cent. The Ebola outbreak had not only weakened the ability

Anthony Banbury, Special Representative of the Secretary-General and Head of the United Nations Mission for Ebola Emergency Response (UNMEER), with President Ellen Johnson Sirleaf, of Liberia, on 4 November 2014 in Monrovia, Liberia. During a visit to Liberia’s Foya District, UNMEER head Anthony Mr. Banbury applauded the work being done by district health officials and organizations such as Médecins Sans Frontières and Samaritan’s Purse. He noted that patients continued to arrive at the field hospitals and the threat of transnational contagion remained. “The only way we will end this crisis is if we end every last case of Ebola so there is no more risk of transmission to anyone,” Mr. Banbury said. “When that’s accomplished, UNMEER will go home.”

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“ We have worked very closely with the government of Liberia and with NGOs and UN partners on setting up a response apparatus in Liberia that has been fairly successful. If you told me after my first trip out there at the end of August that by December we’d be down to somewhere in the neighbourhood of 10 new cases a day in Liberia I wouldn’t believe you. This is not all USAID-led; it’s a very collaborative effort with the government in the lead. What USAID has done is provide assistance but also as a conveyer of US government capabilities across the whole wide range of actors. One of the really unique elements of this response is you need a whole different range of capabilities. You need epidemiological, heavy logistical, and in some cases direct medical treatment capabilities. They may not all be in-house for USAID but we can pull them from across the US government.

Jeremy Konyndyk,
USAID

of governments to collect revenue, it had raised expenditures by about 30 per cent in Guinea, Liberia and Sierra Leone. Furthermore, household incomes were also dropping. In Liberia, nearly half of those working when the outbreak was first detected in March no longer had jobs by the end of the year. And Ebola was not just affecting economies in the three most affected countries. Tourism-dependent economies across Africa were coming under increasing pressure as people cancelled travel plans, with tour operators experiencing drops in forward bookings between 20 per cent and 70 per cent because of fear of Ebola.

The fear and stigma surrounding Ebola was pervasive and widespread. In the affected countries, the sick and their relatives and other contacts, survivors, orphans and health workers found themselves shunned by families and communities. Border closures and travel restrictions threatened to further limit the movement of goods and hamper the global response. The Africa Cup of Nations football tournament was relocated from Morocco to Equatorial Guinea. A fatal case of Ebola in Texas in October raised major public anxiety in the United States, and some returning health workers—one of whom reported sick with Ebola—found themselves greeted not as heroes risking their lives for others, but as pariahs putting a nation at risk.

“The Ebola outbreak is very much an international concern, and governments are legitimately putting measures in place to protect their citizens. However, closing borders and limiting entry to people travelling from West Africa are not effective ways to contain the outbreak,” said Mr. Elhadj As Sy, Secretary-General of the International Federation of Red Cross and Red Crescent Societies. “Actions such as these only contribute to the stigmatization faced by the very brave people who are volunteering to respond to this outbreak.”

It was against this backdrop of fear that the global response to Ebola continued to gather momentum. The United Nations Secretary-General contacted world leaders and encouraged them to make robust commitments and deliver rapid assistance. Many world leaders responded with generous pledges of material and financial support, and encourage each other to do all they could to sustain an effective response. World leaders all agreed that Ebola posed a major threat.

The United States initiated a major programme of support in Liberia; the United Kingdom offered significant assistance to Sierra Leone, and France scaled up contributions for Guinea. The African Union began to mobilize health workers from around the continent, and nations from Asia, Oceania, the Middle East, Europe and the Americas came forward in increasing numbers to offer in-kind and financial support. At the same time, Médecins sans Frontières, the Red Cross, international NGOs and the UN continued to support national governments with critical elements of the response, and the private sector provided its own contributions ranging from providing earth-moving equipment to assisting with social mobilisation and helping to keep employees Ebola-free.

This Global Coalition, which had been called for by the UN Secretary-General in September, played—and continues to play—an important role in encouraging aligned support for the national Ebola plans of the three

“Our major contribution has been to mobilize young African men and women in the health field to go to the three countries. We started with mobilizing individual volunteers, and we got about 100, but then we realized that we needed much more so we then wrote to Member States to give us health workers. At the moment we have 500 health workers on the ground. We are going to send another 500 or more, and we are also planning to take on retired health workers in these affected countries who are also interested in being part of our programme. We are going to train them and support them. By mid-January we should have more than 1,000 health workers deployed in the three affected countries.

We sent epidemiologists, doctors, nurses, laboratory technicians. We try and cover the whole range of people who will be needed. We also mobilized African business people to contribute financially. We have received pledges up to \$32 million. If we send health workers they expect to be supported by us, we can't put the burden on the three countries.

Nkosazana Dlamini-Zuma,

African Union Commission Chairperson

affected countries. To promote the alignment of operations by different groups supporting the response, UNMEER convened a four-day conference in Accra in mid-October. The participants included senior representatives from the World Bank, donor partners, and senior United Nations officials. The outcome was an operational framework for unified and coordinated support to the response. This was subsequently presented to the governments of each affected country as well as to partners to ensure it dovetailed fully with national plans. Wrapping up a tour of the affected countries, where he met with the presidents and national and international partners, Anthony Banbury, head of UNMEER, said: “The framework sets out the step-by-step process on how the UN and international partners can support the three governments achieve the overarching objective of assisting them to become Ebola-free.” Mr. Banbury's meetings with President Alpha Condé of Guinea, President Ernest Bai Koroma of Sierra Leone, and President Ellen Johnson Sirleaf of Liberia provided inputs and direction for refining the operational framework.

As the outbreak continued through October and November, the number of cases and deaths continued to climb and new chains of transmission appeared in Mali. It was becoming clear that the Ebola emergency was evolving: having originated as a single outbreak spreading from an epicentre, it was increasingly characterised as a collection of discrete outbreaks, each with their own momentum—some subsiding, some intensifying.

The United Kingdom has committed £230 million to the global Ebola response in Sierra Leone. This includes supporting 700 treatment beds for up to 8,800 patients over six months, and funding the construction of six Ebola Treatment Centres across the country.

The UK is also opening facilities to provide safe isolation beds where people who suspect they might be suffering from Ebola can seek swift and accurate diagnosis and appropriate care. The UK is already supporting 542 isolation spaces.

The UK is building, running and staffing three new laboratories, and supporting over 100 burial teams nationally. It is supporting NGOs on the ground to work with people to agree practices that will allow them to honour their friends and relatives, while ensuring bodies are safely buried.

A deployment of 200 military staff will run the Ebola Training Academy in Freetown, training over 4,000 healthcare workers. There are more than 800 Ministry of Defence personnel deployed to help with the establishment of Ebola Treatment Centres and the Ebola Training Academy.

The UK also provided £20 million to the Secretary General's Trust Fund. Jonny Hall, Deputy Director, UK Ebola Task Force

“The anecdotal evidence is clear: people who have worked for a large company and those in the surrounding community have had less chance of getting Ebola than those who don't. We have quietly gone along and done a good job ourselves but have not been seen as a major player in the movement to combat the disease. The development world and NGOs should look at the private sector as equal partners and not as an easy source of cash and staff. I think if there is a good outcome from this it should be a new relationship between the private sector and the development world, particular in West Africa.

Alan Knight,

Ebola Private Sector
Mobilization Group

It was also becoming apparent that where the strategy of isolation and treatment and safe burial was being implemented, rates of transmission would drop significantly. A key element in successfully bringing cases down has been government leadership and local ownership – backed by the resources of the international community. In a speech to the Security Council on 21 November, the Secretary-General's Special Envoy on Ebola, David Nabarro, noted that the response capacities available to national and local authorities had expanded substantially and the degree to which societies were engaged in the response had deepened.

“When societies take responsibility for responding and partners align their support, authorities are able to react rapidly and effectively. We are seeing that, where the response strategy is implemented, transmission is decreasing. While the total number of cases continues to rise, the overall rate of increase has begun to slow. This is a good sign. Results are uneven among and within the affected countries, but we are seeing the curve bending in enough places to give us reasonable hope.” But, with hotspots in northern Guinea and western Sierra Leone, and a new chain of



“I think the overall Ebola response in all three countries has been significantly improved, accelerated, made more effective, by the fact this plan is in place, and it's accepted by everyone, that people understand that we need to do case management, have case isolation, the beds, contact identification tracing, safe burials, social mobilization, all those elements. If all those elements weren't functioning together in the pursuit of a plan, we would have what we had before UNMEER, which is a lot of good activity, but not activity that's changing the crisis. Before UNMEER was deployed, there were more cases every day, every week, every month. The crisis was getting worse and worse. The rate of increase was growing. Now it's significantly slowed, the curve has been bent. That's to do with the efforts and work of a lot of different actors, not just UNMEER by any means, but I think UNMEER gets a lot of credit for that.”

Anthony Banbury, Head of UNMEER

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“The world needs to know that we are not as good as we should be, but we are much better than we were as a UN team in addressing this response—and we are getting better. And we are willing across the organisation to ensure that whatever is the best way, the most effective way, the most impactful way for us to meet the needs of those who require our support, we are going to do it. I have never seen the UN community work like this together before.”

Ertharin Cousin, Executive Director,
World Food Programme

transmission in Mali, “we must remain vigilant and persevere with a flexible and well-adapted response,” David Nabarro said. “If we take our eye off the ball, case numbers will climb again and we will all count the cost.”

China has provided four batches of humanitarian and medical aid with a combined value of more than \$120 million to Ebola-stricken and neighbouring countries, and dispatched around 400 medical workers to the front-line. In addition, China has offered another \$16 million to international and regional organizations as part of the global collective efforts to end the outbreak, including \$6 million to the UN Ebola Response Multi-Partner Trust Fund. Material contributions include personal protective equipment, transport and a mobile bio-safety level III laboratory. A 100-bed treatment centre in Liberia has been built, the first solely built and managed by a foreign country in the affected areas. China is also working to help African countries to enhance public health capacity and accelerate their economic and social recovery.



PART THREE

THE ROAD TO ZERO

“This outbreak, and the threat it poses to the region and the world, will not be over until the last case is identified, isolated and under treatment.

David Nabarro,
Secretary-General's
Special Envoy on Ebola

“It is fair to say from our experience that once you have all the pieces together—that is the case management with all the requirements, the ambulances, all that—and you have a robust social mobilization or community engagement, and effective isolation and safe burial, it works. This strategy works. When one of these pieces is missing, the re-transmission continues at an increasing pace.

Amadu Kamara,
Ebola Crisis Manager for
UNMEER in Sierra Leone

As 2014 drew to a close, the chains of transmission in Mali appeared to have been broken, with no new cases reported for weeks. Areas that were once hotspots, such as Lofa County in Liberia, had become Ebola-free. Yet, in other areas, most notably northern Guinea and western Sierra Leone, case numbers continued to rise sharply, prompting the launch, in Sierra Leone, of a surge—a concerted effort by the government and its partners to hunt and eliminate the virus wherever it existed.

With an evolving landscape of transmission, the response in 2015 will also evolve. The emphasis of the first phase in the post-September scale-up had been on reducing the intensity of the outbreak throughout the region. This has been accomplished by encouraging behaviour change and safe burials and by improving access to effective diagnosis and treatment. While maintaining the priorities and tactics of the 2014 phase of the response, the 2015 phase—now being introduced throughout the region—emphasizes community-by-community implementation of responses that are adjusted in response to needs.

“We need an additional focus on establishing a very strong network of virus detectives”, says David Nabarro. “Skilled experts to search out people who have illness, to check to see if they have got Ebola, to help them isolate themselves while being treated—and then to follow up their contacts. It’s called case finding, surveillance and contact tracing. It’s the extra piece of work that’s needed now. But unfortunately it’s painstaking work. The work is done by people close to the communities—hundreds and hundreds of them, all over the affected countries. You have to break down the task so that each team is dealing with a micro-outbreak of disease through the skilful detectives. You have to cover the whole population, build the trust of local leaders, and work with them to find out where there is illness; you have to trace people with disease, study each chain of transmission, understand how each person has become infected and help them to get access to good treatment.”

According to Stephen Gaojia, Sierra Leone Incident Manager for Ebola: “We believe a decentralized response is going to be critical to get us to zero in the shortest possible time.” His words are echoed by Anthony Lake, UNICEF Executive Director. “Rigidity in our operations, or in our thinking, is the enemy of success. We have to be flexible because this is not one big Ebola

crisis; it is a shifting group of multiple local crises that have to be addressed. A cookie cutter approach will not work; we have to be flexible in each local context. That means looking at the anthropology of different areas because cultural practices differ—for example burial practices in parts of Sierra Leone will be very different to the burial practices in parts of Liberia—and looking at the historical context of each community. If we are to succeed in convincing people to alter some of their deeply ingrained practices we have to understand the local characteristics of these communities in detail, in ways we have not before.”

For example, areas exhibiting most success in reducing and eliminating the incidence of Ebola have been those where the local community has become educated and actively engaged in practices that minimize the possibility of transmission. Significantly less success has been achieved in locations where the population exhibits reticence—fear or denial, sometimes manifested in violent rejection of community outreach workers and medical teams.

A flexible response—adapted to the unique conditions of densely populated urban areas, remote rural locations, and towns and villages close to national borders—will characterize the response going forward. It will need the continued, and even intensified, attention of all partners working together with a common goal: zero cases. The outbreak began with one case, and the threat it poses will only end when there are none. The zero case scenario is achievable. It has been accomplished previously in Uganda, the Democratic Republic of Congo and, more recently, in Nigeria and Senegal. But, ending the outbreak means establishing alert and response capacities in each local government area, ensuring timely and reliable disease surveillance, coordinating all responders, continued strong engagement by the health sector and the provision of safe services to minimize the damage to societies and economies.

“We simply must find the resources required, no matter the cost, to get to zero cases as soon as possible,” says Jim Yong Kim, President of the World Bank. “Any delay will dramatically increase the price in terms of both lives and money. For Senegal, the cost to treat one patient and track all of his contacts was more than \$1 million. For Nigeria, one infected person led to 19 other cases, and more than 19,000 contacts traced by over 800 health care workers at a cost of more than \$13 million. In Guinea, Liberia and Sierra Leone there are not one or 10 active transmission lines, but hundreds. Defeating Ebola now will cost billions—but it will spare the rest of the world from the spread of the virus, save lives in the countries, save money over the long-term, and help the countries rebuild their economies. Looking forward, building a system that helps prevent epidemics from spiraling out of control in the first place will also cost billions of dollars. But this, too, is a cost we must bear, as the costs of inaction would prove far higher.”

Maintaining essential services—a critical feature of the STEPP strategy—is necessary not just for ending the outbreak, but for the early recovery

“Ebola has taught us some hard lessons. I see four clear issues that we must address as matter of urgency. First, robust and resilient health systems are absolutely critical to help countries withstand a crisis like Ebola; the shattered health systems of these countries must now be rebuilt. Second, preparedness, including a high level of vigilance for imported cases and a willingness to treat the first confirmed case as a national emergency, makes all the difference. Countries that did this defeated the virus before it had a chance to explode. Third, no single intervention can bring an Ebola epidemic like this one under control. Only a package of control measures, executed effectively and simultaneously, can do that. Finally, community engagement in all measures, including contact tracing, early reporting, and safe burials, is the linchpin of successful control.

Dr. Margaret Chan,
WHO Director-General

“ This is not the last epidemic we will be facing as humanity. We know that epidemics will easily get out of control in those parts of the world where health systems are weak. So we need to figure out how to ensure that when those epidemics take place, we are better prepared for when an epidemic hits a weak region like the Mano River Area. That requires that we take another look at how WHO is organized and the means they have at their disposal.

Donald Kaberuka,
President of the African
Development Bank

of the affected countries. Already weak medical services have been hard hit by Ebola. In the words of Babatunde Osometehin, Executive Director of UNFPA: “Ebola is a symptom of a health system that is weak. If in fact it is strong, we wouldn’t have all this. We should ensure that we come out of those three countries with a better health system than we found in the beginning.” Donald Kaberuka, President of the African Development Bank agrees. “ We must now focus on two things: rebuilding the health systems of the three countries and rebuilding the economies of the region. I have agreed with the World Bank that we work on the social and economic rebuilding of the three countries once the epidemic is under control.”

“We should look to build a system that would truly protect the world from an even more devastating pandemic in the future,” says the World Bank President Jim Yong Kim. “We need to be ready right now to respond much more quickly and much more effectively the next time Ebola or any other virus breaks out. We know this can be done. It is going to be extremely difficult. It is going to take everything we know about public health.”

“The efforts to defeat Ebola are more than just a short-term emergency response—they are also contributing to long-term development and resilience in very practical ways,” says Anthony Lake. “For example, as we help countries develop community care centres, we are either linking them explicitly to rehabilitation and growth of primary health care facilities to tackle non-Ebola illnesses as well, or locating them in areas where future health service delivery is needed so that when the virus is defeated, the local health care systems will be strengthened. As a critical

Ebola vaccines and other treatments and therapies

There are as yet no vaccines to protect against Ebola licensed for use in humans but, under WHO guidance, evaluation of the most advanced Ebola vaccine candidates has been accelerated.

The two vaccine candidates currently being tested in humans are the cAd3-ZEBOV vaccine, being developed by GlaxoSmithKline, in collaboration with the United States National Institute of Allergy and Infectious Diseases, and the rVSV-ZEBOV vaccine, being developed by NewLink Genetics and Merck Vaccines USA, in collaboration with the Public Health Agency of Canada. Both vaccines have shown to be safe and efficacious in animals.

Phase I clinical trials (to test for safety and for dose selection) are underway for both vaccines. Trial participants are healthy adults in countries with no (or very few) cases

of Ebola. For the cAd3-ZEBOV vaccine, trials began in the United Kingdom and the USA in September and in Mali and Switzerland in October. For the rVSV-ZEBOV vaccine, trials began in the USA in October and in Gabon, Germany, and Switzerland in November. Trials in Canada and Kenya are also due to begin shortly.

Phase II clinical trials of the cdA3-ZEBOV vaccine are expected to take place in several countries with no or few cases of EVD in West Africa in January 2015. The Phase II trials will test for safety and capacity to induce an immune response in larger numbers and in broader populations, including the elderly, children and persons living with HIV.

Wide-scale introduction of the candidate vaccines in affected countries will depend on the results of the clinical trials and review by regulatory authorities of vaccine safety

mass of community health care workers is trained to defeat Ebola, they are investing in the backbone of the local health systems of the future—and it is local health systems that reach the people most in need of health care.”

As the Ebola outbreak advances and its pattern evolves, the response must lessen the long-term damage it causes. “The challenge for 2015 is going to be the transition from crisis to post-crisis knowing that we need to remain



WHO /Mathilde Missioneiro

and efficacy. Data from all trials is being gathered and analysed as rapidly as possible. Phase III clinical trials are planned to start in early 2015 in the three countries most affected by Ebola. The objectives of these trials will be to assess whether the vaccines protect against Ebola and to further document safety.

Other treatments and therapies available or being evaluated include transfusion of convalescent whole blood and plasma donated by patients who have recovered. These have been prioritized for use as an investigational therapy. Convalescent whole blood is currently being administered in some Ebola treatment centres. Limited amounts of convalescent plasma are expected to become available in the near future, and trials in Guinea and Liberia are anticipated to begin shortly.

Of the pre-existing medicines that have been considered for re-purposing to treat Ebola, many have demonstrated efficacy against Ebola virus in test tubes (in vitro), however very few demonstrate any activity in monkeys infected with Ebola. Two antivirals have been identified as having promise—favipiravir and brincidofovir—and they will be entering clinical trials shortly.

WHO is working with all relevant stakeholders on each of the potential therapies and vaccines to continue to accelerate identification, verification, development and, if safety and efficacy are found, deployment. Final decisions on introduction are made by Ministries of Health. While target populations for mass vaccination are being discussed, experts agree that front-line workers should be among the first to be offered the vaccine.

“A lot of people are dying from malaria and other causes that are not Ebola-related, even if Ebola is in the region, so restoration of healthcare systems and building resilience for healthcare is critical. **Tolbert Nyansweh**, Liberia Incident Manager

mobilized on the crisis but at the same time finding the right time to start actions that are essential in the post-crisis,” says Ambassador Christine Fages, coordinator of France’s inter-ministerial task force on Ebola. “Health systems need attention. They have serious logistical difficulties—there are few health care providers and virtually no patients. We must find a way to restore the functioning of health systems using health care providers who have passed through the Ebola centres. There is the problem of the organization of health systems, training of caregivers, the restarting of supply chains and the integration of these health facilities in the social landscape of these countries. There is also economic reconstruction: the epidemic has a very negative impact on the economy of these countries. We must begin to see how we can help these countries economically to revive when the crisis is over. There is also the vaccine issue, research that we should continue even if the epidemic is slowing.”

“We have been discussing with the United Nations Secretary-General the possibility of holding a conference to take stock of where things are and what else needs to be done,” says African Union Commission Chairperson Nkosazana Dlamini-Zuma. “Hopefully by then the epidemic would be on the decline and we can discuss what’s next. How do you get to zero cases? And what do we do post-Ebola? I think that we also need to gear up towards how other organizations, especially those with development and economic mandates, can come in to make sure the economies of these countries recover. It will also be good to mobilize humanitarian resources because Ebola has left some people destitute, especially some children who have lost parents, siblings—sometimes you just find one survivor in the family. We have to look at how

On 4 December 2014, German Ambassador to Ghana, Ruediger John, handed over 400 motorbikes for Ebola response at the UN Humanitarian Response Depot. The motorbikes will be used to bring blood samples to laboratories in the most affected areas of Guinea, Liberia, and Sierra Leone.
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Nkosazana Dlamini-Zuma, Chairperson of the African Union Commission, addresses a high-level meeting on the Response to the Ebola Virus Disease Outbreak. 25 September 2014. Ebola like all other tragedies has actually had the most effect on women and children—women because generally they are the caregivers—children because when your mother dies, then you are left without a parent then for the rest of your life you be facing a very difficult situation. So when we talk about the empowerment of women, it is to give them the strength and the resilience and resources at a family level and community level to be able to deal with things like these.

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we are going to assist countries to look after these children. Also, while we are all focusing on Ebola we must not lose sight of other diseases and other problems, because if we don't more people will then die of malaria, childbirth and so on."

In the words of Tom Frieden of the United States Centers for Disease Control and Prevention: "We have to invest in public health, not only when there is an emergency but also when there is not. If this doesn't convince the world that investing in public health is crucial nothing will. As horrible as Ebola is it's only one of a series of outbreaks that can occur if we don't strengthen the public health system. Strengthening public health is not a vague thing, it is very specific. Do you have a laboratory network? Do you have an emergency operating centre that can mobilize quickly? These are core, straight-forward public health functions that weren't in place before and they are why we have an epidemic."

According to David Nabarro, two things will result from the outbreak. "One is that there will be a real push towards much better health systems that are responding to people's needs and that are able to detect these kinds of illnesses in the future. Secondly, in coming years these societies in West Africa will be better prepared for disease outbreaks than any others in the world. Their people will be able to tell the rest of the world how communities can best understand such threats and withstand them. They will be able to teach the rest of the world about how to resist infection with Ebola and other haemorrhagic viruses. So there will be stronger health systems and more resilient societies—better able to deal with disease threats themselves and to show others how to handle them."



FIEVRE EBOLA: SIGNES ET SYMPTÔMES

Si vous avez ces signes, consultez immédiatement le Centre de Santé le plus proche.

- EMBRASURES SANGUINANTES
- FIEVRE
- RASHES ROUGES DE PETITS GONIOLES
- POULEXES MUSCULAIRES OU ARTICULAIRES
- EMETISSON QUÉLQUÉ

Appelez le **115** pour toute assistance
Santé de la République de Guinée et ses partenaires



