

Discussion Brief
African responses to the 2014/5
Ebola Virus Disease Epidemic

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Regional Network for Equity in Health in East and
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The Ebola Virus Disease Epidemic

Ebola virus disease (EVD) (also Ebola hemorrhagic fever, or simply Ebola) is a disease of humans and other primates caused by ebola viruses. It causes an acute, serious illness which is often fatal if untreated. The outbreak in West Africa in 2014/5 is “the largest and most complex Ebola outbreak since the Ebola virus was first discovered in 1976” (WHO, 2015:1). From the first cases notified in March 2014, there have been more cases and deaths in this outbreak than all other EVD outbreaks combined. It started in Guinea and spread across land borders to Sierra Leone and Liberia, by air (1 traveller) to Nigeria and USA (1 traveller), and by land to Senegal (1 traveller) and Mali (2 travellers) (WHO, 2015). On August 8, the WHO Director-General declared the West Africa outbreak a Public Health Emergency of International Concern under the International Health Regulations (2005).

There has been significant documentation on the various international responses to the epidemic. There is also evidence that the epidemic triggered new developments in epidemic prevention and response from Africa. In April 2015 the AU called for the lessons learned to be identified for future responses (AU, 2015f). This brief summarises the publicly available documentation on the response of African countries to the EVD epidemic. It is based on 63 documents accessed through key word search in July–August 2015 of online databases, supplemented by documents obtained from snowballing in September 2015, shown in the reference list. The documents were analysed to capture:

- a. The actions taken by African governments and institutions at national, regional and continental level to support the response to the epidemic.
- b. The identified positive features and challenges in the African response.
- c. The links between the African emergency response to the EVD epidemic and health system strengthening.

The information is summarized in this brief, to inform discussion on research, review and action to support the African response to health emergencies and engagement on health system strengthening within global health.

Top to bottom: (1) Ebola in Guinea, European Commission DG ECHO, August 2014 (2) The Ebola Help Line Hero, Julia Smith/DFID, February 2015 (3) Liberia, Morgana Wingard, 2014

Cover: Liberia, Morgana Wingard, 2014

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African responses to the Ebola epidemic



Top and right: Anthony Banbury, Special Representative of the Secretary-General and Head of the Mission for Ebola Emergency Response (UNMEER), visits the Magbenteh Ebola Treatment Centre, run by the ASEOWA, UNMEER/Martine Perret, 2014

The African response came from African governments and intergovernmental organisations, the African Development Bank, corporates, civil society and others. The responses included financial support, health worker deployment, health commodities, laboratory and epidemiological support, information sharing and establishment of an African Centre for Disease Control and Prevention (ACDCP). The continental and regional organisations provided policy support, including on how the epidemic was communicated globally. The African Union (AU) formed the AU Support to Ebola Outbreak in West Africa (ASEOWA) with representatives from AU departments, UN agencies and partners as a collaboration “in the spirit of Africa solidarity and global approach” to ensure coordination, transparency and information sharing across those involved (ASEOWA, 2015b).

The African contributions, described further below, supported the three most affected countries – Guinea, Liberia and Sierra Leone – in dealing with Ebola, in setting up their EVD response unit and training of their personnel, to support the treatment response, awareness, case containment and ongoing surveillance (Boadu, 2014b).

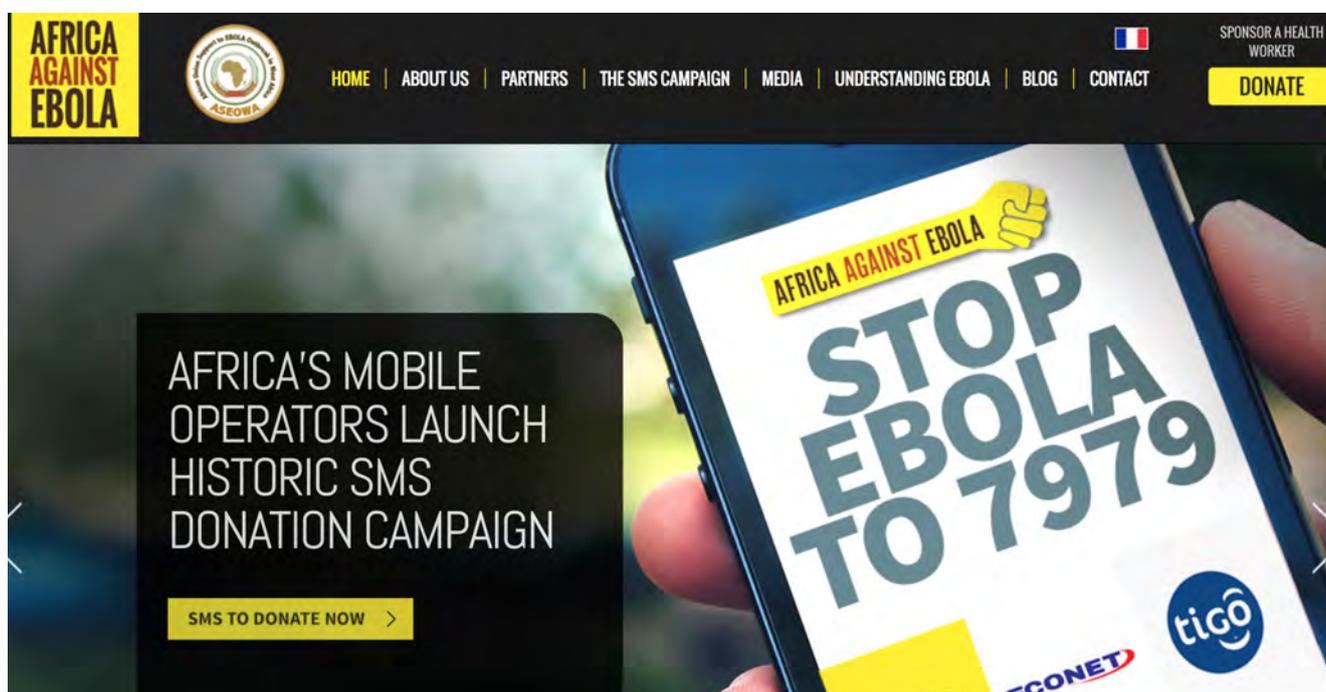


I. Funding inputs:

The funding support from African institutions is documented as

- a. US\$525mn between April 2014 and April 2015 from the African Development Bank (ADB) (ADB, 2014b; Snyder, 2015; World Bank, 2015b). The funds were disbursed in both grant and loan support to Guinea, Liberia, Sierra Leone and Cote d'Ivoire for purposes of preparedness for EVD control and mitigation of socio-economic impact; to address the human resource, food security and social protection shortfalls that raise the risk of exposure, and to strengthen system capacities to manage future responses (ADB, 2014a; 2014b).
- b. The AU made a direct contribution of US\$1 million from the AU Special Emergency Assistance Fund for Drought and Famine; with further contributions of US\$100 000 from the Special Fund Contributions for IDPs and Refugees and US\$100,000 donated from AU staff members directly (ASEOWA, 2015b).
- c. Telecommunication networks¹ in the *AfricaAgainstEbola* sms campaign and ordinary people through the *AfricaAgainstEbola* campaign contributed US\$34 million into an *AfricaAgainstEbola* fund. The fund, coordinated by the *AfricaAgainstEbola* Solidarity Trust, in partnership with the AU, was launched December 2014 and operational in 42 participating countries through a collaboration between the African Union Commission, telecommunications operators and regulators. The operators donated \$1 per sms supporting the AU Ebola response and encouraged donations via the *AfricaAgainstEbola* website (<http://www.africaagainstebola.org>) (ASEOWA, 2015b).
- d. A roundtable of AU, African corporates in telecommunications, banking, energy, manufacturing, and services sectors and the ADB in November 2014 led to pledges of US\$31mn, although its not clear how far the pledges were delivered on or whether this overlaps with other sources above (ASEOWA, 2014b).
- e. Further direct contributions were made to the AU and to country responses by African governments and philanthropists, such as by Kenya through the Ministry of Foreign Affairs to the AU Commission (Ayagah, 2015).

Combined, these African sources contributed about US\$600mn to the response to the epidemic, 13% of the total of \$4558 mn reported by the UN in May 2015.²



Africa Against Ebola Website Screenshot, <http://www.africaagainstebola.org>, date accessed 14 October 2015

1. Participating networks as of 5.8.2015 were Airtel, Azur, Econet Wireless Int., Etisalat, Ethio Telecom, Glo Nigeria, MTN, Orange, NetOne, Safaricom, Telma, Tigo, Vodacom and Vodacom Ghana.

2. In Resources for Results IV, 1 September 2014-31 May 2015



2. Health worker deployment:

ASEOWA intended to have up to 1000 health workers in the field, rotating every 6 months, in a three-stage cycle as below:

- Pre-deployment, with recruitment by the health worker contributing country (HWCC); health worker CV's, medical screening, contracts; signing of a MOU with HWCC and logistic arrangements in receiving countries by the ASEOWA mission in Monrovia. This was followed by a two day ASEOWA training and send-off.
- Deployment of 13 weeks including one week of in-country rest, with arrival in Guinea, Liberia or Sierra Leone; in-country EDV training for 12-15 days; and deployment of 75 days, including 1 week rest and recuperation.
- Exit/rotation for 3 weeks, involving two travel days, 21 days of observation and debriefing and contract extension for a second round deployment or exit.

A total of 835 African medical personnel were deployed by ASEOWA by 12 February 2015, including medical personnel (clinicians, epidemiologists, nurses, hygienists / environmental health technicians and laboratory technicians) and non-medical personnel (logistics, psychosocial and communication teams) (ASEOWA, 2014a; 2015a; 2015b). This was 64% of the total of 1300 health workers deployed internationally, as reported in May 2015.³ The first group of 86 health workers in September 2014 was reported to originate from 12 African states (Burundi, Cameroon, Congo, DRC, Ethiopia, Kenya, Niger, Nigeria, Rwanda, Tanzania, Uganda and Zimbabwe) (ASEOWA, 2015b). Subsequently a range of countries and regional bodies sent health workers, including by December 2014/ January 2015: Nigeria (196); Ethiopia (187); Kenya (170); ECOWAS (115); DRC (81); South Africa (total unspecified) (AU, 2015a). Of these 835 workers, 151 were assigned to Guinea,⁴ 345 to Sierra Leone and 339 to Liberia (ASEOWA, 2015b). The personnel sent provided epidemiological support; worked in the EVD treatment units and laboratories, trained local medical teams and community members; and supported awareness campaigns.

3. Health commodity and service support:

Beyond personnel, ASEOWA has provided management support for the ETUs, and capital inputs, including: a 45 KV power generator to support Cape Mount St. Timothy Referral hospital, chlorine, hand washing barrels, hand sanitizers, thermometers, IEC materials and other inputs for awareness campaigns. ASEOWA has also supported the re-opening of Redemption hospital in Monrovia, the opening of a new lab in Koinadugu Sierra Leone, and worked with EVD survivors and their networks (ASEOWA, 2015b). There were also direct contributions from countries: South Africa established a diagnostic center in August 2014 in Sierra Leone which trained local personnel to assist in diagnosing EVD and South African sterilizing units for low resource environments were used by the UN (Boadu, 2014b).



Redemption hospital, Monrovia, by CDC Global (CDC learns from Liberian District representative) [CC BY 2.0 (<http://creativecommons.org/licenses/by/2.0/>)], via Wikimedia Commons

3. In Resources for Results IV, 1 September 2014-31 May 2015

4. As volunteers were largely from English speaking countries this limited deployment to Guinea



4. Information sharing:

The ASEOWA collaboration supported information sharing across all those involved. The AU co-ordinated initiatives to engage the media, civil society and social networks to communicate about Ebola locally and internationally. In particular there was concern to work with media to ‘assist in re-writing the negative narrative’ so that African journalists could tell what was seen as often untold stories of the solidarity efforts from within the continent from grass roots upwards around Ebola (ASEOWA, 2014c). Towards this end, in December 2014 the AU, in collaboration with the UNECA and the African Communications Agency, hosted a summit on “Re-Writing The Narrative on Ebola Through Responsible and Coordinated Efforts” with 50 media participants from 15 countries (unspecified) that set media strategies for consistent engagement on the efforts being made within the continent.⁵

5. Establishment of an African Centre for Disease Control and Prevention:

The epidemic galvanized implementation of an AU resolution to establish an African Centre for Disease Control and Prevention (ACDCP) and regional centres by mid-2015, and to enhance the early warning systems to be able to provide more timely and effective responses to health emergencies.⁶ This was supported by technical and financial backing from the US CDC, and technical support from the China and European Union CDCs and WHO (ASEOWA, 2015b; Snyder, 2015; AU 2015g). The AU has since then assessed the existing centers in Africa; convened a Multinational Task Force comprised of 16 member states (3 per region and Ethiopia), produced a roadmap for the establishment of ACDCP and adopted the statute for the centre in July 2015 (AU, 2014d). The Southern African Development Community (SADC) health ministers identified South Africa as the centre of excellence in Ebola laboratory diagnosis in that region (SADC, 2014) and Nigeria was identified as the regional centre for West Africa.

The mobilization and co-ordination of a range of resources, strengthening of skills and capacities and communication of information represented a concerted response from within the continent. There were interesting innovations and positive features within these broad responses, discussed below. There were also perceived weaknesses in some responses: in criminalizing the disease, in communication from authorities and in travel bans and restrictions that are discussed later in the brief.



Still from 10th African International Media Summit (AIMS) “Mobilizing Media: Re-Writing the Narrative on Ebola Through Responsible & Coordinated Efforts.” livestream, <http://summits.au.int/en/video/10th-african-international-media-summit-aims-“mobilizing-media-re-writing-narrative-ebola-thro>

5. The documents sourced did not report a media monitoring or evaluation report of the outcome of the strategy or how far it influenced other international media, raising this as an area for follow up inquiry.

6. Assembly Decision AU/Dec.499 (XXII):



Innovative features of the African response

The response brought numerous dimensions of innovation. The **establishment of ASEOWA** was noted by the AU as a new initiative of 'Africa helping Africa' (AU, 2015b:2). Equally the ADB Ebola Sector Budget Support Fight Back Programme was identified to uniquely target four countries and draw from the regional allocation. This was seen to be a new design that may pave the way for a new generation of operations founded in sub-regional policy dialogue and moving regional integration ahead (ADB, 2014b). This enabled **new continental scale responses**: the significant deployment of health workers from other countries was at a scale not seen in prior responses, and built capacities for management of Ebola in all participating countries, with recommendations to keep an AU database of volunteers for future responses (AU, 2015f). The "AfricaAgainstEbola" sms campaign was a private sector continental scale innovation.

Various technological and cultural innovations emerging from Africa were applied.⁷

- [Reimagined Ebola Treatment Units](#): Students and faculty of Makerere University School of Public Health Uganda designed Ebola treatment tents that increase airflow and decrease temperatures through re-imagined heat and air exchange mechanisms, in simple, low cost and structurally safe designs.
- A [Community Education Platform](#) was designed by IBM Research's Africa laboratory in Nairobi. It is an engagement platform that allows two-way communication between public health officials and citizens and enables community members to call or SMS their reply to questions or report situations in their location.
- The [Africa Stop Ebola Music and Media Campaign](#) produced a song recorded in local languages by 12 West African musicians including from Mali, Guinea, Cote d'Ivoire, Senegal and Congo to promote safe hygiene to avoid EVD, and to reduce stigmatization of survivors and families of people with EVD.
- The grassroots and civil society engagement used new social and other media platforms. Within the countries affected, various mobile phone based applications and SMS messaging platforms were used for sharing information and advice with the public (such as mHero - Mobile Health Worker Ebola Response and Outreach - in Liberia and Guinea) (Court 2014; Odusote 2015) and to tackle misinformation about Ebola through real-time answering of citizen's questions through [U-report](#) in Nigeria.

Strengths of the African response

The **collaboration and cooperation** – African solidarity – was noted as a strength of the response (UNDP, 2015a). Member states' contributions to ASEOWA and ECOWAS' Solidarity Fund for Ebola and deployment of health workers, financial and material resources from African governments, private sector and public; the "AfricaAgainst Ebola" sms campaign; and the pooled funding and establishment of the ACDCP signaled a significant organized, self-determined and solidarity response from within the continent. The innovations outlined above contributed African experience and technologies. These features of the African response were commended by the UN Secretary General Ban Ki Moon at a round-table UN discussion on Ebola in January 2015 (UNSG, 2015).

The **contribution of African governments and health personnel**, directly and through ASEOWA or regional organisations (primarily ECOWAS), as documented earlier, enabled both the immediate response and widened experience within the continent to manage such epidemics. African countries also stepped in to overcome barriers. For example Ghana and Senegal established a 'humanitarian air-bridge' to fly first-line responders to West Africa when some commercial airlines stopped operations to the three affected countries. Partnerships with national and regional bodies also ensured food support during the epidemic under the leadership of national coordination bodies (WFP, 2015).

7. Information on examples is documented at www.ebolagrandchallenge.net/innovations



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The **engagement of the private sector** brought new capacities, resources and initiatives to the response, such as the contributions and inputs of the telecommunications networks described earlier. An Ebola Private Sector Mobilization Group formed in August 2014 grew to over 100 companies. “It has provided resources to front-line responders, advocated for international support and pledged to its members that its members will do all that it can to remain open for business throughout the Ebola outbreak as a vote of confidence in the affected countries. The EPSMG companies also built and donated treatment facilities and made other in-kind and cash contributions.” (UNDP, 2015a; 2015b: 104).

Less well recognized until later in the epidemic was the important contribution of **social communication and grassroots level work in community responses**. Community buy-in and trust are integral to responses to epidemics (Boadu, 2014a). Community health workers (CHWs) and volunteers played a key role in controlling the spread of infection by disseminating accurate information, undertaking surveillance and contact tracing and promoting hygiene practices and safe burials (Oxfam, 2015). In Liberia, social denial of Ebola and aggression towards volunteers and health workers was overcome by persistent community work to inform people of infection risks, treatment and prevention, and safe burial practices (Beaubien, 2015). The responses within communities in Liberia, Guinea and Sierra Leone during the Ebola epidemic, such as in hand-washing practices and safe burial practices was recognized as key in the decline of transmission (UNDP, 2015a). In Telimele district Guinea, a crisis committee involving religious, community and political leaders to promote awareness and aid case containment supported the health interventions and becoming Ebola-free (Boadu, 2014b). These changes were stimulated by a range of activities: Grassroot engagement was often innovative, making use of social media, mobile phones, new media platforms and raising wider awareness through engaging journalists, stars, local musicians and others, and involving a range of different types of community leaders as raised earlier (Boadu, 2014a; Oxfam, 2015; Hector, 2014).

Civil society was reported to provide a rapid response, especially in addressing local practices, and supporting families and primary level health workers (Gundan, 2014). The contribution of international civil society to relief efforts is widely documented. Within Africa local civil society also responded, directly and in partnership with international organisations. For example, in Sierra Leone, [Restless Development](#), a network of volunteers trained by health outreach workers travelled to local communities to support disease prevention, service uptake and support survivors of Ebola (Hector, 2014). [Social Mobilisation Action Consortium](#), a coalition of local Sierra Leonean and international NGOs implemented activities to address stigma surrounding the disease (Hector, 2014). [Africa 2.0](#) and ActionAid (Liberia) supported social mobilization, trained local committees to monitor active EVD cases and provided personal protective equipment to frontline workers (Boadu, 2014b). The **African diaspora** also provided support. [LunchBox Gift](#) was, for example, set up by a Sierra Leonian living in the UK, who mobilized funds for and set up a scheme to support volunteers in Sierra Leone to prepare and deliver meals to those in need during quarantine periods (Hector, 2014).



Restless Development Website, <http://restlessdevelopment.org/sierra-leone-our-work>



Challenges in the African response

There were also weaknesses and challenges documented in the African response. In prior EVD epidemics, such as in Uganda in 2000, containment of the epidemic was noted to relate to the effectiveness of the Ugandan health services response. In DRCs experience with six previous EVD outbreaks, an effective response called for rapid deployment of experts and partnership with non-state organisations and traditional community groups to engage with local communities (Oxfam, 2015). A rapid organization and deployment of resources - health workers, planes, food, commodities, laboratory services - by African countries, noted earlier, was thus important for the response to the West African epidemic. In Nigeria, for example, authorities quickly redeployed resources by converting a polio emergency operations centre into an Ebola response centre (Oxfam, 2015).

This meant that report of **delays in responding** in some settings weakened the effectiveness of the response, together with gaps in information, communication and surveillance, inadequate engagement of regional organisations and late engagement of communities. In the context of these gaps, coercive quarantine measures that engaged the military and punitive laws appeared to fuel stigma of those affected, to drive the epidemic underground and to lead to distrust and even violence. The closure of borders and travel restrictions by African (and other) countries was observed to not comply with the 2005 International Health Regulations (IHR), to worsen the severity of economic and social consequences, to act as a disincentive for transparency and to block the movement of personnel and supplies.

The reports indicated a number of **weaknesses in information and communication**:

- **Late reporting** on the spread of cases in Sierra Leone and Guinea up to June 2014. In contrast, in Liberia authorities were reported to be transparent and direct in reporting spread of cases (MSF, 2015). Late reporting was noted to delay Africans raising and setting the agenda on the epidemic globally (Boadu, 2014a).
- This was observed in part to relate to a lack of effective surveillance and data management integrated within the health systems of affected countries, with “data not aggregated, analysed or shared in a timely manner and in some cases not at all” (WHO, 2015a: 11). One factor affecting this was weak co-ordination and communication mechanisms linking local healthcare services with the centralized bureaucracies that carry out surveillance (Abramowitz, 2014).
- Inadequate early prioritization of culturally sensitive messages and community and CHW engagement, despite the role of socio-cultural practices, including funeral and burial customs in EVD transmission. There were competing and sometimes disempowering narratives on the epidemic. Some messages emphasized that no treatment was available, reducing trust in services. In Sierra Leone, explanations for the spread of the epidemic included eating bush-meat and bats and attendance at funerals of relatives in neighbouring Guinea. However there were also media messages on the spread being due to ignorance, to the refusal of those affected and their families to seek medical care in hospitals and in one story, from health care workers spreading the virus through promiscuous relations while on duty (Batty, 2014).
- **Lack of trust, communication gaps and bleak or confusing public messaging** was reported to reduce communities’ willingness to engage (WHO, 2015; UNDP, 2015a), and even to have led to outbreaks of violence in Guinea, where inhabitants in one village killed a group of health workers (Oxfam, 2015).

Notwithstanding the significant contributions of the African response outlined earlier, continental figures, including Graça Machel and AU Commission Chairperson Nkosazana Dlamini-Zuma raised that the response was still inadequate and slow (AU, 2014c; news24, 2014). It took six months after the first case was confirmed for the AU to pledge the initial US\$ 1mn and four months after ASEOVA was established to deploy health workers (Pailey, 2014).



The AU emergency summit on EVD in September 2014 was held 10 months after the virus first emerged in West Africa and a month after the outbreak was declared a health emergency of international concern by the WHO (Lebhour, 2015). AU Commission Chairperson Nkosazana Dlamini-Zuma at an October 2014 meeting noted: “With the wisdom of hindsight, our responses at all levels – continental, global and national – were slow, and often knee-jerk reactions that did not always help the situation” (AU, 2014c).

Despite the level of migration within the affected region, there were also reports of late or inadequate engagement of the local regional organizations (UNDP, 2015a; EC, 2014; Youde 2014), albeit with report of increased coordination and cooperation of the Mano River Union countries by March 2015 (EC, 2015). Sub-regional collaboration was raised as an important factor in lifting the isolation of the three countries, in building the trust of local populations and in bringing economies of scale to bear on the capacity to monitor and stop the spread of Ebola and other diseases (UNDP, 2015a; Snyder, 2015). In SADC and the East African Community (EAC) the regional responses were relatively rapid: In SADC, health ministers in August and September 2014 issued a common regional position on port health; surveillance and notification; on standardizing public health interventions including procurement and prepositioning of personal protective equipment, training of health workers, sensitisation of stakeholders, identification and equipping of isolation/treatment centres, laboratory diagnosis and media and public information (SADC, 2014a; 2014b). In the EAC, a September 2014 ministerial meeting issued a communiqué on measures to control EVD spread and support affected countries (EAC, 2014).

Quarantine was a key public health component of the response. For example, a 3 day country-wide quarantine in Sierra Leone from 19-21 September 2014 involved 30,000 volunteers conducting home searches for EVD infected inhabitants and educating the populace on Ebola and prevention (Roache et al., 2014). However the use of **militarized ‘lockdowns’ and punitive rules that criminalized the epidemic appeared to fuel community distrust, stigma and violence.**

There was also concern on the extent to which militaries integrated inputs from, and the role of, the health ministries in the affected countries (Snyder, 2015). For example, a cordon sanitaire was enforced in August 2014 by the Liberian military in West Point, Monrovia. At the time, with communication gaps and community distrust, communities responded with violence (Gostin & Friedman, 2015). Liberia and Sierra Leone enacted policies that made anyone hiding suspected Ebola cases in homes and places of worship liable to prosecution. This criminalised Ebola and was noted to raise the risk of infected persons going underground and further spreading the disease. It was observed to stigmatise EVD and to “foster suspicion, conspiracy theories, and violence against health care workers” (Youde, 2014; Harmon, 2015).

The **closing of borders and travel and trade restrictions** imposed were viewed as imposing significant additional burdens and weakening the response. Sierra Leone closed its borders with Guinea and Liberia, despite WHO advice specifically against it; Senegal closed its southern border with Guinea for a month; and Mauritania, despite not bordering any of the countries with Ebola cases, closed most border crossings along the Senegal River. Conversely the governments of Guinea and Liberia kept their border crossings open in the interest of facilitating the response to the disease (Youde, 2014). Further, nearly a quarter of WHO Member States instituted travel bans and trade restrictions that were identified to be in violation of the 2005 IHR (WHO, 2015). Between August and October 2014 travel bans and restrictions were implemented by a number of Africa countries, with those for whom information was publicly available shown in *Table 1* overleaf.

Travel and consequent trade restrictions were reported to have lowered morale in and stopped essential drugs, supplies, food items, and medical experts from entering the countries hardest hit by Ebola (Lebhour, 2015; Pailey, 2014; WHO, 2015). The Liberian Minister of Information Lewis Brown called this response ‘un-African’, stating “International hysteria might be expected, but African hysteria is simply unconscionable” (Pailey, 2014:1).



Table 1: Travel bans and restrictions imposed by African countries in August-October 2014 (information as of 18 May 2015)

Country	Travel ban/restriction imposed
Botswana	Visitors arriving from Guinea, Liberia, Nigeria and Sierra Leone refused entry even if holding a visa
Cameroon	Admission and transit refused to visitors arriving from or having transited Guinea, Liberia, Nigeria and Sierra Leone.
Cape Verde	Bans travels by non-resident foreigners who have been in Sierra Leone, Guinea or Liberia in the past 30 days.
Central African Republic	Admission and transit refused to visitors arriving from or having transited Guinea, Liberia, Nigeria and Sierra Leone. Airlines required to submit in advance to Civil Aviation Authority a passenger list with details on points of embarkation and transit.
Chad	Visitors to Chad who have visited DRC, Guinea, Liberia, Nigeria and Sierra Leone within the previous 30 days refused entry.
Equatorial Guinea	Denied entry to travellers whose trips originated in countries affected by Ebola.
Cote d'Ivoire	Closed land borders with Guinea and Liberia. Refused entry to any passengers arriving from, or having been in Guinea, Liberia, Nigeria, and Sierra Leone within 21 days. Borders reopened October 14 2014.
Kenya	Banned travelers from Liberia, Guinea and Sierra Leone.
Mauritania	Banned entry to citizens of Liberia and Sierra Leone.
Mauritius	Refused entry to nationals of DRC, Guinea, Liberia, Nigeria and Sierra Leone, even if holding a valid visa or residence permit issued by Mauritius. Restriction on travelers and nationals from/of Nigeria lifted 22 October 2014.
Namibia	Refused entry to travellers from Guinea, Liberia, Nigeria and Sierra Leone with exception of Namibian citizens who would be subject to screening
Rwanda	Banned travelers who had visited Guinea, Liberia, or Sierra Leone in prior 22 days.
Sao Tome and Principe	Refused entry to visitors who had visited Guinea, Liberia, Nigeria and Sierra Leone within the previous 30 days
Senegal	Banned flights to and from Guinea, Sierra Leone and Liberia. Shut its southern land border with Guinea for a month.
Seychelles	Banned travelers who have visited Sierra Leone, Liberia, Nigeria and DRC "for any length of time." Banned Seychelles nationals from traveling to Sierra Leone, Liberia, Guinea, Nigeria or DRC unless permitted by the Public Health Commissioner
South Africa	Restricted entry for non-citizens traveling from Guinea, Liberia or Sierra Leone; but restrictions could be waived for "absolutely essential travel."
South Sudan	Restricted travellers coming from Guinea, Sierra Leone, Liberia or DRC who had travelled to those countries in the preceding 21 days.
Zambia	Banned entry by travelers from countries affected by the Ebola virus

Source: IATA 2014; Reuters 2014; Thompson & Torre 2014; Diversity Travel 2015

WHO observed that the travel bans and restrictions "significantly interfered with international traffic, outside the scope of the temporary recommendations issued by the [WHO] Director-General" and as a result, the countries affected faced not only severe political, economic and social consequences but also barriers to receiving necessary personnel and supplies. These consequences constituted a significant disincentive to transparency" (WHO, 2015:11). A 2014 UN Security Council Resolution 2177 (2014: 4) also expressed concern over the travel bans imposed, calling on "Member States, including of the region, to lift general travel and border restrictions, imposed as a result of the Ebola outbreak, and that contribute to the further isolation of the affected countries and undermine their efforts to respond to the Ebola outbreak and also calls on airlines and shipping companies to maintain trade and transport links with the affected countries and the wider region."

In September 2014, SADC Ministers of Health aligned their regional position on commercial and individual travel from EVD affected countries with the IHR 2005, indicating requirements for entry and exit screening: for travellers from EVD affected countries to be followed up for 21 days; for quarantine of people with a history of close contact with EVD infected people, bodies or animals for up to 21 days and for travel to



affected countries to be discouraged (SADC, 2014b). The AU adopted a resolution for member states to “urgently lift all travel bans and restrictions to respect the principle of free movement and urge that any travel related measures be in line with WHO and ICAO recommendations, in particular proper screening” (AU, 2014a: 2), and in April 2015 noted that “all restrictions should be lifted with regard to the affected countries and stigmatization ended” (AU, 2015f). Many countries subsequently lifted or amended these restrictions.

Linkages to health system strengthening

There is recognition that the spread of the epidemic was in part a result of the weakness in the health systems in the affected countries, although other socio-economic factors contributed to the risk of the outbreak (ADB, 2014a; Oxfam, 2015; UNDP, 2015b). Features of the health system that were identified as contributing to this were: low public expenditure; poor infrastructure; limited capacities and activities for surveillance, laboratory testing, contact tracing or infection control, with capacities mainly concentrated in the cities; inadequate skilled health workers, especially in rural areas, with about 10-20% of WHO recommended ratios of 223 doctors, nurses and midwives per 100,000 people, and limited or poorly integrated community health workers (ADB, 2014a; Oxfam, 2015; UNDP, 2015b; Gostin & Friedman, 2015). Sierra Leone had only one laboratory capable of testing for Ebola, for example, and samples had to be sent to France, Germany and Senegal for testing, slowing responses to the epidemic (Dionne, 2014).

These weaknesses were already evident in poor coverage outcomes for other health indicators, but also undermined the ability of the services to detect and manage EVD. Health workers lacked protective equipment, infection controls, and safe and sterile isolation units, so that hospitals themselves became “amplification points, fueling EVD transmission”. This put health workers at risk, leading to mortality amongst health workers and compounding the crisis (Roache et al., 2014: 3). Deficits in service availability and quality undermined community access to and confidence in the health system, which when compounded by fear and stigma further weakened the response (ADB, 2014a; Oxfam, 2015; Roache et al., 2014)

Recognition of these wider health system deficits levered funding and other support to address them, within post-disaster recovery programmes. The 2005 IHR, key to health security (AU, 2015g) included **eight key capacities in the public health response** to the international spread of disease, viz:

1. Rapid determination of the control measures required to prevent domestic/ international spread of risks;
2. Specialized staff, laboratory analysis of samples (domestically or through collaborating centres) and logistic assistance (equipment, supplies and transport);
3. On-site assistance as required to supplement local investigations;
4. A direct operational link with senior health and other officials to rapidly approve and implement containment and control measures;
5. Direct liaison with other relevant government ministries;
6. Links between hospitals, clinics, airports, ports, ground crossings, laboratories and other operational areas for dissemination of information and recommendations from WHO on events in the country and in other countries;
7. A national public health emergency response plan, and multidisciplinary/ multisectoral teams to respond to events that may constitute a public health emergency of international concern; and
8. Provision of the above on a 24-hour basis (WHO, 2008a).

An assessment of progress in the development of these eight capacities was responded to by only 28 of the 46 countries in the African region by November 2011, but the responses indicated significantly lower human resource capacities, and more limited capacities for legislation, policy and financing and for managing chemical and radiation events. African countries raised that they faced a number of constraints in implementing the IHR, including weak health systems, inadequate infrastructure and resources, and weak communication infrastructure in remote areas⁸ (SEATINI and TARSC, 2012).





As noted earlier, the EVD epidemic has added momentum to the establishment of the African Centers for Disease Control and Prevention to provide strategic direction and promote public health practice within Member States through capacity building and promotion of continuous quality improvement in the delivery of public health services. The Mano River Union countries are seeking to strengthen disease surveillance and response in the sub-region, such as through cross-border information sharing and joint border management measures and establishment of a West African CDC is also under discussion (Snyder, 2015).

In the event of a public health emergency on the continent with cross border or regional implications, the Africa CDC – directly or through one of five regional collaborating centres – is mandated to deploy responders, in consultation with affected Member States to confirm and/or contain the emergency (AU, 2015c). Co-ordination with other African networks such as the regional Emerging Dangerous Pathogens Lab Network will be important to avoid parallel systems and duplication (WHO, 2015). It would seem timely therefore to implement an updated assessment and gap analysis of current capacities against the obligations of the IHR 2005 for all African countries, to support compliance with IHR 2005.

While responses to emergencies are seen to call for medium and long term support for disease surveillance and health systems capacities (UNDP, 2015b), there is also a demand for resilient health systems that are able to provide normal health services in the face of an emergency like Ebola, through ensuring adequate trained health workers, non-clinical staff and CHWs; available medical supplies, including medicines, diagnostics and vaccines; a robust health information system, including for surveillance; an adequate number of well-equipped health facilities (infrastructure), including access to clean water and sanitation; adequate sustainable financing and a strong public sector to deliver equitable, quality services (Oxfam, 2015). An AU organized conference in May 2015 - “Africa helping Africans in the Ebola Recovery and Reconstruction” – also took this more comprehensive approach, focusing on **a combination of strategies for responding to emergencies, strengthening health systems and investing in public health** (AU, 2015b).

ADB has proposed investment in medium-term improvements of recipient country health systems, changes to relevant governance structures, and investment in community resilience (ADB, 2014). The World Bank had mobilized US\$1.6 billion by mid-April 2015, not only for the direct Ebola response, but also for rebuilding health systems, agricultural capacities, and social safety nets (World Bank, 2015a; Gostin & Friedman, 2015). The resources required to overcome chronic deficits are however significant. Closing the funding gap to achieve a figure of \$86 per capita expenditure on healthcare (as the estimated minimum needed for a system able to support universal primary health care) annual funding must be increased by \$419m in Sierra Leone, \$279m for Liberia, \$882m for Guinea, and \$132m for Guinea-Bissau (Oxfam, 2015).

The issues of resource gaps and flows may however overshadow some of the other learning from the epidemic on strengthening the health system. Community engagement, communication within and across services, balancing attention and resources between public health, prevention and care and ensuring improved infection control and other support for health workers calls as much for organizational change as for resources. For example community engagement, effective communication within communities, with services and with other community level sectors and organisations and community health literacy were shown earlier to play a critical role in control of the epidemic, as they also do in the effective implementation of public health and in the uptake and use of services.

Beyond improved funding, there are issues of how resources are prioritised and managed, including to decentralize and consistently implement public health and prevention measures and to ensure effective communication and information flow between community health, primary care and referral services.

8. As reported by the Director-General EB130/16, 24 November 2011 based on responses received by WHO as at 2 November 2011: Algeria, Angola, Benin, Burundi, Cameroon, Chad, Congo, DRC, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Kenya, Lesotho, Madagascar, Malawi, Mauritania, Sao Tome and Principe, Senegal, Seychelles, Sierra Leone, Togo, Tanzania, Zambia and Zimbabwe



Areas for follow up



Ebola survivor in Liberia leads a training of health workers assigned to Ebola Treatment Units, Morgana Wingard/Sarah Grile, 2014

The individual countries, AU and RECs are engaging in policy dialogue to strengthen the African response to emergencies, integrating learning from the Ebola epidemic, including in relation to health system strengthening, and mapping and leveraging the competencies of the different regional organisations (AU, 2015g). Global responses to such emergencies seek to ensure health security across borders, but also recognize that structural inequalities in global development contribute to social vulnerability and limit the resources countries and communities have to respond effectively. Epidemics arise from risks relating to conflict, poverty, production systems, food security, migration and other factors and call for action from many sectors. As global resources are being mobilized and the global architecture for emergency responses and global health security are being defined, African leadership is seen as key to ensure ownership and sustainability of the response.

The challenges reported in addressing the 2014 epidemic point to areas that need review within the continent and countries as a basis for international engagement, in:

- Overcoming weaknesses in information and communication and delays in reporting;
- Ensuring that central surveillance systems link coherently to primary care level;
- Working with communities to provide clear messages, public information and outreach that empower local and relevant community action and participation;
- Involving RECs in supporting, co-ordinating and standardizing responses;
- Applying the Siracusa Principles in defining public health measures to avoid measures that stigmatise or criminalise those affected;⁹
- Ensuring that travel restrictions do not exceed the provisions set in IHR 2005, and do not undermine efforts to respond to the epidemic;
- Identifying and addressing gaps in core capabilities for the IHR 2005 and in
- Prioritising investments in public health and universal primary health care.

9. The Siracusa Principles are non-binding principles adopted by the UN Economic and Social Council in 1985 that relate to measures that restrict individual freedoms and that indicate that they should: be carried out in accordance with the law; have clear public health purpose as a legitimate objective of general interest; be based on scientific evidence and not drafted or imposed arbitrarily; be strictly necessary in a democratic society to achieve the objective; be well-targeted, through the least restrictive alternative, not applying to more individuals than is necessary for the public's health, and given that there are no less intrusive and restrictive means available to reach the same objective; be respectful of human dignity, and not discriminate unlawfully against individuals; and be of a limited duration and subject to review.



Learning from the 2014 epidemic, the AU identified that the ASEOWA was important for addressing some of these challenges, in providing a quick humanitarian emergency response and effective coordination at various levels. It combined with private sector collaboration, international and African solidarity, involvement of a diverse range of specialist cadres and hot zone training (in affected countries); field positioning (such as of epidemiologists from the African Field Epidemiology Network), competent leadership and local solutions applied in response to local priorities (AU, 2015e). This brief also points to the importance of effective systems to deploy and use resources at the onset of epidemics.

The April 2015 AU Specialised Technical Committee meeting (AU, 2015f) identified the follow up measures below:

- i. **On disease surveillance and public health**, strengthening integrated disease surveillance, research and cross border collaboration, including on epidemic management integrating lessons from the 2014 epidemic, and developing an African Hazard Preparedness plan and guidelines for responding to emergencies;
- ii. **On health workers**, setting a database of core health volunteers and standby response team for rapid response to future emergencies; and providing training in member states for countries facing acute shortages of health workers;
- iii. **On health system strengthening**, linking emergency to long-term solutions, including strengthening human and institutional capacities; providing support for survivors, orphans and widows/wers; and debt cancellation for affected countries.

This brief highlights further measures within the continent ahead of epidemics to:

- i. Ensure information and surveillance systems function to primary care level;
- ii. Assess and mobilise resources to address deficits in key capacities in public health, including an updated assessment of the 8 key capacities in the IHR 2005;
- iii. Maintain and update databases of the current range of medical and non-medical personnel, commodity, diagnostic and other resources and capacities available for deployment in response to emergencies;
- iv. Build media capacities on public health and emergency responses;
- v. Provide measures and mechanisms for pooled and preparedness funding; and
- vi. Encourage private sector and development bank investment in technological innovations, research and development and social media networks for public health within the continent, to steer innovation towards public health and health systems.

The Ebola response demonstrated vividly the contribution that community perceptions and health literacy, social communication, and grassroots work with communities play in effective disease control, and the agile and creative role that civil society, media and communications sector can play in this. This too is an area for investment ahead of epidemics, within health system strengthening. It signals, further, that one of the key links between measures for health emergencies and health systems strengthening is the extent to which they are people-centred, through bottom-up empowerment and top-down support.



Liberia, Morgana Wingard, 2014



The limitation of relying on published documentation is that much of the experience and learning from the Ebola epidemic is not publicly documented, especially that in countries and communities. There is scope for follow up research to inform the AU policy intention of combined strategies for responding to emergencies, strengthening health systems and investing in public health. This **follow up research** could, for example address:

- How far features of the emergency response (such as early warning and surveillance systems) supported wider health system strengthening (HSS), to enable health systems to sustain key services, such as for maternal and child health.
- What role and contribution the RECs made in co-ordinating responses and contributions from African countries, and in capacitating a sustainable pool (and database) of experts and resources for future responses; and the learning from other regions (such as UNASUR).
- The factors leading to deficits in implementing the IHR 2005 and to deviations from the IHR 2005 in the response from African countries during the EVD epidemic.
- The global health governance and financing reforms needed to reinforce the link between emergency responses and HSS.

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