

COMMENTARY**Monitoring and managing mental health in the wake of Ebola****Byron Kiiza Yafesi Bitanidirwe***Department of Psychiatry, University of Maryland School of Medicine, Baltimore, Maryland, USA***Abstract**

Infectious disease continues to have dramatic effects on morbidity and mortality around the world. Few events could cause such loss of life and damage to livelihoods. As witnessed with the recent West African Ebola outbreak, raising alerts and identifying the outbreak in the community took too long. As a consequence local health systems were quickly overwhelmed. In addition, response at the international level proved slow and poorly coordinated. Rapid diagnostics, effective therapeutics, protective equipment, and a vaccine were all lacking. The crisis was however ultimately halted, thanks to a massive deployment of international resources in combination with the bravery and compassion of the medical staff, scientists, healthcare and aid workers on the ground. Despite this triumph, the lingering psychological sequelae of Ebola remain a significant public health challenge. The importance of mental health service delivery and policy implementation in addition to public health funding resources will prove integral in tackling this issue in the long run. With this in mind, adopting a political ecology approach towards health and disease will be crucial in order to depathologize the clinically significant mental distress related to Ebola.

Key words

- Ebola
- healthcare
- health systems
- mental health
- policy
- Western Africa

The global population continues to be challenged by serious threats from infectious diseases, as demonstrated by the explosive spread of the Zika virus to new geographical areas [1]. Perhaps more worryingly is the potential link between Zika infection in pregnancy and microcephaly, a rare birth defect that sees babies born with unusually small heads and can cause lasting developmental problems [2]. The reports of increased occurrence of neurological syndromes (*i.e.*, Guillain-Barré syndrome) in some countries coincident with arrival of the virus is also a source of concern.

In the same vein, the Ebola crisis that was rampant in West Africa some 15 months ago, where at the height of the outbreak some 950 confirmed cases were reported per week [3], has only been recently quelled. Tragically, this part of the continent has already been affected by a series of social and economic problems arising from violent conflicts linked to poor governance, corruption and human rights violation [4]. Placing conflicts aside and focusing on the economic impact of Ebola, recent studies from the World Bank estimate that the three West African countries (*viz.* Guinea, Liberia and Sierra Leone) most ravaged by the Ebola virus epidemic to have lost in the region of US\$ 2.2 billion in forgone economic growth in 2015 [5]. In this regard, empiri-

cal research from Liberia and Sierra Leone have shown Ebola to result in job loss, smaller harvests as well as food insecurity [5].

Building on the issues touched on above, the West African countries affected by Ebola all exhibit the same crippling characteristic: a weak health system due to finite resources [6]. These countries lack the most basic equipment and are chronically understaffed by poorly trained, overworked healthcare personnel [6]. Perhaps more importantly, were the reported cases of Ebola infections among healthcare workers, which led to health facility closures, distrust in the health system, and direct and indirect loss of the healthcare workforce [7]. These effects were reported to have weakened efforts to control the Ebola epidemic and in the process led to a collapse of the basic healthcare infrastructure required to accommodate the necessary treatment of more common parasitic diseases in the region such as yellow fever, cholera and malaria.

To date, over 27 000 cases and 11 000 deaths have been reported worldwide as a result of exposure to the Ebola virus, the vast majority of them in Guinea, Liberia and Sierra Leone [8]. In the face of the enigmatic Ebola virus, significant strides have been made in terms of key innovations in the prevention, treatment and vaccine

development. Towards this end Gavi, the Vaccine Alliance and Merck recently signed an advance purchase agreement that gives the drug company US\$ 5 million (£ 3.5 million; € 4.6 million) to develop the rVSV-ZEBOV-GP live attenuated Ebola Zaire vaccine [9].

Despite this significant step, unfortunately, the consequences on the psychosocial wellbeing of communities at-risk living in Ebola-affected areas has been largely overlooked, with few efforts having been made to address the mental health needs of victims, their families, and treatment teams. In particular, Ebola has been shown to be associated with key predictors of psychosocial well-being such as orphaning of children, discrimination against affected families due to stigma, exposure to extreme traumatic events including mass mortality in addition to loss of healthcare workers and inadequate supplies of medicine, food and resources [10]. Towards this end, the stories recounted by survivors, aid workers and professional staff often provide a vivid image of extreme suffering, discrimination, helplessness, fear, grief and death [11]. When presented with this background it is perhaps unsurprising that many of the people who were on ground to witness the Ebola epidemic are afflicted in some way or another by emotional and mental anguish. Some of the mental health conditions associated with population-wide direct exposure to Ebola include anxiety, depression and post-traumatic stress disorder [10]. A lack of effective mental health systems (*i.e.* one psychiatrist in both Sierra Leone and Liberia) in addition to poverty further exacerbate these risks [12].

Confronted by this dilemma, a proactive strategy for addressing the Ebola-associated mental health burden in West Africa has been suggested. This strategy includes several key elements. Firstly, interventions should focus on targeting high-risk subpopulations such as bereaved family members, ostracized orphans, stigmatized survivors, and health care and burial workers who have experienced mass morbidity and mortality. Secondly, the development of effective methods for the assessment and treatment of outbreak-associated psychological stressors, for both civilians and healthcare workers is of key importance. One option would be to employ trauma signature analysis (TSIG) [13], an evidence-based approach that assesses the event-specific exposures and experience of disaster survivors as a means of identifying unique risk factors for post-disaster mental health consequences. Indeed, TSIG analysis has been used previously in a series of major disasters, including the 2010 Haiti earthquake [14] as well as the 2011 Japan tsunami [15]. Thirdly, interventions should coalign with the Inter-Agency Standing Committee (IASC) guidelines on mental health and psychosocial support in Eb-

ola virus disease outbreaks [16]. The IASC guidelines are organized based on a four tier intervention pyramid: 1) restoring security and basic services including providing shelter, food, water and healthcare to improve the wellbeing of the affected community; 2) reinforcing community and family support; 3) providing support to individuals suffering from psychosocial distress; and 4) providing specialized mental health intervention for severely affected survivors [17]. Such a system of support has been previously used for Philippine typhoon survivors, Nepalese survivors of political violence and Syrian war refugees.

With the current efforts in place to strengthen the treatment capacity for mental health conditions in West Africa (*i.e.* deploying child mental health clinicians to schools in Liberia [18]), it is apparent that the global health community's attitudes toward the importance of mental health well-being are changing. In this respect, the World Health Organization, increasingly addresses psychological care in its reports [19], and donors to non-governmental groups such as the International Medical Corps, Doctors Without Borders/Médecins Sans Frontières and the International Committee of the Red Cross are becoming more amenable to supporting mental-health programs. But there is still much work to be done to ensure that psychological care is a priority in the Ebola response.

Ebola represents an important global health issue with lingering mental health challenges [7]. The importance of mental health service delivery and policy implementation will prove integral in tackling the psychological sequelae of Ebola in the long run. Specifically, critical approaches to the political ecology of health and disease which have the potential to incorporate ever-broadening social, economic, political and cultural factors to challenge traditional causes, definitions, and sociomedical understandings of disease will be necessary to help depathologize the clinically significant mental distress related to Ebola [20]. Taken together, future responses to Ebola outbreaks should involve a framework whereby a prioritization of investment (*e.g.* the Pandemic Emergency Financing Facility recently launched by the World Bank Group) is allocated to the provision of healthcare staff, resources, and sustainable health systems [21, 22].

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