

Legacy of Ebola outbreak: Potential risk of measles outbreak in Guinea, Sierra Leone and Liberia

Sir,

It has been more than a year since the notification of first case of Ebola virus disease in March 2014 in West-Africa, and even now the public health authorities have not been successful to interrupt completely the transmission of the disease.^[1] The recent estimates released by the World Health Organization revealed that almost 24907 cases and 10326 associated deaths have been reported worldwide in the affected nations.^[2] Although, critical analysis of the affected nations has identified multiple reasons for the rapid progression of the disease, having a weak public health care delivery system with limited human resources/infrastructure support, remains the leading cause, especially in the most severely affected nations, Guinea, Sierra Leone, and Liberia.^[3,4]

Owing to the unprecedented magnitude of the disease and lack of preparedness, most of the public health authorities and the team of health professionals in the affected nation have diverted their attention to halt the outbreak of Ebola.^[5] The estimates pertaining to the pre-Ebola period indicates that only 62-73% of the infants had received measles vaccine in the three of the most affected West-African nations.^[6] However, because of this Ebola outbreak, routine immunization activities have taken a toll and a reduction in vaccination coverage has been observed.^[5,6] This has been attributed to both health systems (viz. nonfunctional health centers either because of diversion of resources for management of Ebola or because of death of the health workers) and patient-related factors (sense of fear and reluctance to approach health establishments).^[5-7]

In fact, it has been projected that due to the disruption in the routine immunization services for 12-18 months, around 25-75% reduction in the vaccination rates has been observed in West-African nations.^[6] Such a massive gap in vaccine coverage can precipitate a major measles outbreak, which itself could account for more than 0.1 million additional measles cases, and even 2000-16000 additional deaths.^[6] Furthermore, the risk of a rise in the number of cases of other vaccine-preventable diseases can also be not ruled out.^[5,7] Although, it is a fact that no

cure is available for either Ebola or measles, nevertheless, a potent and effective vaccine is available for measles which can prevent a person from acquiring the disease.^[5] This is a crucial aspect as measles is far more contagious (one case of measles can transmit infection to 12-18 individuals) than Ebola (one case of Ebola is expected to infect 1-2 people).^[6] Not only that, in contrast to Ebola, someone with measles is even infectious during the asymptomatic phase and thus it is difficult to interrupt the transmission of the disease.^[6]

All the stakeholders and international agencies do not want measles to be the second infectious disease, which further affects these nations.^[5] Thus, it is very essential to intensify the immunization activities by the prompt initiation of supplementary immunization activities through mass vaccination campaigns.^[5,6] However, it is quite difficult to organize the same on a nationwide scale owing to the logistics constraint (viz. equipments for maintenance of cold chain; personal protective equipments to the vaccinators); health workers' concern (viz. to deal with the myths and misconceptions associated with measles disease, to convince people to come to immunization sessions in health centers where most of them are avoiding hospitals); and psychological issues (viz. to instill a sense of safety among parents and make them understand that it has nothing to do with Ebola).^[5-7]

Although, challenges do exist, still it is not impossible to overcome them, as stakeholders have been successful in organizing supplementary immunization campaigns in all three most severely affected nations.^[5] Outbreak response immunization activities have been performed in the measles-affected regions of Liberia and Guinea.^[5] In addition, steps have been taken to ensure strengthening of the health infrastructure and implementation of effective infection prevention precautions in Sierra Leone.^[8] In fact, the World Health Organization has released new sets of recommendations to perform immunization activities in the African regions, keeping Ebola outbreak in mind and range of precautions, which the health workers should take during the immunization sessions.^[9] These immunization activities will not only reduce the risk of a measles outbreak, but even prevent the risk of precipitation of outbreak of other vaccine-preventable diseases.^[5,6]

To conclude, as Guinea, Sierra Leone, and Liberia, have not yet recovered from the Ebola, it is the responsibility of the program managers, health professionals, and other stakeholders to scale up the immunization activities and strengthen the health care delivery system so that the potential risk of measles outbreak can be prevented.

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