Ebola crisis in Uganda: A new public health warning from WHO

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Forty-six days have passed since the outbreak of Sudan virus in Uganda when a young man in Mubende was confirmed with the rare Ebola infection. There are now 130 confirmed cases of Ebola and 21 probable cases reported. The death toll has also been rising with 43 confirmed and 21 probable deaths. The case fatality rate of confirmed cases is 33 percent and overall, confirmed and probable cases, 42 percent. Notably, 15 healthcare workers have been infected of whom four have perished.

According to the World Health Organization's (WHO) update from October 28, Ebola has affected seven of 147 districts, including Wakiso, the district in which the capital of Kampala, a densely populated city of millions sits on the shore of Lake Victoria. Dr. Tedros Adhanom Ghebreyesus, WHO director-general, said at this week's press conference, "Although these cases [in Kampala] are linked to known clusters, the very fact that there are cases in a densely populated city underscores the very real risk of further transmission and the very urgent need for increased readiness in districts and surrounding countries."

Some 1,844 contacts remain under active follow-up, while 1,194 have completed the 21-day observation period, the incubation period for Ebola to manifest in someone previously in contact with a confirmed or probable case.

The WHO also reported that they had released another $5.7 million from their Contingency Fund for Emergencies in support of the outbreak in the region on top of the $5 million previously distributed to the region.

The US Embassy in Uganda reported on Wednesday that the US has channeled $22.3 million "through implementing partners" in support of the response by the Uganda's government and other international organizations. These efforts include 51 Centers for Disease Control and Prevention (CDC) staff offering direct technical assistance and working in collaboration with district and national level task forces advising on response strategies and coordination.

Although the experimental Sudan virus vaccine trials have yet to begin, Dr. Henry Kyobe Bosa, the national incident manager for Ebola for Uganda's Ministry of Health, said in an opinion piece in the *New York Times* that the US support includes experimental monoclonal antibodies, MBP-134 (licensed to MappBio) and the antiviral Remdesivir.

Remdesivir, a broad-spectrum antiviral medication developed by Gilead Sciences, gained much media attention as one of the early pharmaceuticals for the treatment of mild to severe COVID-19. However, trial results from a WHO-initiated international study recommended against its use, due to lack of efficacy.

Remdesivir, a sort of wandering minstrel in search of an audience, was created and developed in 2009 to possibly treat hepatitis C and respiratory syncytial virus (RSV) infections but was found to be ineffective against these two pathogens. Then, in October 2015, the United States Army Medical Research Institute of Infectious Diseases (USAMRIID) announced that Remdesivir completely protected Rhesus monkeys from Ebola virus when they treated with the drug three days after viral inoculation.

Remdesivir was fast-tracked through clinical trials in response to the Zaire Ebola virus epidemic in West Africa from 2013 to 2016. It was also used in the Kivu Ebola epidemic in the eastern region of the Democratic Republic of the Congo (DRC) in Central Africa between 2018 and 2020. There were a total of 3,470 confirmed and probable cases then killing 2,266 people. Four of these cases had spilled into Uganda. However, Remdesivir's use was discontinued by Congolese health officials after determining it was significantly less effective than various monoclonal antibodies that were available.

More recently, a study published in *JCI Insight* on May

23, 2022, Remdesivir combined with a cocktail of monoclonal antibodies protected macaques, nonhuman primates, against advanced Sudan virus disease. Currently, the vaccines available against the Zaire strain of Ebola do not work against the Sudan strain as the viruses are too divergent in their evolutionary development. There are no licensed anti-Sudan virus therapeutics on the markets.

Study findings were significant in that 80 percent of macaques who received the combination treatment within six days of being infected with the Sudan virus survived. However, after this period, the survival plummeted to 20 percent, meaning these treatments require immediate administration in probable or confirmed cases.

In early October, the US initiated a clinical trial using the combination therapy of MBP-134 and Remdesivir in Uganda. Seven critically ill patients have thus far received the treatment. These efforts are being financially supported by the Administration for Strategic Preparedness and Response (ASPR), which announced last month when the trial was being launched in Uganda that they had provided Mapp Biopharmaceuticals, a San Diego-based research and development firm, a contract for $110 million.

Assistant Secretary for Preparedness and Response Dawn O'Connell said in a press release dated October 4, 2022, "One of the ways we enhance the nation's readiness for health emergencies is by investing in medical countermeasures for which there is no commercial market. The funding being provided by BARDA [Biomedical Advanced Research and Development Authority] will advance this research. If approved this treatment will put the US in a better position to prepare for and respond to future potential ebolavirus incidents. Given the current outbreak of Ebola Sudan in Uganda, this work is now even more important."

The rhetoric in the press release is unabashedly nationalistic and underscores the security and economic interests motivating such research. Instead, there should be a call for an international collaboration to build centers of excellence and community treatment facilities in these regions where Ebola and other infectious disease pose a daily existential threat.

As Dr. Bosa observed, "We know that the countermeasures we have work best when they are given in the earliest stage of this disease. Patients who have monoclonal antibodies late into their illness have died, for example. But most Ebola patients are going to public health facilities too late. Many have gone to private facilities or have tried alternative methods first. We also need more of a supply of treatments to treat patients we do see early."

Experience has taught healthcare providers that early intervention with intravenous hydration and supplemental oxygen can improve the prognosis for those infected with Ebola. This requires both trust in the public health infrastructure and aid and support for the front-line healthcare providers who are placing their own lives in peril.

The failure of medical science and public health to keep pace with the threat posed by emerging infectious disease demonstrates that even the most dedicated scientists cannot overcome the social polarization within capitalist society. The mobilization of public health resources on a socially equitable basis can only be carried out through the intervention of the working class on an international basis, in struggle against the profit system.

The COVID pandemic that has raged for the last three years has revealed and exacerbated tremendous divisions in communities across the world. An international response early during the outbreak in 2020 to eliminate the virus while supporting people through the provision of material resource such as food, medicine, income, and access to internet and on-line educational material, could have beat back the pandemic. It would also have had the effect of promoting consciousness of social equality, a major reason capitalist governments rejected this course of action.

In the Ebola outbreak in Uganda, neighboring countries like Burundi, Kenya, Rwanda, South Sudan, Tanzania and the Democratic Republic of the Congo are preparing for the possible spilling of the Sudan virus across their borders. The WHO has requested these countries activate an assortment of response mechanisms that include community surveillance readiness, laboratory training, health system preparedness, and border controls. The current risk assessment, considering the presence of Sudan Ebola virus in a densely populated urban setting to be very high at the national level (Uganda itself) and high at the regional level.