

## **EBOLA OUTBREAK IN DRC (North Kivu):**

### **I. Epidemiological situation (Sept 25 , 2018):**

A total of 151 cases of haemorrhagic fever reported, 120 confirmed and 31 probable. 11 suspected cases are under investigation.

Of the 120 confirmed, 70 died.

Over the last few days, 5 new cases have been reported, 2 of them in Tchomia (near the border with Uganda), which has raised worries of international spread.

In addition, a deadly rebel attack in Beni over the last weekend caused work to be suspended for a few days before being resumed on Thursday. The situation in the region remains high risk for healthcare workers and civilians.

Dr. Salama (WHO Deputy Director-General for Emergency Preparedness and Response) has expressed concern over the situation: “active conflict limits access to civilians already traumatized by decades of conflict and murder”.

### **II. Response**

Teams will meet in Tchomia, where a mobile lab and Ebola Treatment Center will be installed.

Save the Children is working in the region (including across the border in Uganda) on community outreach to reduce fears of the disease and provide information on how families can protect themselves.

Ugandan health authorities are preparing to deploy vaccination if necessary. It is not clear how many vaccine doses are still in stock.

#### **Vaccination**

Since vaccination began on 8 Aug, 11,773 people have been vaccinated.

#### **Treatment**

To date, 39 patients have been treated with mAb 114, Remdesivir, or Zmapp. Of these, 19 are cured and have been discharged, 12 have died and 8 are still hospitalized.

### **III. Scientific literature update**

#### **Antibodies**

The resolution crystal structure of a cross-protective neutralizing antibody (CA45) bound to the ectodomain of EBOV GP is reported in *Nature Commun*, and identifies a highly conserved epitope that represents a good drug target candidate.

<https://www.ncbi.nlm.nih.gov/pubmed/30258051>

A study performed among healthcare workers in DRC (2014 outbreak) shows that a significant proportion of HCW (40%) had antibodies against the virus (2.8% of them with neutralization capacity), despite never having developed EVD symptoms.

<https://www.ncbi.nlm.nih.gov/pubmed/30239838>

In this sense, a study from Sierra Leone suggests that a case definition broader than those commonly applied may be better suited in a scenario where it is of greater importance to identify atypically presenting, pauci-symptomatic cases.

<https://www.ncbi.nlm.nih.gov/pubmed/30239602>

### **Vaccines**

Vaccination with VSV-EBOV vaccine induces dynamic changes of circulating miRNAs (four in particular), which could be used as markers to predict vaccine-induced immunogenicity according to a study in *Vaccine*.

<https://www.ncbi.nlm.nih.gov/pubmed/30244872>

### **Social / Economical issues**

A study analysing tweets concerning sexual transmission of EBOV during the West African outbreak underpins the importance of closely watching comments circulating on social media and adjusting official communications accordingly.

<https://www.ncbi.nlm.nih.gov/pubmed/30254789>