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EBOLA OUTBREAK IN DRC (North Kivu):

I. Epidemiological situation (03 Dec 2018):

Cases
A total of 444 cases, of which 396 are confirmed and 48 are probable
Of the 396 confirmed: 260 have died.

Vaccination: 39,277 people have been vaccinated in DRC.

The situation continues to be worrying:

Over the last five days, 16 new cases were reported in several locations in and around the main hot spots. The virus seems to be moving south.
MSF project coordinator has expressed his concern by the epidemiological situation in Butembo, where the number of beds in the ETC has been doubled.

As a preventive measure, front-line providers in Lubero (North Kivu) are being vaccinated

Officials are starting to worry about the vaccine supply, particularly if the virus hits urban settings.
The global stockpile is 300,000 doses – Beni alone has a population of 400,000 and Butembo of 1 million.

Response:
More steps are being taken to involve women in the outbreak response and strengthen community engagement.
Females have made up a large number of cases in this outbreak – 61% of total cases.

II. Scientific literature update

Vaccines

Two phase I studies show that the prime-boost vaccine regimen of ChAd3-EBO-Z followed by MVA-EBO-Z is well tolerated and immunogenic, although antibody production was higher among UK volunteers as compared to Senegalese volunteers.
https://www.ncbi.nlm.nih.gov/pubmed/30407513

A paper in J Infec Dis analyses adaptive immune responses to VSV proteins following immunisation with the rVSV-EBOV vaccine currently being administered on the field. VSV-specific antibodies and T-cell responses were observed in one third of subjects.
https://www.ncbi.nlm.nih.gov/pubmed/30452666

Nanomedicine reports on lipid nanoparticles displaying recombinant EBOV glycoprotein (rGP). The epitopes are properly maintained and are efficient in eliciting antibody and T cell responses when administered in mice.
https://www.ncbi.nlm.nih.gov/pubmed/30471480

Treatment

A paper in Cell Reports shows that *in vivo* delivery of synthetic human DNA-encoded monoclonal antibodies (DMAbs) protect against EBOV infection in a mouse model. DMAb plasmids were delivered by intramuscular injection, followed by electroporation, resulting in DMAb expression and secretion into systemic circulation.
https://www.ncbi.nlm.nih.gov/pubmed/30428362

A letter in NEJM warns that we remain unprepared to care for pregnant women in the context of Ebola and highlights the need to address pregnancy issues when responding to an Ebola outbreak. https://www.ncbi.nlm.nih.gov/pubmed/30485156

Preparedness

A pilot trial demonstrates the feasibility of using an online simulation training for an Ebola response course. https://www.ncbi.nlm.nih.gov/pubmed/30489171