5 September 2014 - After two days of discussion on potential Ebola therapies and vaccines, more than 150 participants, representing the fields of research and clinical investigation, ethics, legal, regulatory, financing, and data collection, identified several therapeutic and vaccine interventions that should be the focus of priority clinical evaluation at this time.

Currently, none of these vaccines or therapies have been approved for human use to prevent or treat EVD. A number of candidate vaccines and therapies have been developed and tested in animal models and some have demonstrated promising results. In view of the urgency of these outbreaks, the international community is mobilizing to find ways to accelerate the evaluation and use of these compounds.

Safety in humans is also unknown, raising the possibility of adverse side effects when administered. Use of some of these products is demanding and requires intravenous administration and infrastructure, such as cold chain, and facilities able to offer a good and safe standard of care.

The experts determined:

- There was consensus that the use of whole blood therapies and convalescent blood serums needs to be considered as a matter of priority.
- Safety studies of the two most advanced vaccines identified – based on vesicular stomatitis virus (VSV-EBO) and chimpanzee adenovirus (ChAd-EBO) – are being initiated in the United States of America and will be started in Africa and Europe in mid-September. WHO will work with all the relevant stakeholders to accelerate their development and safe use in affected countries. If proven safe, a vaccine could be available in November 2014 for priority use in health-care workers.
- In addition to blood therapies and candidate vaccines, the participants discussed the availability and evidence supporting the use of novel therapeutic drugs, including monoclonal antibodies, RNA-based drugs, and small antiviral molecules. They also considered the potential use of existing drugs approved for other diseases and conditions. Of the novel products discussed, some have shown great promise in monkey models and have been used in a few Ebola patients (although, in too few cases to permit any conclusion about efficacy).

Existing supplies of all experimental medicines are limited. While many efforts are underway to

accelerate production, supplies will not be sufficient for several months to come. The prospects of having augmented supplies of vaccines rapidly look slightly better.

The participants cautioned that investigation of these interventions should not detract attention from the implementation of effective clinical care, rigorous infection prevention and control, careful contact tracing and follow-up, effective risk communication, and social mobilization, all of which are crucial for ending these outbreaks.

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The recipients of experimental interventions, locations of studies, and study design should be based on the aim to learn as much as we can as fast as we can without compromising patient care or health worker safety, with active participation of local scientists, and proper consultation with communities.

This will require the following crucial elements:

- Appropriate protocols must be rapidly developed for informed consent and safe use.
- A mechanism for evaluating pre-clinical data should be put in place in order to recommend which interventions should be evaluated as a first priority.
- A platform must be established for transparent, real-time collection and sharing of data.
- A safety monitoring board needs to be established to evaluate the data from all interventions.

All of these will require continued ethical oversight.