

# Experimental Ebola drugs needed for 'up to 30,000 people'

\* Scientists estimate need for drugs, vaccines in West Africa \* Study shows dilemma after WHO backs use of untested drugs

## LONDON

UP to 30,000 people could have used experimental treatments or vaccines so far in the world's worst outbreak of Ebola currently plaguing West Africa, British scientists said on Wednesday.

The calculation highlights the dilemma facing officials considering how to distribute the tiny quantities of unproven drugs that are likely to be available in the near term to fight the deadly disease.

The World Health Organisation (WHO) is hoping for improved supplies of experimental treatments and progress with a vaccine by the end of the year, after last week backing the use of untested drugs

and vaccines.

Oliver Brady, an epidemiologist at the University of Oxford, and colleagues have been crunching the numbers and believe the number of people needing such treatment or protection is very large, even under a conservative scenario.

"This demand is likely to be higher than many people realise," Brady wrote in a commentary in the science journal *Nature*.

"Our analysis is crude and has very clear limitations. But it does demonstrate that for treatment and prevention interventions to be rolled out evenly and fairly, stocks must be scaled up substantially."

As of Aug. 16, the WHO puts the number of Ebola cases in West

Africa at 2,240, of whom 1,229 have died.

But Brady said many more required protection, including family members and others close to those infected, healthcare and support staff looking after patients, people handling corpses, and essential non-medical staff like aid workers.

One rare experimental drug, ZMapp, has already been used on two American aid workers and is now being given to three African healthcare workers who showed symptoms of the disease, all of whom have shown very promising signs of recovery.

But California-based Mapp Biopharmaceutical, which makes

the drug, has said its scarce supplies are now exhausted and producing more will take time. It is currently working with Kentucky BioProcessing and the U.S. government to accelerate scaled-up production.

There are other drugs in the pipeline but all are unproven and have yet to clear even the earliest stage of clinical trials.

Brady said available stocks were limited to treatment courses for tens or at most hundreds of people.

Only one treatment, made by Tekmira Pharmaceuticals, has yet begun human safety trials, while the others have been tested only in non-human primates.

In total, 17 Ebola drugs and 12

vaccines are in the pipeline at various companies and institutions, according to BioWorld, a Thomson Reuters publication.

Some have been languishing in animal studies and other preclinical research for more than a decade.

"It is inconceivable to think that all individuals infected or at risk of infection will get treated - there's simply not enough experimental drug to go round," said Jonathan Ball, professor of molecular virology at the University of Nottingham, who was not involved with the Oxford team's work.

Like many experts, he believes the current outbreak will be stopped by standard infection control measures and public education.

"If the aim is to prevent the disease occurring in humans, then history tells us that our best bet is vaccination.

But that isn't going to happen tomorrow and it won't solve the current problem in West Africa," Ball added.

The Canadian government said last week it would donate 800 to 1,000 doses of an Ebola vaccine developed in a government lab to the WHO, even though it is untested on humans.

Another vaccine from GlaxoSmithKline is awaiting approval from the U.S. Food and Drug Administration to begin a human safety trial, possibly as soon as next month.