

# New Ebola vaccine faces key test

May 18 2018

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The experimental Ebola vaccine dubbed rVSV-ZEBOV has shown promising signs that it can contain the spread of the prolific killer virus.

With a new Ebola outbreak in the Democratic Republic of Congo triggering fears of a regional threat, the vaccine is about to face its toughest test.

The single-dose injection—developed by pharma company Merck and funded by the World Health Organization (WHO) and Canada's public health agency—has been approved for use by the Kinshasa government.

Roughly 7,500 doses have been sent to Equateur province in the northwest of the DRC. Here is what we know about the vaccine.

## What is rVSV-ZEBOV?

It uses a modified version of the [vesicular stomatitis virus](#) (VSV), which causes illness in rodents, cattle, pigs and horses, but is not dangerous to humans.

The vaccine prompts the human body to develop antibodies against the invader so that when Ebola attacks, the antibodies are quick to identify it and fight back.

Clinical trials involving 16,000 volunteers in Africa, Europe and the United States have indicated it may be 100 percent effective.

The vaccine does not contain any live Ebola virus.

It can trigger side effects like cold or flu-like symptoms and swelling at the point of injection.

## **Can it stop an epidemic?**

The "vaccine is an additional tool," WHO spokesman Tarik Jasarevic told reporters in Geneva on Friday. "It does not replace all the other elements of the response."

Because rVSV-ZEBOV remains experimental and has not been tested in the height of the epidemic, it is premature to assume that it alone can contain Ebola's spread.

The epicentre of the outbreak is also an extremely remote, rural part of DR Congo, making access difficult. WHO has therefore conceded that "getting the vaccination teams to the affected area will be challenging".

The vaccine also has to be stored at temperatures as low as minus 80 degrees Celsius (-112 degrees Fahrenheit), so keeping it stable in an area with poor infrastructure creates additional complications.

## **Are there enough doses ready?**

In addition to the doses that WHO has sent to DRC and a small reserve stock in Geneva, Merck has said it has 300,000 doses ready for the UN's use free of charge, according to Jasarevic.

WHO estimates that for every confirmed Ebola case, 100 to 150 of that patient's contacts should be vaccinated.

That number could go up for urban cases, given the increased frequency of close human contact in cities.

As of Friday, there were 31 suspected or probable cases in the current outbreak, plus 14 that have been laboratory confirmed.

Health workers and other responders—like those tasked with burying Ebola victims—should also be vaccinated, WHO said.

A WHO spokesman told reporters it was a "targeted vaccination" and therefore not for the "general population".

Gavi, the [vaccine](#) alliance, has given \$1 million towards the operational costs in the DRC campaign, in addition to other support donated to WHO.

Jasarevic said the UN health agency was aiming to start vaccinations in Equateur as soon as possible.

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Citation: New Ebola vaccine faces key test (2018, May 18) retrieved 5 May 2024 from <https://medicalxpress.com/news/2018-05-ebola-vaccine-key.html>

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