

Subject: Vaccine to end Nigeria Polio?

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Vaccine 'could end Nigeria polio'

Polio could be wiped out in Nigeria - one of the world's last blackspots of the disease - thanks to an improved vaccine, research suggests. An Imperial College London team found a recently introduced polio jab is four times more effective at protecting children than previous vaccines.



Polio is still a major problem in Nigeria

They say it could eradicate type 1 polio - the most common form - in Nigeria if it reaches enough children.

The study appears in the New England Journal of Medicine.

Nigeria is one of only four countries in the world where polio of global cases reported so far this

“ Last pockets of unvaccinated children now need to be reached to achieve elimination in Nigeria ”

has yet to be eliminated, and 82% year have been in the country.

Polio is highly infectious and it five years of age. A small minority permanent paralysis, which can be

Helen Jenkins
Imperial College London

primarily affects children under of infected people develop fatal.

The monovalent oral poliovirus vaccine, known as mOPV1, has been used in Nigeria since February 2006 and the number of reported cases of polio in the country fell by 75% between 2006 and 2007.

The latest study shows that just one dose of mOPV1 gives a child in Nigeria a 67% chance of being protected, compared with a 16% chance after receiving the standard trivalent vaccine.

However, the researchers warn that although the monovalent vaccine is proving very effective, many more children need to be immunised if the polio virus is to be eliminated in Nigeria.

In the north west zone of the country, where the majority of new cases are found, 21% of children report never having received a single dose of the vaccine and a further 55% have received fewer than the recommended four doses.

Concern raised

Earlier this year the World Health Assembly expressed alarm over a dramatic increase in type 1 cases in Nigeria because of poor immunisation in the north of the country.

The Nigerian government subsequently established a presidential taskforce to identify barriers to immunisation, and potential solutions.

Researcher Helen Jenkins, based at Imperial's MRC Centre for Outbreak Analysis and Modelling, said: "Nigeria and India are responsible for the vast majority of new global polio cases.

"In Nigeria, we now have an effective vaccine to use and we've seen the start of improvements in vaccine uptake.

"These last pockets of unvaccinated children now need to be reached to achieve elimination in Nigeria and this in turn will have a dramatic impact on the prospects of worldwide eradication."

In a statement the World Health Organization said the study proved the new vaccine was a "highly effective tool" - but operational problems stood in the way of successfully eradicating polio.

"To overcome the remaining operational challenges, full political oversight and engagement at all levels is necessary, as demonstrated by states such as Kebbi, where case numbers have declined following such engagement."

The researchers reached their conclusions after analysing **the vaccination histories of 21,815 children with acute flaccid paralysis, 14% of whom had polio**, collected between January 2001 and December 2007.

<http://www.bbc.co.uk/news/health-11621842>

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New polio vaccine more effective in reducing disease

By Ania Lichtarowicz Health reporter, BBC News



The new oral polio vaccine could help to finally eradicate the virus

A new vaccine against the polio virus has helped reduce the number of cases by more than 90%.

Research published online in the journal *The Lancet*, shows that the new vaccine is **significantly better** at protecting children against polio than the current popular vaccine.

It has already been used in Afghanistan, India and Nigeria.

The scientists behind the work **believe** this new vaccine could help to finally eradicate the disease.

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Disease elimination

Mass vaccination campaigns have led to the number of polio endemic countries falling from 125 in 1988 to just four in 2005.

This meant an actual drop in cases from **350,000 to just 1,606 in 2009**.

Polio is caused by one of 3 versions of the poliovirus: type 1, type 2 or type 3.

Until recently, vaccines targeting either all three forms of the virus or just one of them were used to immunise children.

The last case of type 2 polio was recorded in India in 1999, so it's the other two types that need to be targeted to finally eliminate the disease.

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"Start Quote

This vaccine could get us over the top and get us to the finish line for eradication."

End Quote Dr. Roland Sutter WHO

The authors of the study carried out a trial in India comparing the commonly used old vaccines to the new one, which is taken orally.

In total, 830 newborn babies received either the new vaccine or one of the old vaccines in two doses - one at birth and one 30 days later.

Blood samples were taken before vaccination and after the first and second doses to measure seroconversion - the rise in antibodies produced by the immune system against polio.

It appears that the new vaccine is about 30% more effective in protecting against polio than the most commonly used vaccine to date.

Finish Line

The new vaccine has already been used in immunisation campaigns in Afghanistan, India and Nigeria.

In India the number of cases this time last year was 464. Over the same period this year there have only been only 39 cases.

Nigeria has seen an even greater difference, with cases falling by 95%.

The new vaccine and improved immunisation programmes appear to be responsible for this significant decrease, according to the World Health Organization (WHO).

Dr Roland Sutter, from the WHO and the lead author of the study, told BBC News: "This (new) vaccine could get us over the top and get us to the finish line for eradication.

"The dramatic drop in the number of polio cases in India and Nigeria is attributable to the new vaccine and better coverage during immunization campaigns."

The private sector manufacturers played a key role in its development, says Dr Bruce Aylward, the Director of WHO's Global Polio Eradication Initiative.

"They've held the price to the same price of what we are paying for the older polio vaccine," he says.

The new vaccine can be administered in the same way as the previous one. "That's why there is so much promise with this product," says Dr Aylward.

Commenting on the research, Nigel Crawford and Jim Buttery from the Murdoch Children's Research Institute (SAEFVIC) in Melbourne, Australia, said that the new vaccine had shown great promise.

However they cautioned that the global financial crisis had resulted in a massive funding gap for immunisation programmes worldwide, including polio.

<http://www.bbc.co.uk/news/health-11447199>

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New bid to halt polio in Angola



Children are given an oral vaccine

A mass polio immunisation campaign is starting in Angola in a bid to vaccinate all children under five.

The campaign is part of a series of programmes aimed at stopping a polio outbreak that has paralysed 24 children this year alone.

Over 7m vaccine doses are set to be delivered.

The World Health Organisation (WHO) says previous attempts to stop the virus circulating failed because too few children were vaccinated.

Prolonged outbreak

This outbreak in Angola started in 2007 and the WHO now considers it the greatest risk to Africa's polio eradication efforts.

Polio is a highly infectious virus which mainly infects young children.

It is transmitted through contaminated food and water and once it enters the intestine it multiplies and can spread into the nervous system.

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"Start Quote

The good news is that we know this outbreak could be stopped very rapidly"

End Quote Oliver Rosenbauer Global Polio Eradication Initiative

In the worst cases, polio causes paralysis which is often permanent.

Current vaccines are highly effective in protecting children against infection.

This outbreak, despite previous vaccination campaigns, has now spread to the Democratic Republic of Congo.

The WHO say there is a high risk of the virus spreading further still.

Earlier efforts to stop the virus from spreading were not good enough, according to the UN health agency with not enough children vaccinated.

The virus can only be stopped if all children receive the vaccine.

The WHO estimates that in some areas more than a third of at risk children have not been immunised.

Oliver Rosenbauer, spokesperson for the Global Polio Eradication Initiative at the WHO said: "Children across Angola, and indeed Africa, will continue to be paralysed by this awful virus, and it's completely needless because it could so easily be prevented.

"The outbreak of course also has international implications. It has already this year spread to DR Congo, and we know that a past outbreak in 2006 spread to Namibia as well."

"But the good news is that we know this outbreak could be stopped very rapidly.

"If these upcoming immunisation campaigns are effectively implemented, this outbreak can be stopped in its tracks even by the end of the year.

"Africa is on the verge of being polio-free - and it can be rapidly and realistically achieved. "

Easier to control

These setbacks in central Africa are in stark contrast to improvements elsewhere on the continent.

Nigeria - which is the only country in Africa to never have been polio free - has seen a 99% drop in cases.

The outbreak in Angola should be much easier to control than in Nigeria simply because there are fewer children to vaccinate.

Another immunisation campaign is planned for the end of the month.