

Fake malaria drugs threaten crisis in Africa

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Fake drugs threaten control of malaria in Africa.

(Medical Xpress) -- The emergence of fake and poor quality anti-malarial drugs could dash hopes of controlling malaria in Africa, warn experts writing in the *Malaria Journal*. Millions of lives could be put at risk unless urgent action is taken, they argue.

The international team led by Oxford University researchers report cases where medicines are on sale in Africa that have been deliberately counterfeited by criminals or are of poor quality resulting from factory errors.

Not only are these drugs potentially harmful to the patient, but they risk promoting the emergence of [drug](#) resistance among the parasites that cause malaria.

The Wellcome Trust-funded researchers examined anti-malarials collected in 11 African countries between 2002 and 2010, which they believed to be either fake or substandard.

Their analysis showed that some counterfeits contained a mixture of the wrong pharmaceutical ingredients, some of which may initially alleviate malaria symptoms but would not cure malaria. Worse still, these unexpected ingredients could cause potentially serious side effects, particularly if they were to interact with other drugs the patient was taking, such as antiretroviral therapies for HIV.

Some of the [fake drugs](#) also contained small amounts of artemisinin derivatives, the most effective anti-malarial drugs available, perhaps to try to ensure that the drug would pass simple authenticity tests.

But taken at such low levels, the drug is unlikely to rid the body of malaria parasites, and could lead to the emergence of resistance to artemisinin.

The researchers also identified pollen found in some of the tablets which indicated that the counterfeits originated in eastern Asia.

In 2001, police in Guangzhou, China, arrested Nigerian and Chinese men for production of counterfeits of the anti-malarial halofantrine. No evidence was found from the pollen analysis of counterfeit pharmaceutical production in Africa.

However, production facilities for packaging materials for counterfeit anti-malarials have been seized in Nigeria.

"Public health organizations must take urgent, coordinated action to prevent the circulation of counterfeit and substandard medicines and improve the quality of the medicines that patients receive," says lead researcher Dr. Paul Newton of Oxford University, who is based in Laos where he leads the Wellcome Trust-Mahosot Hospital-Oxford University Tropical Medicine Research Collaboration.

Malaria is estimated to kill around 800,000 people each year, mainly young children and pregnant women. The most effective anti-malarial drugs are the artemisinin derivatives. Fears over the development of resistance mean that they are recommended to be used with one or more other drugs as artemisinin-based combination therapies (ACTs).

Dr. Newton adds: "The enormous investment in the development, evaluation and deployment of anti-malarials is wasted if the medicines that patients

actually take are, due to criminality or carelessness, of poor quality and do not cure.

"Malaria can be readily treated with the right drugs of good quality, but poor quality medicines, as well as increasing mortality and morbidity, risk exacerbating the economic and social impact of malaria on societies that are already poor. Worse still, they encourage [drug resistance](#), potentially resulting in the failure of artemisinin treatments, with profound consequences for public health in Africa.'

Dr. Newton and colleagues argue that multiple parallel strategies are needed to tackle this problem. Their recommendations include increased investment in national medicine regulatory authorities in Africa and improving access to good quality, affordable artemisinin combination therapies.

"Failure to take action will put at risk the lives of millions of people, particularly children and pregnant women," says Dr. Newton.

Provided by Oxford University

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