

Bad malaria pills in Africa raise resistance fears

February 8 2010, By MARGIE MASON , AP Medical Writer

(AP) -- High rates of the most effective type of malaria-fighting drugs sold in three African countries are poor quality - including nearly half the pills sampled in Senegal - raising fears of increased drug resistance that could wipe out the last weapon left to battle a disease that kills 1 million people each year, according to a U.S. report released Monday.

Between 16 percent and 40 percent of artemisinin-based drugs sold in Senegal, Madagascar and Uganda failed quality testing, including having impurities or not containing enough active ingredient, the survey found.

Artemisinin-based drugs are the only affordable treatment for malaria left in the global medicine cabinet. Other drugs have already lost effectiveness due to resistance, which builds when not enough medicine is taken to kill all of the mosquito-transmitted [parasites](#).

If artemisinin-based drugs stop working, there is no good replacement and experts worry many people could die.

"It is worrisome that almost all of the poor-quality data that was obtained was a result of inadequate amounts of active (ingredients) or the presence of impurities in the product," said Patrick Lukulay, director of a nongovernmental U.S. Pharmacopeia program funded by the U.S. government, which conducted the survey. "This is a disturbing trend that came to light."

The study is the first part of a 10-country examination of antimalarials in

Africa by the U.S. and the [World Health Organization](#). It follows evidence from the Thai-Cambodian border that artemisinin-based drugs there are taking longer to cure malaria patients, the first sign of drug resistance.

The three-country report also found bad drugs in both the public and private health sectors, meaning governments - some buying medicines with donor funds - are not doing enough to keep poor-quality pills out. All of the drugs tested from the public sector in Uganda, however, passed the quality tests. But 40 percent of the artemisinin-based drugs in Senegal failed.

"There are countries where donated medicines are not subjected to quality controls, they're just accepted," said Lukulay. "There are countries in Africa where Chinese products have been donated and found to be unacceptable later in the public sector."

A total of 444 samples of artemisinin-based combination drugs along with the antimalarial sulfadoxine-pyrimethamine - to which resistance has already developed - were first screened locally using visual inspection and basic lab tests. Sulfadoxine-pyrimethamine is still used, mainly for preventative treatment for pregnant women.

Nearly 200 samples then underwent full quality control testing in a U.S. laboratory to examine the amount of active ingredient present and drug purity. For both drugs, 44 percent from Senegal failed the full quality testing, followed by 30 percent from Madagascar and 26 percent from Uganda.

While the study is not the first to assess the quality of antimalarials in Africa, it is the most rigorous and complete. Similar failure rates were found in previous work, but those did not focus specifically on artemisinin-based drugs.

"I am alarmed by these results because it means there are many cases of [malaria](#) that are being only partially treated, and that just guarantees acceleration of artemisinin [drug resistance](#)," said Rachel Nugent, deputy director for Global Health at the Center for Global Development, a U.S. think tank. "It is the most comprehensive study out there on antimalarials and should be a wake-up call."

Nugent was not involved in the study.

In all three countries, the antimalarial brands collected from various areas and sectors tended to either do well across the board or poorly, which could prove helpful for governments working to ban low-grade drugs.

Results from the other countries surveyed - Cameroon, Ethiopia, Ghana, Kenya, Malawi, Nigeria and Tanzania - have not yet been publicly released by the WHO. But Clive Ondari, who worked on the study for the WHO in Geneva, said failure rates in three of those countries were also significantly high.

Ghana has already withdrawn more than 20 drugs from the market after receiving the initial results, Lukulay said.

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