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Review

Poor-quality antimalarial drugs in southeast Asia and sub-Saharan Africa

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Summary

Poor-quality antimalarial drugs lead to drug resistance and inadequate treatment, which pose an urgent threat to vulnerable populations and jeopardise progress and investments in combating malaria. Emergence of artemisinin resistance or tolerance in *Plasmodium falciparum* on the Thailand–Cambodia border makes protection of the effectiveness of the drug supply imperative. We reviewed published and unpublished studies reporting chemical analyses and assessments of packaging of antimalarial drugs. Of 1437 samples of drugs in five classes from seven countries in southeast Asia, 497 (35%) failed chemical analysis, 423 (46%) of 919 failed packaging analysis, and 450 (36%) of 1260 were classified as falsified. In 21 surveys of drugs from six classes from 21 countries in sub-Saharan Africa, 796 (35%) of 2297 failed chemical analysis, 28 (36%) of 77 failed packaging analysis, and 79 (20%) of 389 were classified as falsified. Data were

insufficient to identify the frequency of substandard (products resulting from poor manufacturing) antimalarial drugs, and packaging analysis data were scarce. Concurrent interventions and a multifaceted approach are needed to define and eliminate criminal production, distribution, and poor manufacturing of antimalarial drugs. Empowering of national medicine regulatory authorities to protect the global drug supply is more important than ever.



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