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# Harnessing Market Forces to Fight Fake Drugs

*Editor's Note: David Yanagizawa-Drott is Assistant Professor of Public Policy at Harvard's Kennedy School of Government. In this guest post he talks here about his research presented recently at our Impact and Policy Conference.*

At the Impact and Policy conference in Bangkok, I talked about the prevalence of fake antimalarials, and drew upon evidence from my study with J-PAL affiliates Martina Björkman-Nyqvist and Jakob Svensson to explore a potential solution to the problem.

The prevalence of counterfeit drugs is a global public health concern, with evidence from Sub-Saharan Africa and South East Asia indicating that 35% of medicines in public and private outlets are fake. The problem is exacerbated for antimalarial drugs because fake antimalarials are not only visually identical to authentic drugs, but the quality of the drug is only partially inferable when used. Researchers agree that fake and substandard antimalarial drugs could be wrecking the chances of winning the war against malaria in Africa, where at least half a million people die of malaria every year. However, there is essentially no evidence of how supply and demand forces drive drug quality, or how to combat the problem.

For our study, we partnered up with the NGOs BRAC and Living Goods in Uganda, and went door-to-door selling authentic antimalarials at a price 20-25 percent lower than that prevailing in the local market. By randomly assigning the intervention across villages, we could test our main hypothesis: if consumers had access to one provider of authentic medication, they would be able to compare health outcomes across outlets, and would stop buying from outlets that sell fake drugs. To avoid a decline in both reputation and demand, drug outlets would be prompted to increase the quality and decrease the price of their antimalarials.

Another question we were interested in was the effect of misconceptions about malaria on market outcomes. Misconceptions about malaria can lead to overestimation of antimalarial drug quality, since consumers won't learn about drug quality by comparing across health outcomes. When many consumers suffer from such misconceptions, reputational forces on drug sellers are weaker, and there is no incentive to improve drug quality.

The impact of our intervention was a 20-percentage point reduction in fake drug sales, 18

percent lower prices, and a 39 percent increase in antimalarial medicine use. Furthermore, effects on drug quality were lower in villages where a large share of the consumers held false beliefs about what causes malaria.

In sum, high quality products, priced competitively, can drive out bad ones even when quality is not directly observable, but the mechanism appears weaker when consumers are less able to infer quality. There are two main policy takeaways. First, NGOs intervening in private markets not only can have a direct effect on drug quality, but can also have effects at the market level. In fact, the intervention provides grounds for thinking that NGOs may provide a partial solution to the public health problem of poor quality drugs. Second, supplemental education addressing poor knowledge and misconceptions about malaria transmission may not only improve the match between illness and treatment, but may also raise drug quality on the market through households' ability to infer quality.

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