

Leakages and Market Failures in the Provision of Health Products

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Motivation

- Fake medicines are a global public health problem
- Evidence of antimalarial drug quality (Nayyar et al., 2012)
 - Sampled countries in Southeast Asia: Cambodia, China, India, Laos, Myanmar, Thailand
 - **35% of medicines in public and private outlets are fake**
 - Prevalence in Sub-Saharan Africa equally high
 - Similar problem for antibiotics

Common Explanations

- **Profit motives** at all levels in the global supply-chain: manufacturers, counterfeiters, government officials, health care workers, wholesalers, retail drug shops
- Insufficient **internal quality-control** in production process and **regulation and monitoring** of the supply-chain
- **Imperfect competition**
- Widespread **self-prescription** and **poor knowledge** about product authenticity among consumers

However, there is essentially no evidence of how supply and demand forces drive drug quality, and how to combat the problem

- We provide evidence from the private retail sector in Uganda (Bjorkman, Svensson, Yanagizawa-Drott, 2012)

Which one is fake?



A

B

Which one is fake?

Fake

Authentic



A

B

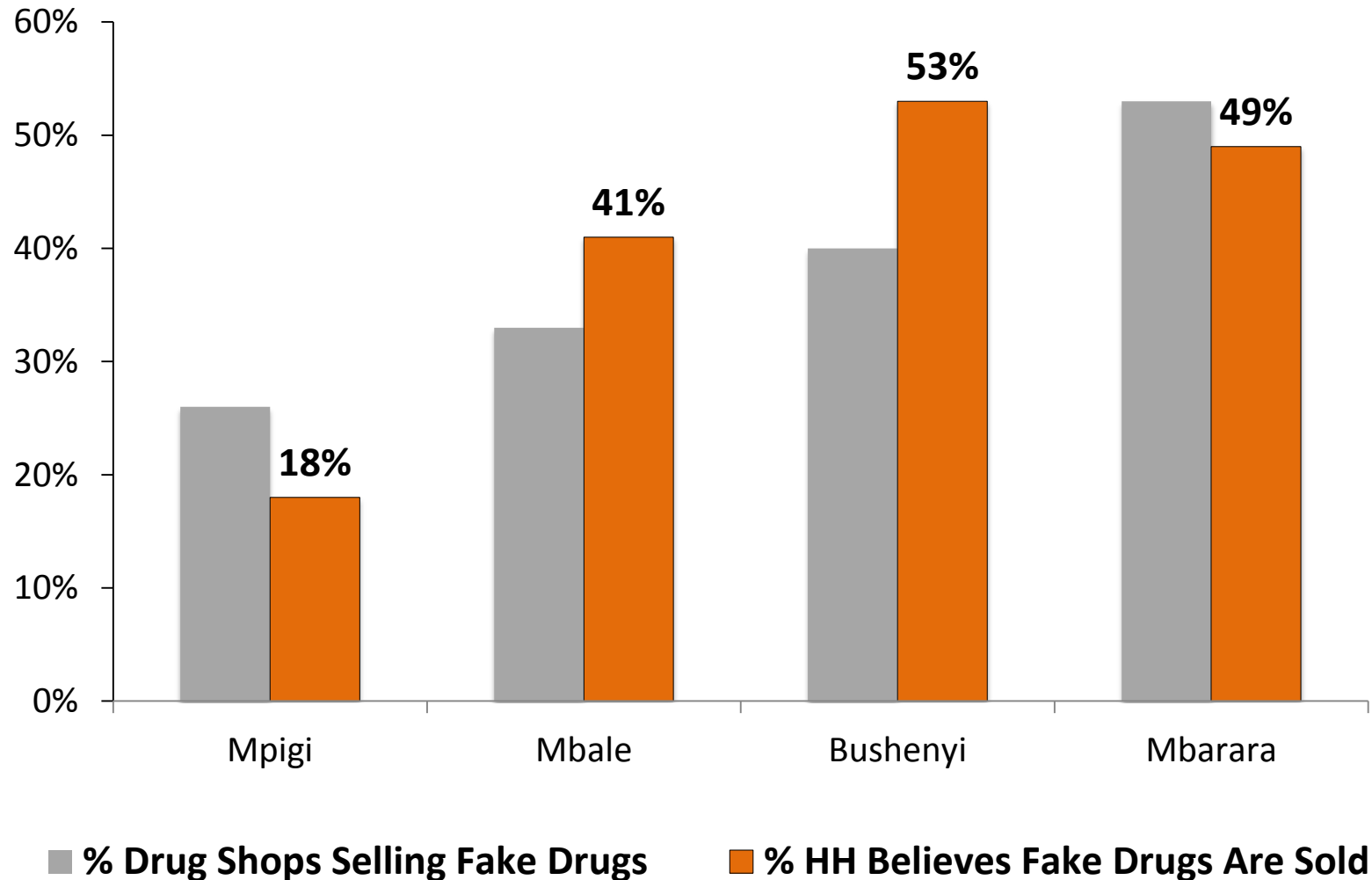
Are fake drugs cheaper?

- Prices may “signal” quality
- The problem may be **less severe** if households can pay a little extra and get authentic drugs
- However, the data from Ugandan drugs shops shows that fake drugs are on average sold at the **same price** as authentic drugs

Do households suspect fake drugs?

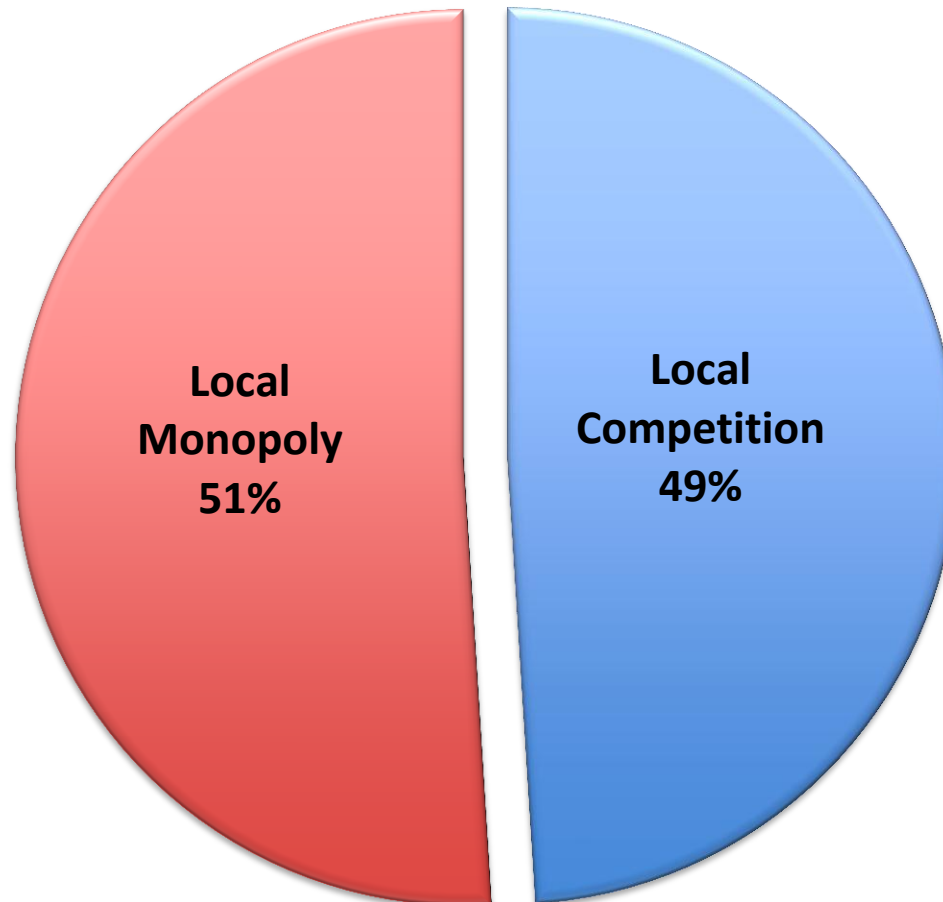
- Households may partially realize that drugs are fake and ineffective
- This would lead to lower demand and treatments among households that believe the drugs are fake
- We used household survey data from Uganda to investigate this

Do households suspect fake drugs?

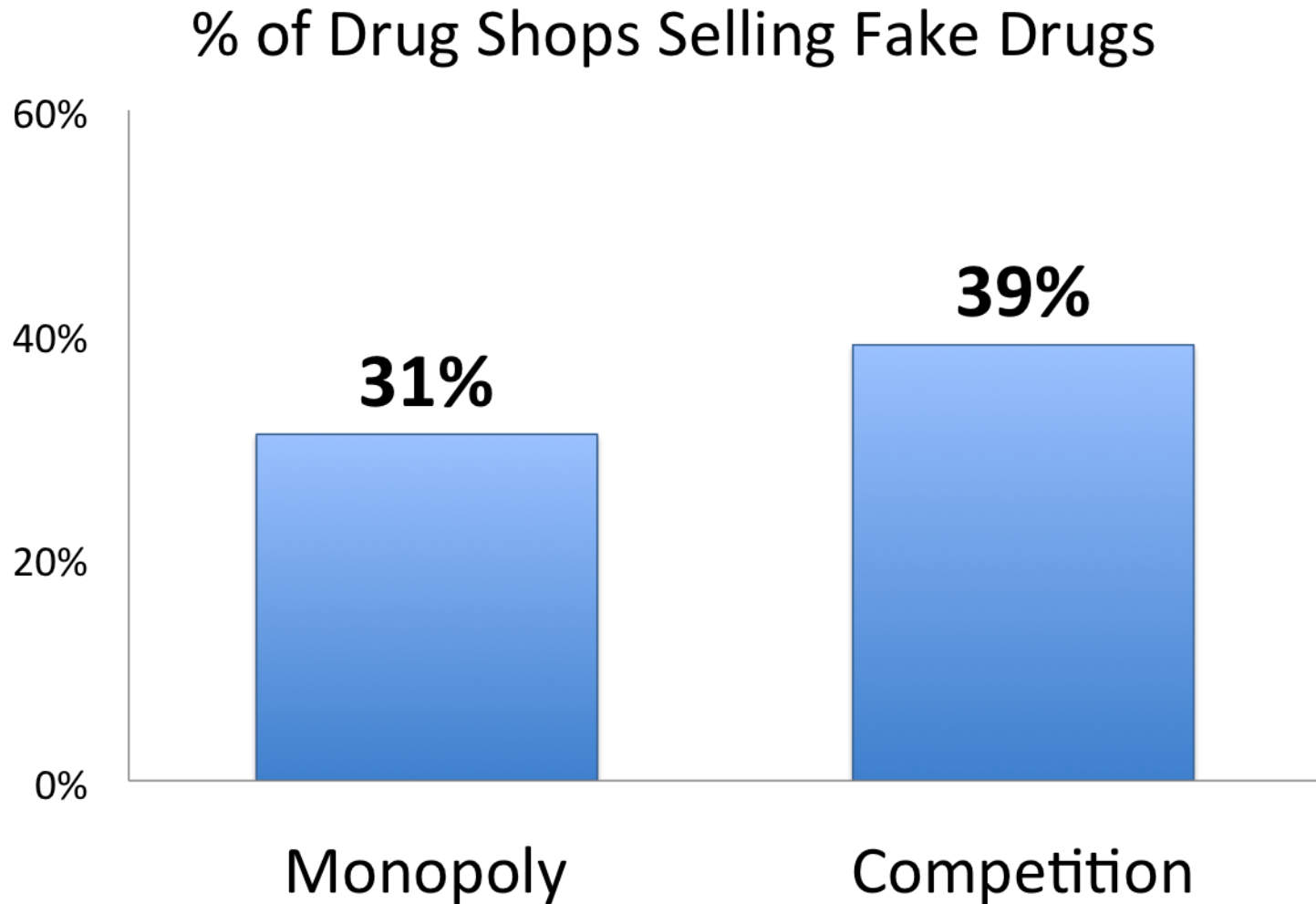


Is the problem lack of competition?

Local Competition in Ugandan villages



Is the problem lack of competition?



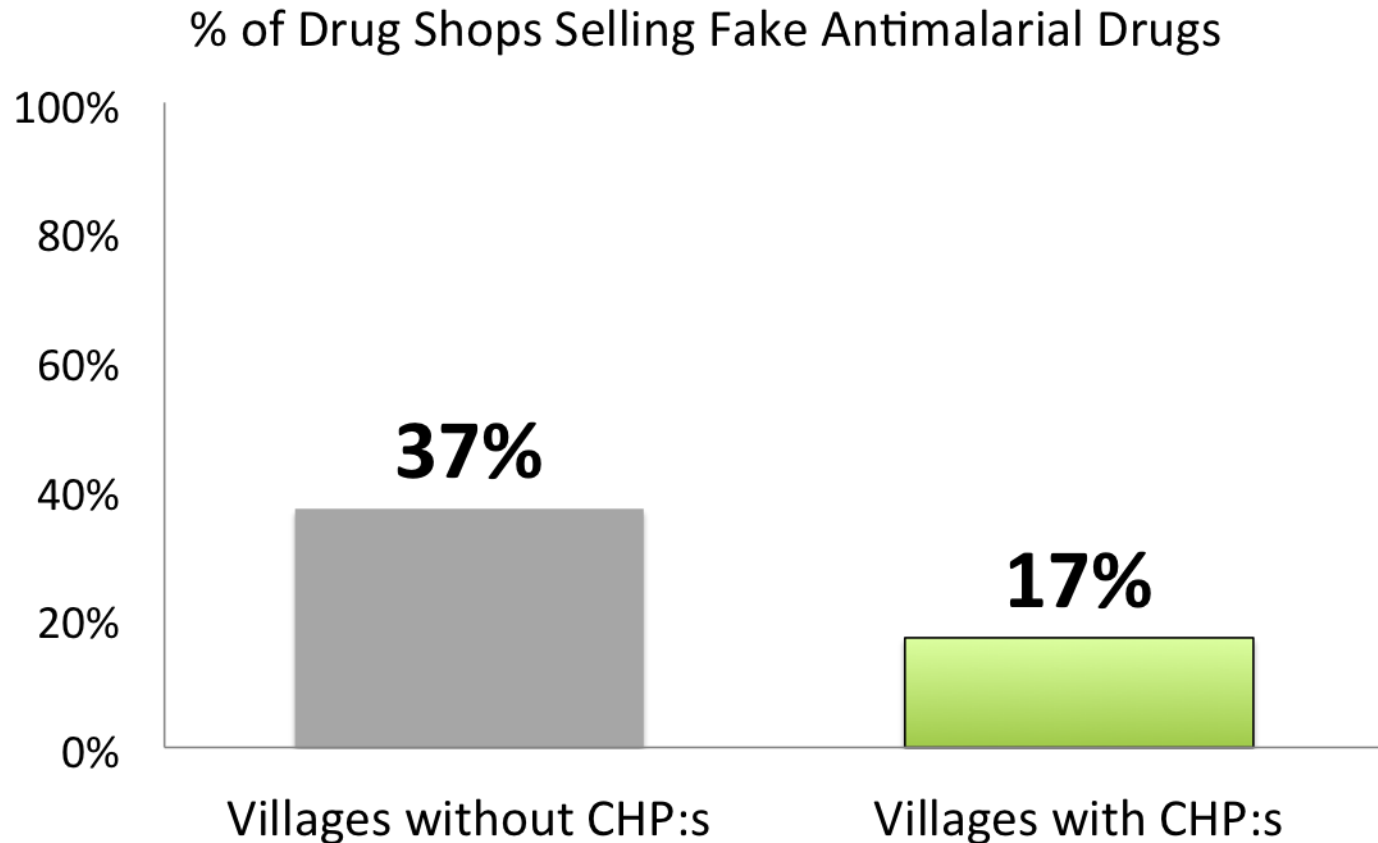
Randomized Experiment

- **NGO Collaboration:** BRAC and Living Goods
- **Intervention:**
 - a. Door-to-door Community Health Promoter (CHP) selling authentic antimalarial drugs at a 20-25% subsidized price
 - b. ~100 sample villages, half randomly assigned CHP
- **Theory of Change:** By having an NGO provider that sells authentic drugs at low price:
 - a. Households will get access to authentic medicines, which can **increase treatments**
 - b. Market forces could **drive out the bad drugs** from private outlets due to the NGO

Randomized Experiment

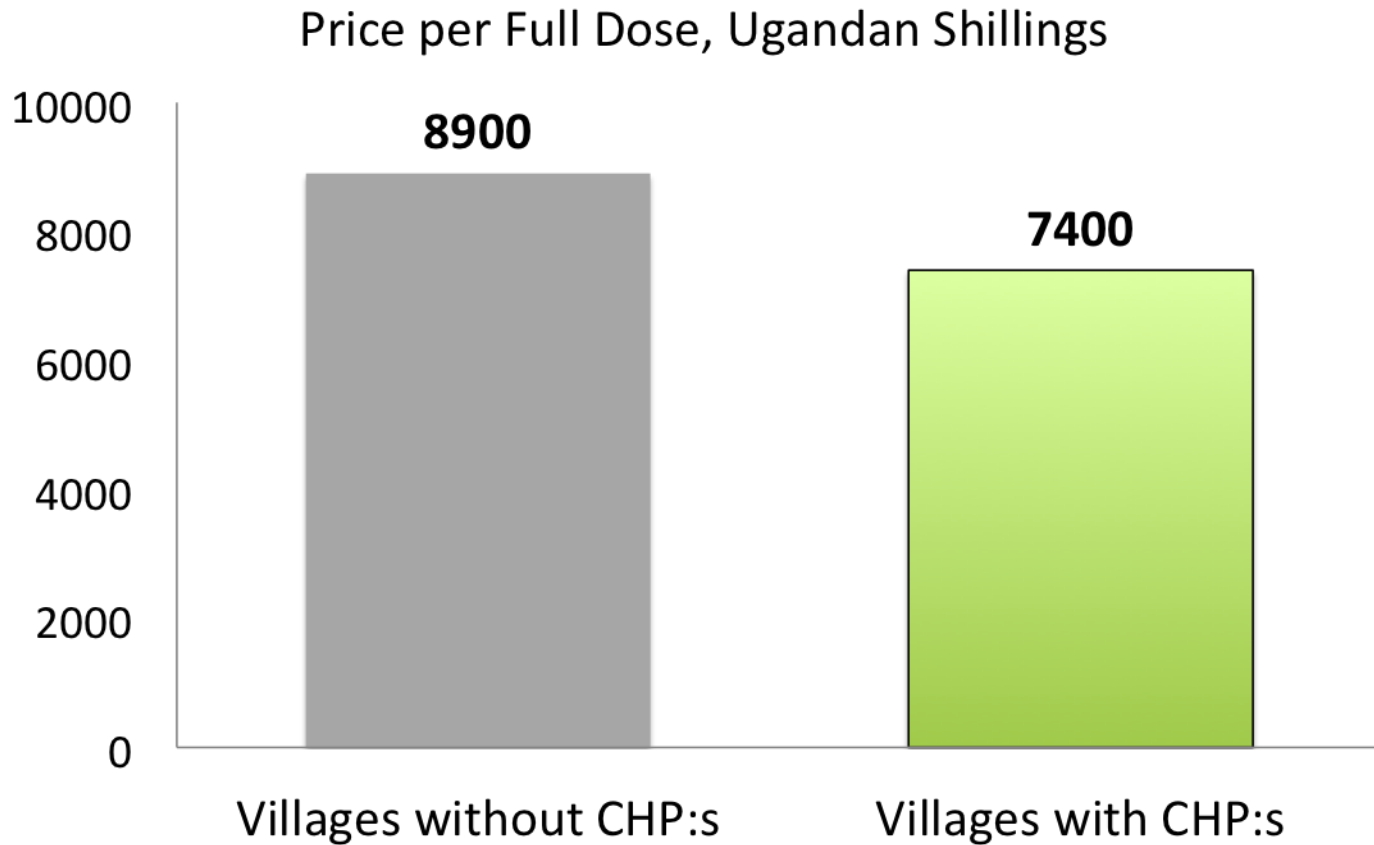


Impact: Drug Quality in Drug Shops



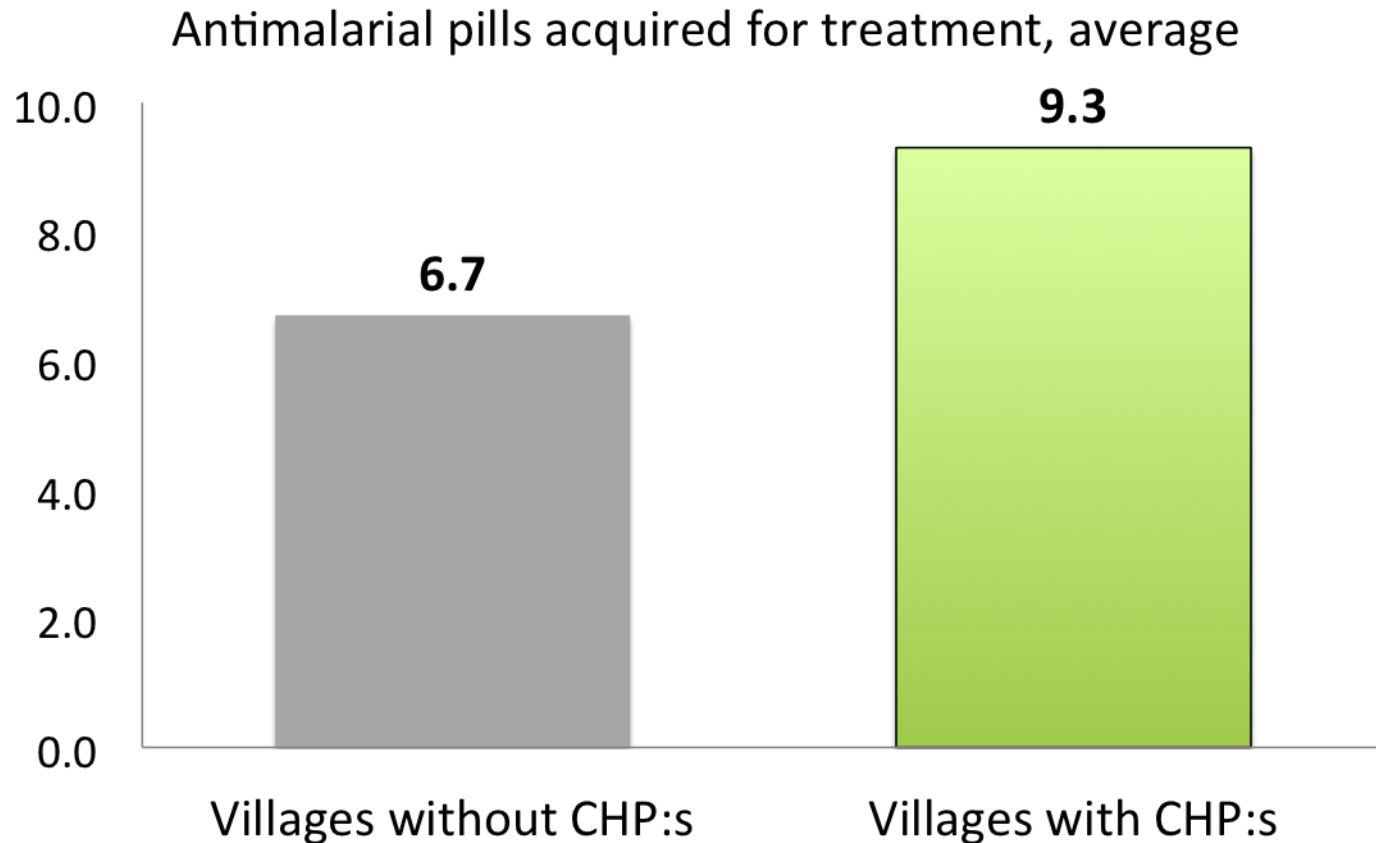
Program Impact:
20 %-points fewer drug shops sell fake drugs

Impact: Price in Drug Shops



**Program Impact:
18% lower prices**

Impact: Treatment of Sick Children



Program Impact:
39% increase in antimalarial medicine use

Conclusion and Way Forward

- Evidence of **positive market externalities**: Fake drugs in private outlets can be driven out by the entry of an NGO committed to high quality and low price
- Interventions directly **targeting the retail sector can be highly effective**
- Potential interventions and policies:
 - Monitoring of quality in public and private outlets
 - Technological solutions
 - Certification and consumer information schemes