June 2022

**Malaria: Existence Perpetuated by a Counterfeit Drug Industry**

Nicholas Black
nabnzk@umsystem.edu

Follow this and additional works at: https://irl.umsl.edu/urs

Part of the History Commons, and the Parasitic Diseases Commons

**Recommended Citation**

Available at: https://irl.umsl.edu/urs/114

This Article is brought to you for free and open access by the UMSL Undergraduate Works at IRL @ UMSL. It has been accepted for inclusion in Undergraduate Research Symposium by an authorized administrator of IRL @ UMSL. For more information, please contact marvinh@umsl.edu.
Malaria: Existence Perpetuated by a Counterfeit Drug Industry

Nicholas Black: (Mentor: Rob Wilson, Ph.D.)

Introduction

- Malaria has plagued mankind for thousands of years, claiming 2-5% of all deaths in the 20th century alone.
- Half the global population lives in regions at risk of malaria transmission. This is unsurprising given malaria is spread by mosquitoes.
- Malaria remains highly prevalent in impoverished/infrastructurally underdeveloped regions.
- These regions are particularly prone to exploitation through counterfeiting practices.
- Malaria has been largely eliminated from infrastructurally developed countries, but remains burdensome in underdeveloped countries due to a growing counterfeit antimalarial industry.

Sources

- Pisani, Elizabeth, “WHO Global Surveillance and Monitoring System for Substandard and Falsified Medical Products.”

Research Findings

- The CDC estimates that in 2020 alone, there were 241 million cases and 627 thousand deaths attributed to malaria. 95% of the deaths occurred in Africa.
- Of this 95%, the WHO claims that children under the age of 5 accounted for 80% of all these deaths (about 475,000 children under 5).
- 1 in 20 children under the age of 5 will die from malaria.
- Counterfeit antimalarials cause up to an estimated 450,000 deaths per year.
- 33 million doses of falsified medication were seized by customs officials during a shipment inspection from China. These falsified medicines were all branded with a recognizable green leaf logo of quality.
- Despite this seizure, the same and adjacent falsified drugs were reportedly found circulating in 18 other neighboring countries less than a year later. This points toward an industrially scaled counterfeiting industry.
- One estimate suggests that only 20% of the 193 WHO member states have well developed drug policies/law enforcement agencies. 50% have varying levels and 30% have no medical regulation at all.
- A French company produced and distributed 8 million doses of subpotent antimalarials and only received a 110,000 euro fine and 2 pharmacists received less than 2 years of prison time.
- 1 in 10 medicines in lower income African countries are estimated to be substandard.
- Counterfeit antimalarials have led to malaria mutations resistant to currently working treatments.

Conclusion

- The counterfeiting industry is extremely profitable despite counterfeit medication often costing less than authentic medicine.
- Impoverished groups remain highly vulnerable to exploitation through counterfeiting, which perpetuates poverty levels.
- Child mortality is greatly accentuated through counterfeiting.
- Mutated strains of malaria extend globally, beyond just malaria endemic regions.
- Global interconnectedness threatens to rapidly spread treatment-resistant malaria.
- It is imperative that stringent punishment and harmonized international regulations are implemented to combat this industry.
- Left unchecked, the counterfeit antimalarial industry will continue perpetuating malaria’s existence.

Regions currently at risk of malaria transmission.

Artemether and Lumefantrine is a commonly reported falsified antimalarial medication with the green leaf logo of quality.

Coartem is another commonly falsified antimalarial medication circulating with the green leaf logo.