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#### The Effects of Malaria on Children in Malawi

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# The Effects of Malaria on Children in Malawi



## **Abstract**

#### Malaria in Children of Malawi

There are 730 children under the age of five that die every day of Malaria. To put these statistics in perspective, every two minutes, a child under five dies of this fatal disease. An exploration of the problem of Malaria, a protozoan parasite that invades the red blood cells, and the negative affects it has caused on the children in the country of Malawi. Malaria is an irregular fever that is transmitted by mosquitos in many tropical or subtropical regions. Symptoms include chills, high fever, sweating, pain in the abdomen or muscles, impaired consciousness, abnormal bleeding, convulsions, organ disfunction. Just in the small country of Malawi, there are over 6,500 deaths every year from this disease. Malawi has the 5<sup>th</sup> highest number of malaria cases in eastern and southern Africa. In the village of Ngodzi, the Mary Lou clinic (which had no running water or electricity) any child under the age of 10 with a fever was immediately tested for malaria because the disease is so common in the area. I went to the impoverished village of Ngodzi and saw how the people were affected, especially children, by this disease. There are several different methods of fighting Malaria in Malawi, some example are pre-natal medication, Malaria treatments, mosquito nets or spray, and more medical clinics. These methods could result in a phenomena of positive Malaria tests in Malawi. In conclusion, Malaria has had detrimental effects on the people of Malawi, and with more education and knowledge about the disease this could help Malawi tremendously.









## Why Malawi?







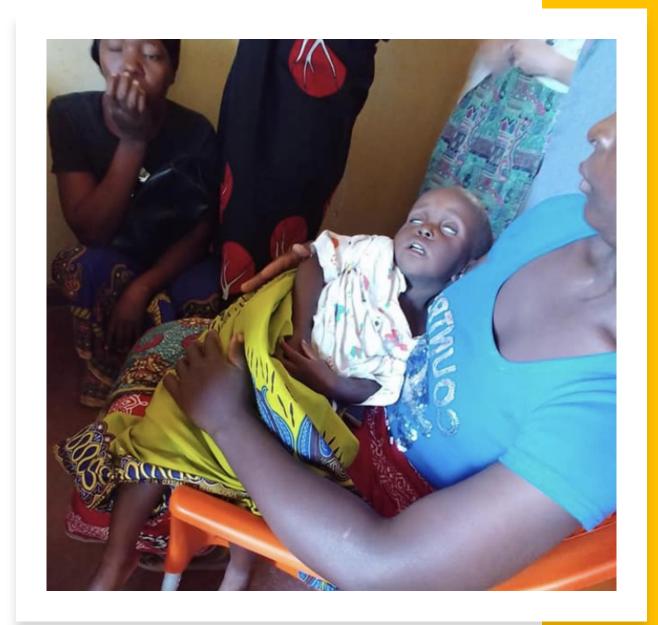


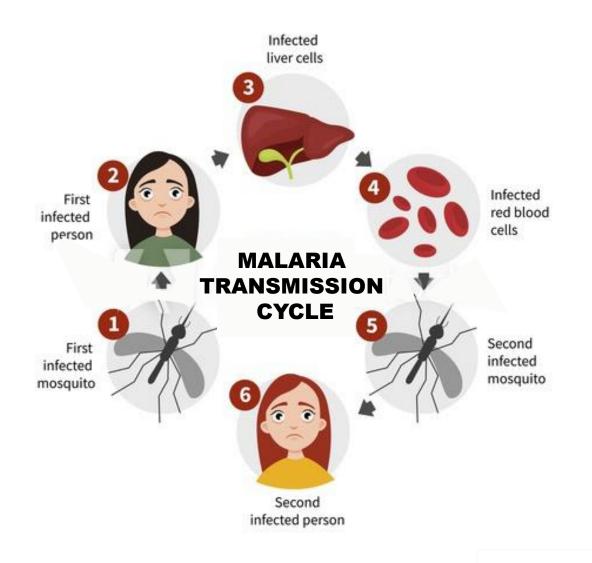
- This summer I had the opportunity to go on a mission trip to Malawi, Africa. It completely changed my perspective on life and of people all around the world.
- I was able to volunteer at the Mary Lou Medical Clinic in the village of Ngodzi. I cleaned 3<sup>rd</sup> degree burns of a six year old and an infant, and charted for Malaria testing.
- I chose Malawi because it is a special place to me and I saw the effects Malaria had on the people around me.



#### What is Malaria?

• Malaria is an irregular fever caused by a protozoan parasite in the red blood cells. This parasite is transmitted by mosquitos in many tropical or subtropical regions. (CDC)







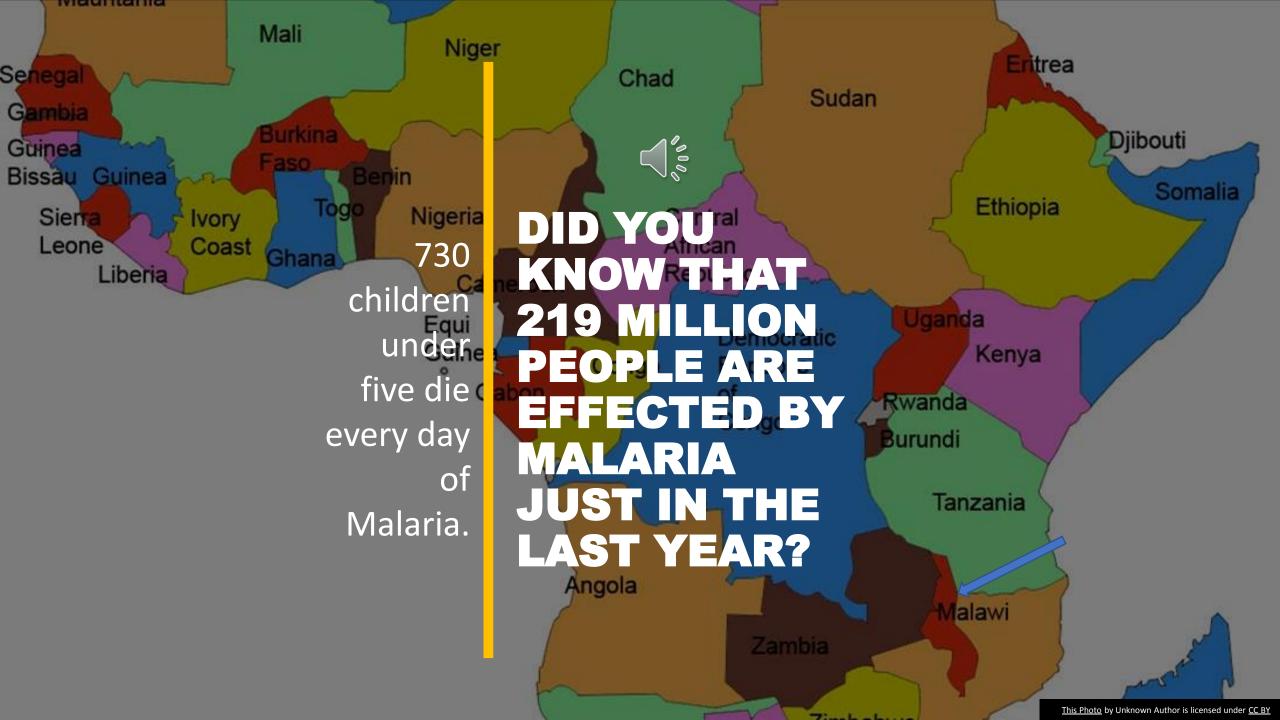
## How is Malaria transmitted?

## The Effects of Malaria in Children in Malawi

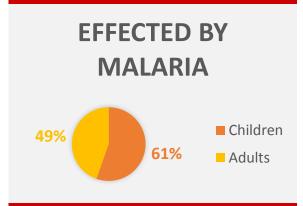


- Just in the small country of Malawi, there are over 6500 deaths every year from this disease.
- Malawi has the 5<sup>th</sup> highest number of malaria cases in eastern and southern Africa.
- For example, in the Mary Lou Medical Clinic (which had no running water or electricity) any child under the age of 10 with a fever was immediately tested for malaria because the disease is so common in the area.

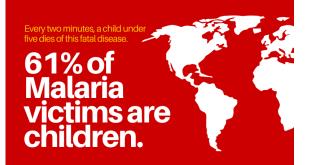




#### MALARIA IN MALAWI



## Adults versus Children

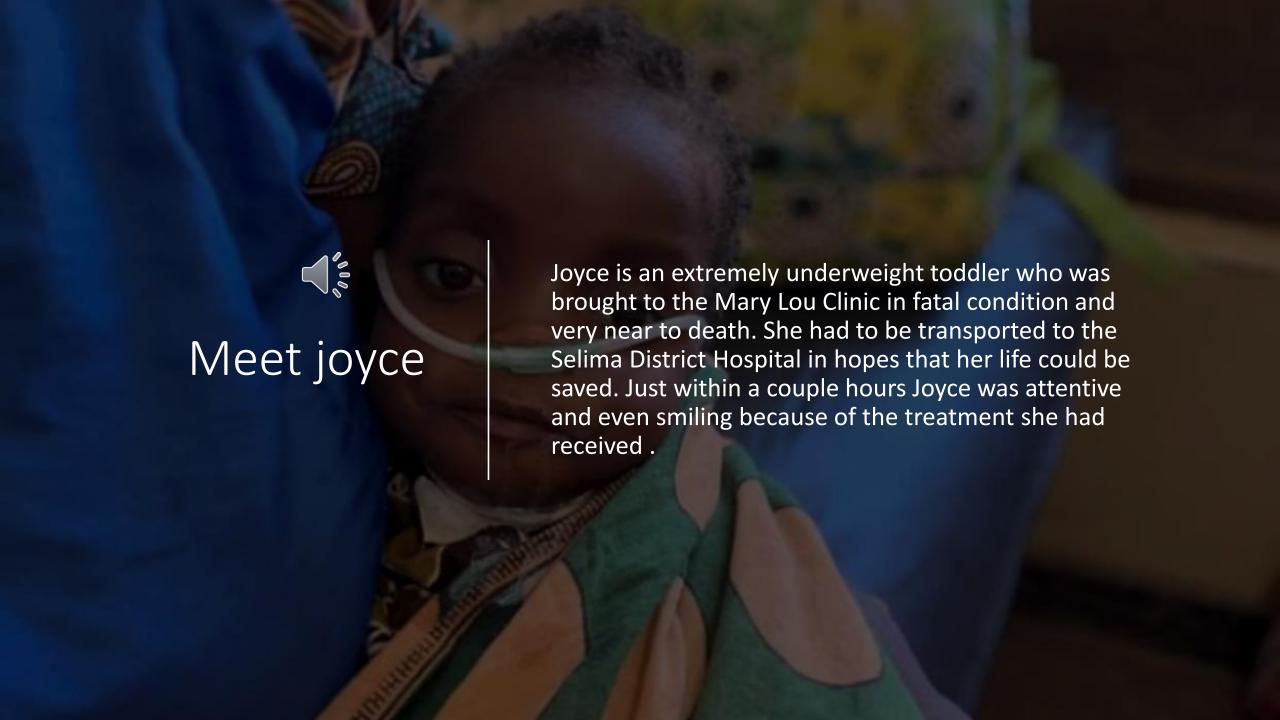




#### SYMPTOMS OF MALARIA



Symptoms include chills, high fever, sweating, pain in the abdomen or muscles, impaired consciousness, abnormal bleeding, convulsions, organ disfunction.





#### TREATMENTS. **FOR MALARIA**

Treatment aims to eliminate the parasite from the blood stream.

#### BUILDING MEDICAL CLINICS

Planting more local medical clinics can make treatment more accessible. For example, the Mary Lou Medical Clinic in Ngodzi, Malawi has up to 4000 patients a month and a huge part of it includes treating hundreds of Malaria patients.

#### INSECTICIDE TREATED

This is designed to block mosquitos physically and is treated with safe insecticide for the purpose of repelling and killing mosquitos. For as cheap at \$15-\$20 an insecticide treated net can be purchased.

#### **BUG SPRAY**

Since the infected mosquito is what causes Malaria, the most simple and easiest ways to prevent Malaria is to use bug spray.

#### PREVENTATIVE PRE-NATAL TREATMENT

New recommendations for Mefloquine use in pregnancy. The CDC recommends the antimalarial drug for pregnant women to treat and prevent Malaria for all trimesters. (CDC)

#### MALARIA MEDICATION

This is a preventative pill you can take, but it is more on the costly side and the drugs are not 100% protective.

#### **VACCINATION DEVELOPMENT**

According to the Centers for Disease Control and Prevention, there are dozens of vaccines in the development process. In particular, GlaxoSmithKlineBiologicals' RTS, S has completed Phase III of clinical testing. (CDC)

#### **EDUCATION**

It may seem too simple, but one of the best ways to decrease the spread of Malaria is to educate the effected communities about what the disease is and hwo to prevent it. Also, as education increases employment increases, which helps a society economically: therefore, prevention methods are easier to access. .













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## **Learning Outcomes**



• The curiosity of this subject actually came from later research while being quarantined, post research fair. With all of the news of the COVID-19 pandemic, I saw that the Malaria drug was used to help a patient who was dying from the Corona Virus. Ironically, Ms. Tee also emailed me about the Anti-Malaria drug news. The man was nearing the end of his life, he even said his goodbyes to his family, but heard that the chloroquine drug (the Anti-Malaria drug) could possibly save his life. He asked the doctor about it, who gave him many reasons to not try it, but because he was at the end of his life he took the risk. It ended up not only saving his life, but treating him for COVID-19.



"When malaria gets into a cell, if you change the pH with a drug like chloroquine phosphate, the malaria can't live," she says, according to Oklahoma TV station KFOR. "The same goes for a virus like COVID-19. If you change the pH, the virus cannot assemble, and if it can't assemble, it can't affect you."

This is HUGE game changer for this current world pandemic. So the question is, have they found a cure? Not exactly, because this isn't an approved drug and there are negative cardiac symptoms from this drug. But at least it's a start, maybe they can experiment with the Anti-Malaria drug and create a different drug or vaccine.