



The Association of Armed Conflict with Malaria Chemoprevention for Pregnant Women in Sub-Saharan Africa

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Background

- Life-threatening disease
- 228 million cases
- 405k deaths
- Highest disease burden in sub-Saharan Africa
- Vulnerable population(s)

Malaria Chemoprevention

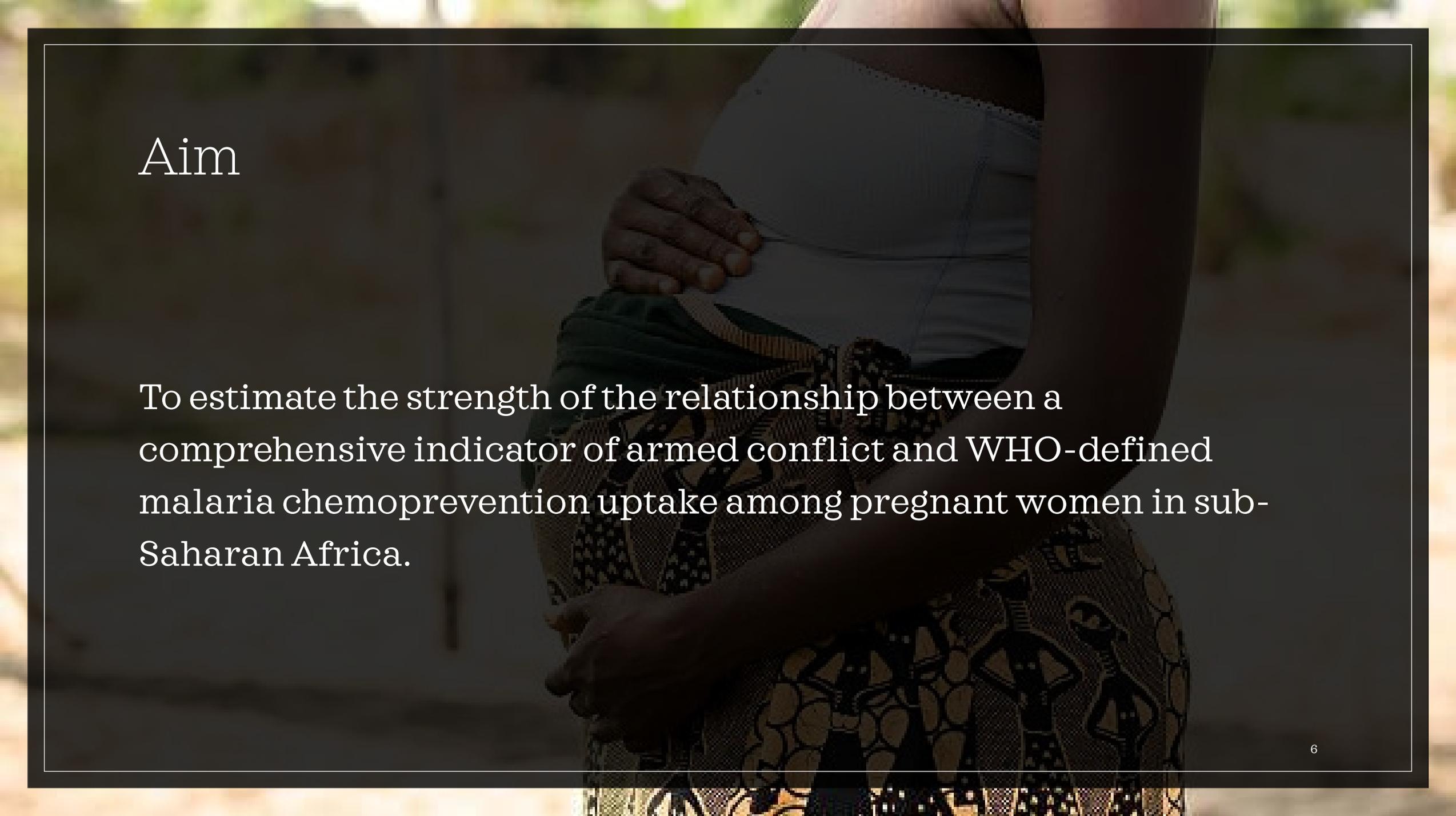
- Sulfadoxine-pyrimethamine (SP)
- Moderate to high transmission areas
- Monthly dosing starting in the 2nd trimester
- Suboptimal chemoprevention rates

Armed Conflict

- Varying degrees of armed conflict
- Heightens infectious disease risk
- Disrupter
 - Institutional
 - Supply chain
 - Individual access

Significance of the Problem

- Armed conflict weakens malaria control programs
- Armed conflict disrupts health services and restricts access to antenatal care
- More than 50% of pregnant women at risk for malaria live in high transmission areas
- Chemoprevention rates remain low

A pregnant woman is shown from the waist up, wearing a white sleeveless top and a patterned skirt. She is holding her belly with both hands. The background is blurred, suggesting an outdoor setting. The image is overlaid with a dark semi-transparent rectangle containing text.

Aim

To estimate the strength of the relationship between a comprehensive indicator of armed conflict and WHO-defined malaria chemoprevention uptake among pregnant women in sub-Saharan Africa.

Methods

- Demographic Health Surveys (DHS)
 - 42 datasets, 20 countries
- Armed Conflict Location Event Dataset (ACLED)
- Gave birth within the last year
- Received antenatal care
- N=85,398



Analysis

- Multilevel logistic regression
 - Individual (level 1)
 - Year (level 2)
 - Country (level 3)
- $p < 0.05$, 95% Confidence Intervals
- Outcome variable : receipt of malaria chemoprevention



RESULTS

Individual-Level Variables

Age

Mean	27.17
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Residence

Rural	69.5%
Urban	30.5%

Education

None or primary education	74.7%
Secondary education or higher	25.2%
Missing	<0.0%

Wealth

Low	42.7%
Middle	20.3%
High	37.1%

Individual-Level Variables

Live Births

One child	21.8%
Two children	19.0%
Three or more children	59.1%

Timing of first antenatal check

1 st trimester	30.0%
2 nd trimester	57.5%
3 rd trimester	11.6%
<i>Missing</i>	0.9%

Antenatal clinic visits

Mean	4.35
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Results

Odds of receiving chemoprevention



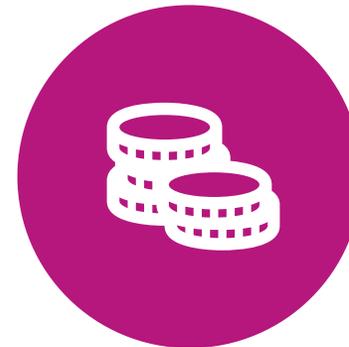
Urban living

1.2x the odds



Secondary education⁺

1.2x the odds



High income group

1.2x the odds

Results

Odds of receiving chemoprevention



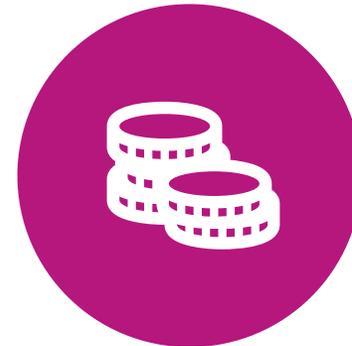
At least three children

1.2x the odds



Seeking care in the 1st or 2nd trimester

1.4x the odds

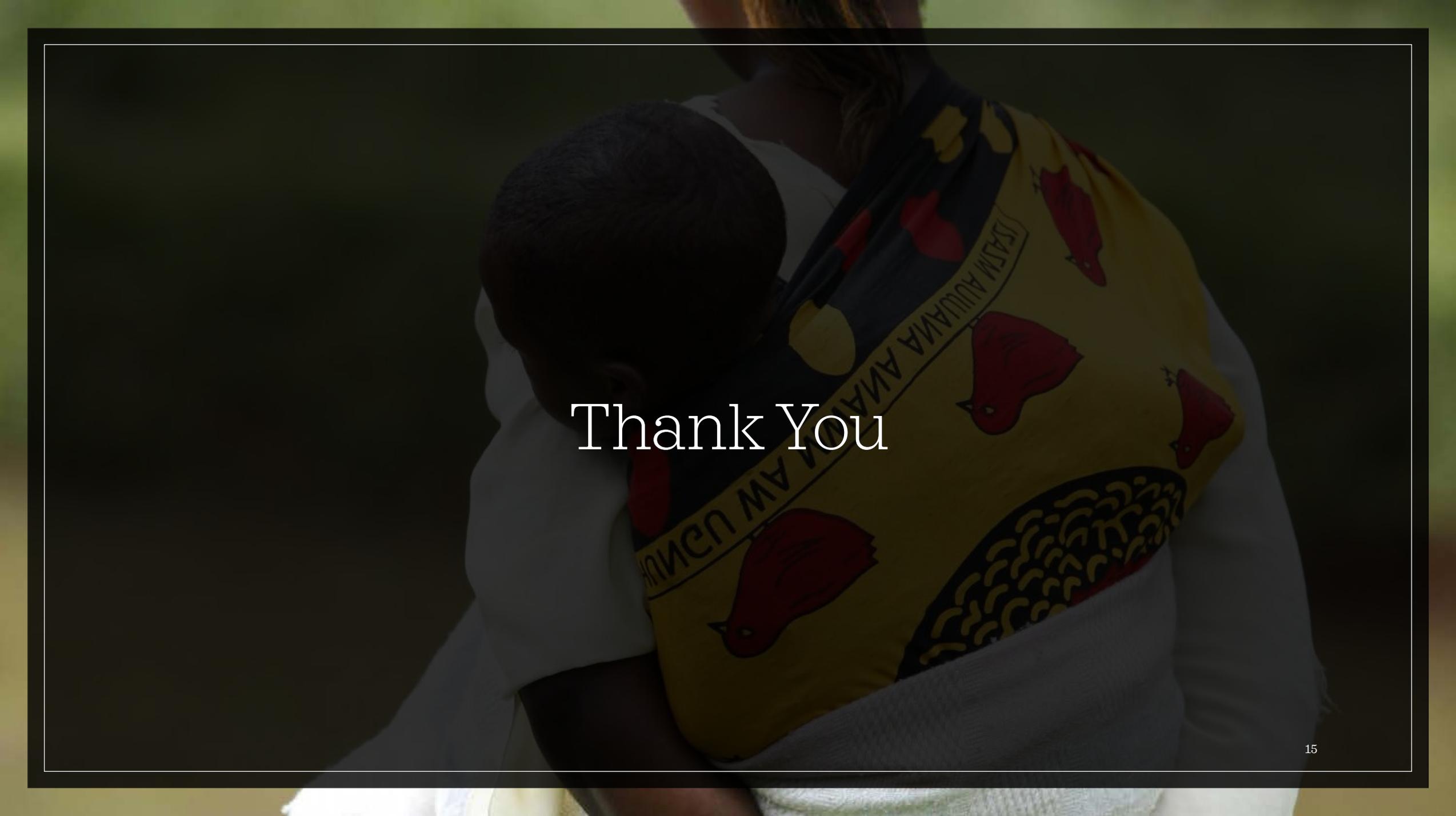


Higher GDP per capita

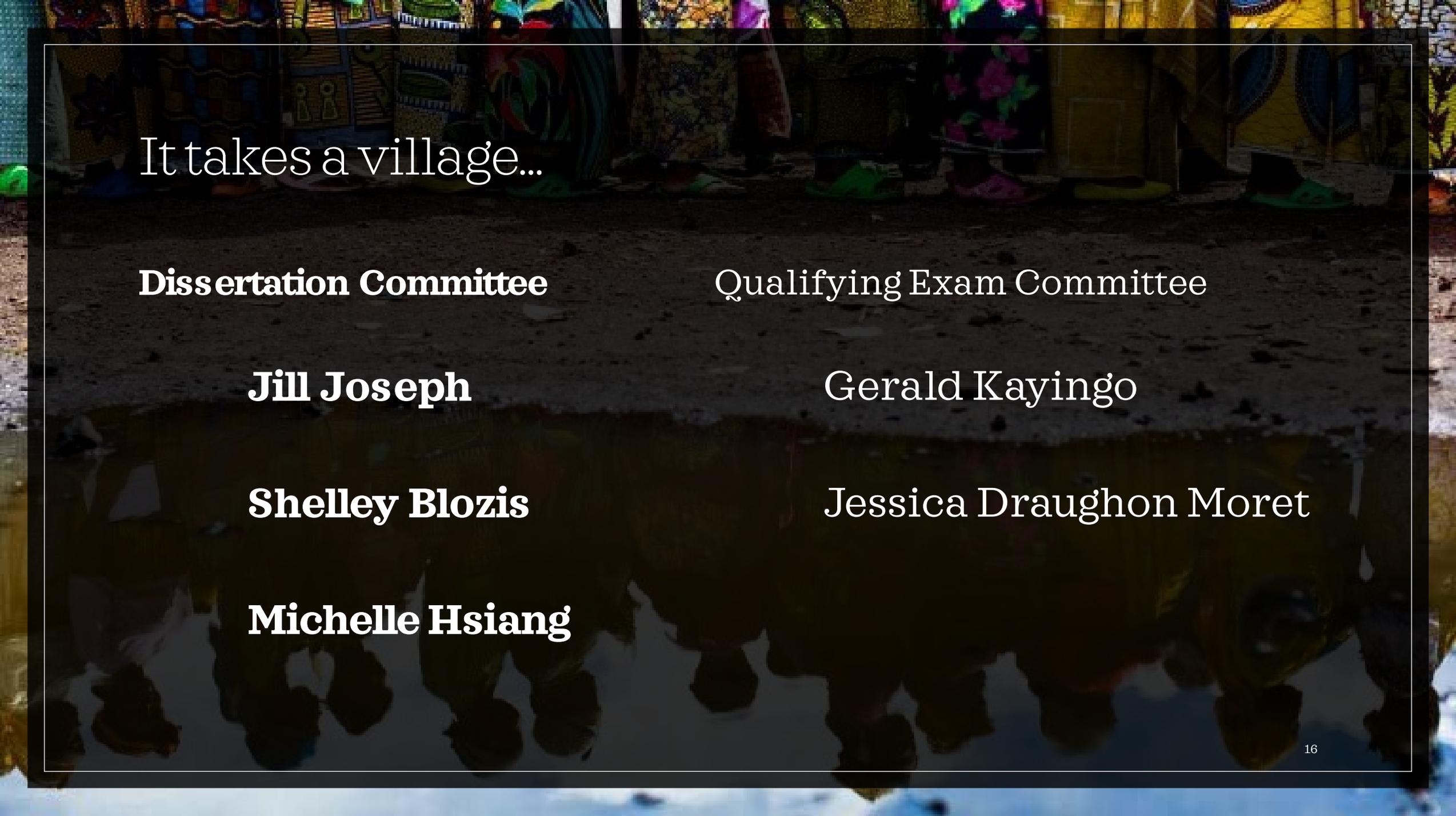
11x the odds

Conclusion

- Armed conflict did not have a significant relationship to malaria chemoprevention
 - Year-level: OR 1.4, 95% CI 0.604-3.486, $p=0.31$
 - Country-level: OR 0.911, 95% CI 0.547-1.517, $p=0.73$
- Individual-level predictors have a significant relationship to the outcome
- Annual GDP per capita (country level variable) had the largest effect on malaria chemoprevention rates

A photograph of a person holding a baby wrapped in a patterned blanket. The blanket features a yellow background with red and black patterns, including a large black and yellow patterned area. The text 'ISASIM AUUUNA ANAANA AW UENUK' is visible on the blanket. The scene is dimly lit, and the text 'Thank You' is overlaid in the center.

Thank You



It takes a village...

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It takes a village...

Segun Adewumi

The Olarewaju & Adewumi Families

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