

## ABSTRACT

**Background:** seasonal malaria chemoprevention (SMC) is a prevention strategy that was implemented in the Upper West region in 2015 targeting children between the ages 3-59 months old during peak malaria transmission period. Children were dosed with Artemisiaquinine (AQ) + Sulfadoxine pyrimethamine (SP) for three days every month for four months period. The objective of this study is to evaluate the impact of SMC on malaria morbidity and mortality among children < 5 old in the Upper West region since its implementation.

**Methods:** secondary data was extracted from NMCP (DHIMS2) to analyze the impact of SMC in the Upper West region using the Northern as a control group. Kernel matching was used to match for common support to evaluate the impact of SMC in the Upper West region in children < 5 years old.

### **Results:**

The coverage of SMC was between 94% to 97% for four years period in the Upper West region. The mean difference for children positive in Upper West and Northern region is -35913.64 at (95% -42155.31 -29671.98). Malaria deaths trends was high (75 deaths) in the Northern region compared to Upper West region. There significant impact of SMC on Children dying due to malaria was reduced to 23.6% in Upper West region, P-value =0.001.

**Conclusion:** the study reveals that SMC intervention has a significant impact in reducing malaria morbidity and mortality in children < 5 years old in the Upper West region of Ghana.