

Project 01: Malaria ITN Cost-Effectiveness (Nigeria)

Analytics • Research • Public Health • Impact Evaluation

Project Overview

Evaluated the cost-effectiveness of ITN distribution across Nigeria's six geopolitical zones, focusing on under-5 children. Combined quantitative and qualitative data from NMIS 2021 to derive actionable insights for malaria-control programs.

Objectives

- Quantify ITN ownership, usage, and behavioural gaps.
- Estimate cost per DALY and per case averted.
- Identify zones with highest cost-effectiveness and barriers to usage.

Tools & Methods

Category	Approach
Data	NMIS 2021 (zone tables), UN WPP 2021 (population), WHO/PMI (cost inputs)
Tools	Excel: metric building & dashboard RStudio: data cleaning & charts
Analysis	Ownership-usage gap model, children protected, cases/DALYs averted, cost ratios
Qualitative	Reasons for non-use coded per zone (NMIS Table 3.8.1)

Key Findings

Indicator	Result	Implication
Average Cost per DALY Averted	≈ \$3098	Highly cost-effective
Average Cost per Case Averted	≈ \$62	Lower relative to treatment cost
Total DALYs Averted	≈ 27,520	Substantial health impact
Most Cost-Effective Zone	North West	High usage & low distribution costs
Average Usage Gap	≈ 17.6%	Behavioural non-use remains significant

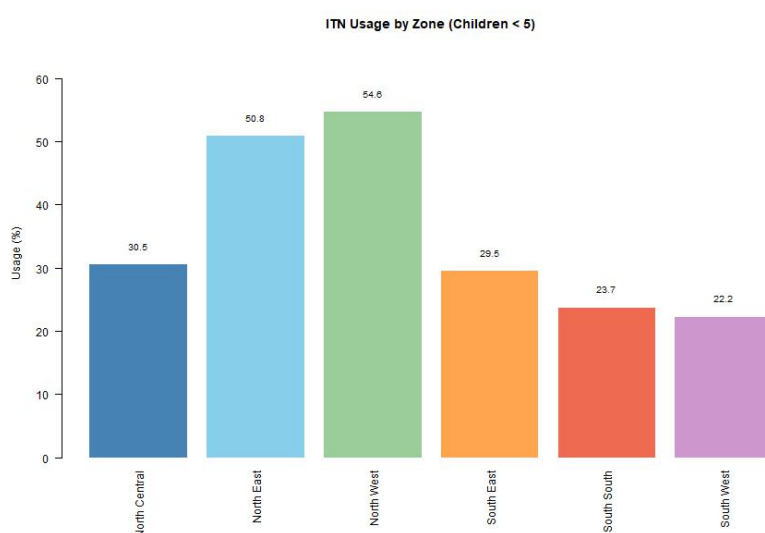


Figure 1: ITN Usage by Zone (Children Under 5)

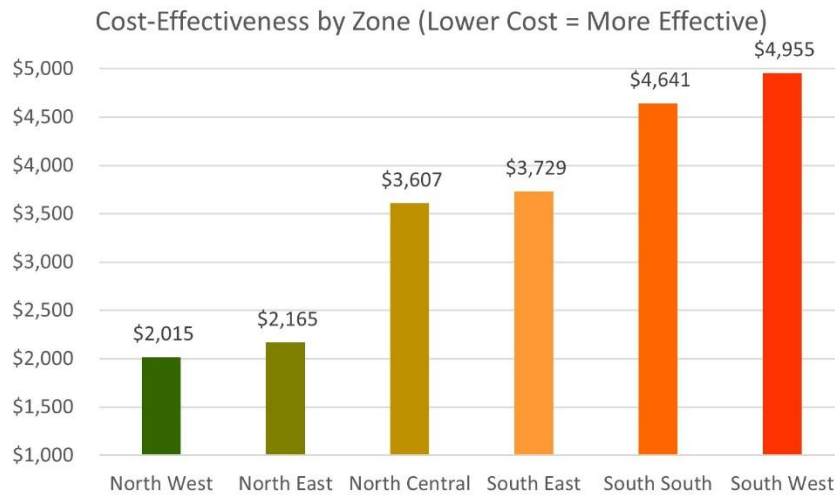


Figure 2: Cost-Effectiveness by Zone

Deliverables

- [Executive Summary](#)
- [Dashboard](#)
- [Full Project Repository \(GitHub\)](#)

Insights & Recommendations

- Maintain ITN coverage; shift focus to behaviour-change communication.
- Target southern zones with comfort & awareness campaigns.
- Replace worn nets to sustain usage rates.
- ITN distribution remains a high-ROI health intervention for Nigeria.

Contact

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