SITUATION

Malaria is endemic to every province in Zambia, with more than 4 million clinically diagnosed cases per year. Nationally, malaria contributes to 3-8% of all infant deaths and up to 20% of maternal deaths. Using insecticide-treated bed nets (ITNs) is an effective malaria prevention measure. Consistently sleeping under an ITN has been shown to decrease child mortality by 17% and the frequency of severe malaria by 45%.

DEMAND-DRIVEN EVALUATION TO INFORM POLICY

In 2014, the government of Zambia planned to distribute ~6 million ITNs nationwide with the goal of covering every sleeping space in Zambia. Previous ITN distributions used community health workers (CHWs) to go door-to-door distributing and hanging every ITN, a burdensome and costly strategy, especially in rural areas.

Prior to distribution, Zambia’s Ministry of Health (MOH) and National Malaria Control Centre (NMCC) commissioned this evaluation to decide if community point distributions could be a viable alternative to door-to-door distributions.

Questions posed by policymakers: Can community point distribution of ITNs achieve similar ITN ownership and use as door-to-door distribution? Does a CHW hanging up ITNs in homes increase ITN retention and use?

EVALUATION DESIGN

Sensitization campaigns and community point distributions were held in three rural communities to measure household attendance. A randomized controlled trial was used to measure how many households hang ITNs on their own over time and to examine if a CHW visit has an impact on ITN retention and use.

To further guide policy decisions, a time-savings model compared human resource needs between door-to-door and community point distributions.

KEY FINDINGS

Community point distribution achieved high retention and use. Hang-up visits did not impact medium-term retention and use.
EVALUATION OVERVIEW

**Intervention:** The intervention had two components:

**Community Point Distribution:** Eligible households sent representatives to collect their allotted ITNs at a central site in the community.

**CHW Hang-up Visits:** Following the community point distribution, CHWs visited households to hang unhung ITNs. Households were randomly allocated into one of five groups to receive these CHW visits at different intervals.\(^a\)

**Intervention Period:** Nov 2013 — May 2014

**Setting and Evaluation Sample:** This evaluation was conducted among 560 households in 3 neighborhoods in rural Rufunsa District, Zambia.

**Data Collection Methods:** Household attendance and ITN distribution were recorded during the community point distribution. CHWs recorded ITN information at the hang-up visit. The evaluation team visited households at two follow-up points\(^b\) to collect data on ITN retention and use.

TAILORING EVALUATION DESIGN

The evaluation design was tailored to answer the policy questions within the decision-makers’ constraints.

The evaluation had a fast turnaround to generate results in time to inform a policy decision. Only three months were available to generate evidence to inform the government’s decisions. The evaluation was designed to generate fast results within that timeframe, with additional follow-up to assess whether the impact lasted beyond the short-term.\(^c\)

The evaluation used a nimble evaluation design to minimize time and cost. A head-to-head comparison of door-to-door and community point distribution strategies would have been too lengthy and expensive. Policy-makers instead identified benchmark retention and usage targets ahead of data collection against which to judge the performance of the new ITN distribution approach.

NOTES:
\(^a\) Group 1: 1-3 days; Group 2: 5-7 days; Group 3: 10-12 days; Group 4: 15-17 days; Group 5 – No CHW visit

\(^b\) Households were visited at 7-11 weeks to assess short-term outcomes and at 5-6 months to assess medium-term outcomes.

\(^c\) A medium-term follow-up was conducted after the government decision had been made.
FINDINGS

Community point distributions reach nearly all households. 96% of the registered households attended the community point distributions, demonstrating that households are willing to travel to community sites to pick up their allotted ITNs.

Delaying hang-up could significantly reduce CHW workload. Self-installation rate of ITNs increased with the number of days between the distribution and the hang-up visit. Delaying the CHW visit by 10 or more days could decrease the number of ITNs that CHWs are required to hang by 70%.

86% of ITNs were retained by households over time. Overall retention of the distributed ITNs was 90% at 7-11 weeks following the distribution and 86% at the 5-6 month follow-up visit. CHW hang-up visits had no detectable impact on retention rates over time.

Households had an average of 74-80% of sleeping spaces covered by an ITN. The percentage of household sleeping spaces covered by an ITN was a proxy for ITN use. At 7-11 weeks after distribution, an average of 74% of sleeping spaces were covered per household. The 5-6 month follow-up found an average of 80% of sleeping spaces covered. These estimates are comparable to recent door-to-door distributions, which found sleeping space coverage of 79% after 8 weeks.

By the 5-6 month follow-up, a CHW hang-up visit had no detectable impact on use. This suggests that households will hang ITNs that they are likely to use on their own and may take down the ones that they are not likely to use.

NOTES:
d. Coverage of sleeping spaces likely increased due to seasonality or the return of children from boarding school.

TIME AND COST-SAVINGS OF A COMMUNITY POINT DISTRIBUTION

Models were constructed to compare time and human resource costs for three scenarios: 1) door-to-door distribution by CHWs, 2) community point distribution with a CHW visit, and 3) community point distribution with no CHW visit.

Community point distributions can save significant personnel time and costs. The community point distribution method with CHW hang-up visits reduced the time required for an ITN distribution by ~25% when compared to a door-to-door distribution method. Furthermore, the community point distribution method without hang-up visits (Group 5 in this evaluation) reduced the time required for an ITN distribution by approximately 59% when compared to the door-to-door distribution method.

Modeled CHW Time Required by Distribution Method

NOTES:
e. Calculations relied on measurements of typical ITN distribution and hang-up operations as found in the evaluation, as well as United Nations Development Programme’s projections of costs associated with conducting door-to-door distributions.
FROM EVIDENCE TO NATIONAL POLICY

In response to the evaluation findings, Zambia’s MOH and NMCC changed national guidelines to allow districts to choose community point distribution instead of door-to-door distribution of ITNs. To support implementation, the evaluation team developed operational plans to assist NMCC and provincial, district, and facility-level staff to conduct community point distributions.

THE 3DE APPROACH  The Demand Driven Evaluations for Decisions (3DE) initiative used impact evaluations in a demand-driven manner to generate evidence for catalyzing at-scale implementation of cost-effective policies. This initiative was funded by the United Kingdom’s Department for International Development (DFID).

Demand Driven  Questions were sourced from the Government of Zambia to ensure that evaluations would directly inform a policy decision. The 3DE team selected questions based on social impact, priority level of key decision-makers, and potential for scale-up.

Rigorous and Tailored  Rigorous impact evaluation methodologies were tailored to the policy context within time, budget, operational and decision-making constraints to generate actionable evidence that could inform a realistic scale-up scenario.

MORE INFORMATION

A full technical report is available at http://idinsight.org/impact/. Contact: Paul Wang, IDinsight (paul.wang@IDinsight.org)

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