

Community engagement and the use of household mapping to target sensitization and improve IRS coverage on Bioko Island

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Since its inception in 2004, the Bioko Island Malaria Control Project (BIMCP) has relied on Island-wide IRS as one of the major malaria vector control strategies. Since 2015, the strategy has focused on targeting high-risk communities for IRS. Communities are selected by stratification based on high prevalence of malaria. However, not only does IRS coverage depends on public acceptance, but it is also highly dependent on the veracity and the accuracy of the data. It is challenging to accurately monitor IRS field operations, refusals in the population, and perform quality control on IRS activities. To reduce these challenges, the BIMCP began using spatial data to improve intervention coverage and collaborating with community leaders to support and strengthen IRS sensitization across the Island. In 2014, the Island was mapped into official government recognized communities and divided into grid sectors. Each household was then enumerated and assigned a unique identifier, which was placed on a sticker on the front door. A Campaign Information Management System (CIMS) was developed to track interventions at the household level on a longitudinal basis. IRS field data were entered directly into the CIMS tablet application and uploaded to a cloud server, enabling multiple household interventions spanning multiple years to be linked by a common unique identifier. Before mapping was introduced, IRS coverages were reportedly very high (above 90%). After mapping was introduced and data entry standardized, IRS coverage dropped to 57% during round 19 in 2014 and subsequently to 41% during round 20 the same year. After the engagement of the Ministry of Interior of Equatorial Guinea, in charge of community leaders, the support provided by these community leaders during mobilization and sensitization activities, increased IRS coverage to 81%, 71% and 82% in 2015, 2016 and 2017 respectively. The use of the CIMS, the mapping of households to systematically track IRS activities and data, led to targeted mobilization and sensitization through community leaders in identified high refusal areas for IRS, resulting in increased coverage.