M&E Strategies for an IRS Program

MosquitoZone International

September 2013

© 2013 MosquitoZone Corporation. All rights reserved.
An Outline of a Successful IRS Program

• Set clear and measurable objectives

• Standardize the approach across all sites

• Continuously build the business case

• Measure, measure, measure!
Standard Methods of Measuring IRS Success

• Most measurements are outcome measurements, e.g.
  • Number of illnesses/deaths prevented
  • Reduction in anemia

• Key measurements also include process indicators
  • Intervention processes
    • IRS, RDT, ACT coverage
  • Biological markers
    • Malaria prevalence, malaria case load, vector population
  • Economic Benefit
Key M&E Indicators for an IRS Program

• Number/Percentage of structures sprayed
  • Number of insecticide sachets used
  • Number of people trained in IRS
  • Number of IRS commodities (hand-cans …)

• Number of people residing in structures sprayed
  • Total
  • Children < 5 years and pregnant women

• Cost per person protected by IRS
Entomological Surveillance as a Means of Evaluating an IRS Program

- Thinking of malaria as a mosquito transmitted disease
  - Measuring reduction in the vector population is a leading indicator
  - Early warning of a failing program
    - Monthly data requirement (or more often)
    - Consistent techniques
    - Requires good data tracking
Before Spraying – vector information

• Identify the vector species
  • Key characteristics (feeding and resting behavior)

• Estimating population size
  • Landing counts
  • Window traps
  • Light traps
  • Baited traps (CO2, octenol, human lure…)
Before Spraying – data management

• How will data be collected and stored
  • Defining the data to be collected and how it will be collected
    • Related to the M&E indicators
  • Defining data flow
    • How does the data get recorded in the field
    • Data integrity (manual and database driven)
    • Report content and format
    • Review process
Monitoring and Evaluating an IRS Program – moderate to high malaria

Characteristics:

• Low expenditure per capita and poor access to medical care

• Health data are often aggregated at a district level (low resolution)

• IRS impact on transmission e.g., reduction in infective mosquito bites may be unknown

*** Focus on reduction in mortality and morbidity
Monitoring and Evaluating an IRS Program – *low* transmission zone

**Characteristics:**

- Increased access to medical care and diagnostic tests
- Malaria transmission often localized in an area of the district, often in poor and marginalized populations
- Data collection that allows identification of geographic and seasonal risks

***Focus on hotspots, rapid response, entomological vigilance (resistance, change), and tracking cases back to geographical areas.***
Monitoring and Evaluating an IRS Program – elimination phase

Characteristics:

• Accurate diagnosis and effective treatment is normal and expected

• Clear distinction between imported and locally acquired cases

***Focus on maintaining support for IRS in the face of success, and root cause investigations of every case.
WHO Certified Malaria Free

Data intensive

• Robust surveillance system in place
• Identification of country hot-spots
  • Areas where transmission last noted
  • Areas susceptible to imported disease
• Trained staff that can carry out case investigations
  • Distinction between imported and locally acquired cases
  • Focus investigations that identify risk factors
Summary: The Take-Home Messages

• Define clear objectives
  • Depends upon the stage of the project – each stage expands the number of goals

• Commit to Robust Surveillance as Standard Operating Procedure
  • Document success and use data to improve on existing strategies
  • Keep robust records – use a dedicated database
  • Must include case data e.g., reduction in number of missed work days, treatment costs…

• Start with the business case and keep building it
Private – Public Opportunities

• Shared resources/expertise
  • Expansion of control beyond the camp fence

• Recognizing malaria is a regional problem

• Regional fund-raising

• Standardized malaria control measures and resourcing across the country

• Coordinated and standardized monitoring, evaluation and planning