ITN Durability Monitoring Overview

February 4th, 2016
ITN Durability Monitoring

• WHOPES guidelines published in 2011
• PMI supported monitoring in 8 countries beginning in 2008/2009
  – Currently conducting a pooled analysis based on existing data
• PMI contracted VectorWorks to develop a toolkit for ITN durability monitoring under PMI, incorporating lessons learned
Why

• Net durability has been studied using a variety of study designs
• Operationalize the WHO guidelines
  – Important to standardize an approach for cross-comparability, simplicity, and common understanding and interpretation of results
• Durability monitoring allows PMI and others to identify places and/or products that perform under expectations
  – NOT for selecting specific nets
Toolkit Contents

1. Introduction and Methods
   – FAQ on how to carry out durability monitoring
   – Durability Monitoring timeline

2. Data Collection Instruments
   – Template protocol
   – Survey questionnaire
   – Consent and recruitment scripts, household selection, etc.

3. Field worker Training Materials

4. Data Cleaning and Analysis

5. Report Templates
Data to be collected

- Number and brands of nets examined, by years in the field
- Number of nets not found, percent survivorship or attrition, disaggregated by reason for loss
- Years (or months) since distribution
- Size and number of holes (by WHO hole size category), and location if laboratory analysis is performed
- Data on household use, care and repair attitudes and behavior, and socio-economic status
Outcome measures

- Total estimated area of damage and pH1 for each individual net
- Proportion of surviving nets in “serviceable” condition as defined in WHO/MPAC guidance
- Estimated survival at each time point combining attrition and integrity as defined in MPAC guidance
- Graph of survival estimates against hypothetical survival curves using the tool provided by RBM VCWG LLIN durability workstream
- Estimation of median LLIN survival if more than two data points with survival <85% are available
KEY DESIGN DECISIONS
Sampling Approach

- Prospective, longitudinal approach
- Use 15 clusters per site, 10 households per cluster.
- Assess all of the campaign nets within the household.
- Tagging occurs at the first visit (not before distribution)
Follow-up Periodicity

- Establish the cohort ideally within 3 months post-distribution, and no longer than 6 months.

- Annual follow-ups at 12, 24, and 36 months after the nets were distributed.
Next Steps

• Coordination of support to countries carrying out ITN durability monitoring.
• Further development of durabilitymonitoring.org toolkit (analysis, etc)
• Build community of durability monitoring implementers for support and problem-solving.
TOUR OF
WWW.DURABILITYMONITORING.ORG
The President’s Malaria Initiative (PMI) has established this website as a repository for tools and datasets from long-lasting insecticidal net (LLIN) durability monitoring activities, conducted primarily under PMI-funded mechanisms. Resources available on this website include study protocols for durability monitoring, questionnaires, consent forms, training materials, data entry screens, and tools for data cleaning, preparation, and analysis. This site will also provide brief reports combining LLIN durability data from multiple interventions, for informed PMI programming. To access the content on this site you will need to become a registered user. To register or login, click the Login button at the top of the screen or click here.

**Monitoring Sites**
See where PMI is conducting durability monitoring. Learn More>>

**Tools**
All the tools needed to plan, conduct, analyze and report on durability monitoring. Learn More>>

**Results**
Reports and more. Learn More>>
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[Website Screenshot]
LLIN DURABILITY MONITORING

Tools

LLIN Durability Monitoring Package

The President’s Malaria Initiative (PMI) Long-Lasting Insecticidal Net (LLIN) Durability Monitoring Package comprises two parts. Part 1 includes materials and tools related to study design, study implementation and data collection, up through the data entry stage. Part 2 includes materials and tools for data cleaning, preparation, analysis, and interpretation, including reporting.

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Before you can access the tools and resources on this site, you must register as a LLIN Durability Monitoring User. If you wish to access the information on this site, sign-up for a new account below. If you are a registered user, please sign in below.

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Log In

Click here to update your profile.

Your display name will appear here.

ACCOUNT INFO

Username

E-mail

Password

Hide from Public

Password must be at least 7 characters long. To make it stronger, use upper and lower case letters, numbers and symbols.

Confirm Password

Type your password again.
Tools

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Part 1: Introduction and Data Collection

Last updated: October 22, 2015

Type of Update: Limited: removal of minor tracked edits from three documents.

Complete DM Package Oct 22 2015 (32 MB)

Individual files (file sizes are listed if greater than 1 MB):

1. Introduction and Methods
   - 1a. Package Table of Contents Contents
   - 1b. PMI LLIN durability monitoring guidelines
      - Overarching technical guidance, including basic approach, costs, and outcome measures
   - 1c. DM Background and FAQ
      - Detailed description of processes and justification/rationales. (Some sections still being written).
   - 1d. Budget Templates, 1d. Budget Notes
      - Adjusted per number of study sites
   - 1e. DM Timeline
LLIN DURABILITY MONITORING

1. Adjusted per number of study sites
   1a. DM Timeline

2. Data Collection Instruments
   2a. Template Durability Monitoring Protocol
   2b. Baseline Survey Questionnaire
   2c. Sample Oral Consent Script for Participants
   2d. Sample Recruitment Script for Local Authorities and Chiefs
   2e. Sample durability monitoring Data Entry Screen (EpiData)

3. Household Selection Tools
   3.1. Household Sampling Instructions
   3.2. Random Number List for Selecting Sections within Clusters
   3.3. Random Number List for Household Selection 15x10
   3.4. Form – Household Listing and Selection
   3.5. Example final sampled settlements

4. Sample Durability Monitoring Supervisor Cluster Monitoring Sheet

5. DM Sample Size Calculator

6. Fieldworker Training Materials
   6.1. Sample Training Workshop Agenda

7. Training Presentations (PowerPoint) and Materials
   7.1. Background on Durability Monitoring (4MB)
   7.2. Monitoring Design
   7.3. Household Selection for Baseline
   7.4. Overview of Questionnaire
   7.5. LLIN Hole Assessment Facilitators Guide (3MB)
   7.6. LLIN Hole Assessment Slides (8MB)
   7.7. Test – Hole Counting Exercise
   7.8. Guidelines for Conducting Interviews
   7.9. Roles and Responsibilities

8. Visual Aids
   8.1. Two-page Field Tool for Tallying and Hole Size
   8.2. Visual Aid for LLIN Brands and Tags (2MB)
   8.3. Visual Aid for Types of Holes (4MB)

9. Post Test and Selection of Fieldworkers
   9.1. Post-Test
   9.2. Post-Test Answer Key
### Monitoring Sites

PMI monitors LLIN durability in many of its focus countries. Completed, current, and upcoming monitoring activities are listed below, and will be updated as new information become available. If you are aware of information we are missing, please contact us.

<table>
<thead>
<tr>
<th>Country</th>
<th>Product</th>
<th>Monitoring Areas</th>
<th>Publications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mozambique</td>
<td>MAGNet &amp; Royal Sentry</td>
<td>Inhambane - Tete - Nampula</td>
<td>Killian A Koenker H Obi E Selby RA Fotheringham M Lynch M. Field durability of the same type of long-lasting insecticidal net varies between regions in Nigeria due to differences in household behaviour and living conditions Malar J. 2015 Mar 24;14:123</td>
</tr>
<tr>
<td>Nigeria</td>
<td>DaawaPlus 2.0 (Zamfara &amp; Ebonyi), Oyo TBD</td>
<td>Zamfara - Ebonyi - Oyo</td>
<td></td>
</tr>
<tr>
<td>Burma</td>
<td>DaawaPlus 2.0</td>
<td>TBD</td>
<td></td>
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<tr>
<td>Madagascar</td>
<td>PermaNet 2.0</td>
<td>TBD</td>
<td></td>
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<tr>
<td>Zimbabwe</td>
<td>DaawaPlus 2.0 and DuraNet</td>
<td>13 malaria endemic districts in Mashonaland Central and West Provinces</td>
<td></td>
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<tr>
<td>Malawi</td>
<td>Yorkool, Royal Sentry</td>
<td>Nkhotakota - Lilongwe - Mchinji</td>
<td></td>
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<tr>
<td>Nigeria</td>
<td>100 denier polyester (PermaNet 2.0) in Zamfara and Nasarawa, and DaawaPlus 2.0 in Cross River</td>
<td>Zamfara - Nasarawa - Cross River</td>
<td></td>
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