Durability Monitoring of LLIN in [Country]

Final Report after 36 Months Follow-up

[Month Year]

*Logos*

# Abstract

The abstract is a summary of the final report and should provide a brief summary of the fundamentals of the research design, key results, and the key points to consider in the conclusion. It is recommended to divide the abstract into the following sections:

Background

Methods

Results

Conclusion

# Table of Contents

[1 Abstract 2](#_Toc2679588)

[2 Table of Contents 3](#_Toc2679589)

[3 Acknowledgements 4](#_Toc2679590)

[4 Background 5](#_Toc2679591)

[5 Methods 5](#_Toc2679592)

[5.1 Sites 5](#_Toc2679593)

[5.2 Brands monitored 6](#_Toc2679594)

[5.2.1 Preshipment testing 6](#_Toc2679595)

[5.3 Design summary 6](#_Toc2679596)

[5.4 Field work 7](#_Toc2679597)

[5.5 Data management 7](#_Toc2679598)

[5.6 Analysis 7](#_Toc2679599)

[5.7 Ethical Clearance 7](#_Toc2679600)

[6 Results 8](#_Toc2679601)

[6.1 Sample 8](#_Toc2679602)

[6.2 Socio-Demographic Characteristics 8](#_Toc2679603)

[6.3 Determinants of Durability 8](#_Toc2679604)

[6.4 Net Use and Ownership 12](#_Toc2679605)

[6.5 Durability of Campaign LLINs 14](#_Toc2679606)

[6.6 Insecticidal effectiveness of campaign nets 20](#_Toc2679607)

[7 Summary and Conclusion 25](#_Toc2679608)

[8 References 25](#_Toc2679609)

# Acknowledgements

Partners, funding mechanism, NMCP/MOH, technical assistance, etc.

# Background

* ~ 1 page
* Why is durability monitoring important/necessary in the context of the country
* Include information on past LLIN campaigns (start with first campaign and work toward the most recent campaign) – a few sentences on when they occurred, targeted population (U5s vs. universal coverage), geographic scope (national vs. subnational)
* Latest coverage/use estimates – one sentence (data from DHS or MIS if possible)
* Details on latest campaign (for the cohort being monitored): when it occurred (month/year), # of nets distributed, nationwide vs. subnational, etc.
* Any previous durability monitoring or operational research that occurred in this country: Use citations if available.

# Methods

## Sites

* Province/district/village for each site: Please provide the rationale for site selection including any differences in behavior, climate, previous durability monitoring, or type of ITN that influenced site selection.
* Description: rural/urban, endemicity, net use (if known), other factors (for each site).
* Please introduce table 1 at this point with a sentence
* Share the LLIN distribution dates at each of the sites

**Table 1:** Socio-demographic and malaria situation in the study areas (*year*); HH=household

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Province** | **% of HH\* with electricity** | **% of HH with access to safe water** | **% of population in lowest SES quintile** | **% of children 6-59m blood slide positive for malaria** | **% of febrile children under 5 treated with an antimalarial** | **% of HH with at least one LLIN** | **% of HH population who slept under an LLIN the night before** |
| *Site 1* | % | % | % | % | % | % |  |
| *Site 2* | % | % | % | % | % | % |  |
| *Site 3* | % | % | % | % | % | % |  |

Figure 1: Site map with GPS points (clusters)



## Brands monitored

* What brand of net was monitored (at what site)
* Please provide the technical specifications of the ITN (material, textile specifics, insecticide with concentration)
* Please indicate WHOPES status of ITNs being monitored (interim of full recommendation and when it was achieved [see WHOPES reports on WHO web-site])

### Preshipment testing

* Please introduce the concept of Preshipment testing, including what parameters are tested and who mandates preshipment testing
* Indicate results of pre-shipment bioassays; obtain from procurement partner (if not available state so).

## Design summary

Please address all of the following:

* What type of study is being conducted (here prospective, longitudinal)
* Please indicate study timeline, the sample size and power of the study, sampling methods (each component should be at least one sentence). [you can find this in the proposal or the docs on the “www.durabilitymonitoring.org” web-site]
* Note any differences between this study’s methodology and the PMI guidelines and state why the decision was taken to deviate from the guideline.
* Discuss how initial community mobilization and sensitization were conducted
* How were nets marked for follow-up?
* How are nets for bioassay or chemical residue analysis identified?
* How are insecticidal and physical integrity assessed in this study?
* Please indicate when the previous surveys took place

## Field work

The field work section should discuss all of the following:

* Team composition
* Criteria used to select supervisors and data collectors
* Training (include training components, dates of training and participants);
* Supervision (composition and methods)
* Community mobilization procedures
* Challenges encountered in this round of field work or changes that were implemented in this round of field work to address problems identified in previous rounds of field work

## Data management

* What devices/tools are used to collect data? Electronic or paper-based?
* What data was collected?
* How was data collected and transferred?
* What was the process for verifying data, and how were inconsistencies addressed?

## Analysis

• How was data transferred for analysis, and what software/version was used for analysis?

• What tests/analytical methods were used to analyze the data?

• Explain the various analysis sections like

- Likert score analysis

- Net integrity and proportionate Hole Index

- Outcome definitions for bio-assay (optimal and minimal effectiveness)

## Ethical Clearance

Please indicate IRB approval from all boards who reviewed the protocol, providing reference numbers

# Results

## Sample

Figure 2: Cumulative Follow-up status after 36 months of households recruited at baseline



## Socio-Demographic Characteristics

Figure 2a: Educational Status of heads of household by gender and site

Figure 2b: Economic resources of households by site at 36 months survey

## Determinants of Durability

**Table 2:** Household risk factors

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Variable and site** | **Baseline** | **12 months** | **24 months** | **36 months** |
| **Site 1** | N=XXX | N=XXX | N=XXX | N=XXX |
| Ever store food in sleeping room | % | % | % | % |
| Cook in sleeping room  never  sometimes  always | %  %  % | %  %  % | %  %  % | %  %  % |
| Rodents observed (last 6 m) | % | % | % | % |
| **Site 2** | N=XXX | N=XXX | N=XXX | N=XXX |
| Ever store food in sleeping room | % | % | % | % |
| Cook in sleeping room  never  sometimes  always | %  %  % | %  %  % | %  %  % | %  %  % |
| Rodents observed (last 6 m) | % | % | % | % |
| **Site 3** | N=XXX | N=XXX | N=XXX | N=XXX |
| Ever store food in sleeping room | % | % | % | % |
| Cook in sleeping room  never  sometimes  always | %  %  % | %  %  % | %  %  % | %  %  % |
| Rodents observed (last 6 m) | % | % | % | % |

Figure 3: Main type of sleeping place for campaign nets if used



**Table 3:** Handling of campaign LLINs (IQR=Inter-Quartile-Range)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Variable and site** | **Baseline** | **12 months** | **24 months** | **36 months** |
| **Site 1** |  |  |  |  |
| Hanging nets NOT folded or tied | % | % | % | % |
| Net dried on fence or bush | % | % | % | % |
| Net ever washed | % | % | % | % |
| Median washed last 6 m (IQR) | ( ) | ( ) | ( ) | ( ) |
| Used detergent/bleach for wash | % | % | % | % |
| **Site 2** |  |  |  |  |
| Hanging nets NOT folded or tied | % | % | % | % |
| Net dried on fence or bush | % | % | % | % |
| Net ever washed | % | % | % | % |
| Median washed last 6 m (IQR) | ( ) | ( ) | ( ) | ( ) |
| Used detergent/bleach for wash | % | % | % | % |
| **Site 3** |  |  |  |  |
| Hanging nets NOT folded or tied | % | % | % | % |
| Net dried on fence or bush | % | % | % | % |
| Net ever washed | % | % | % | % |
| Median washed last 6 m (IQR) | ( ) | ( ) | ( ) | ( ) |
| Used detergent/bleach for wash | % | % | % | % |

**Table 4:** Exposure to LLIN messaging on nets in the last six months

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Variable and site** | **Baseline** | **12 months** | **24 months** | **36 months** |
| **Site 1** |  |  |  |  |
| Any exposure last 6 m | % | % | % | % |
| Mean info sources (if exposed) |  |  |  |  |
| Type of media  media only  both  IPC only | %  %  % | %  %  % | %  %  % | %  %  % |
| **Site 2** |  |  |  |  |
| Any exposure last 6 m | % | % | % | % |
| Mean info sources (if exposed) |  |  |  |  |
| Type of media  media only  both  IPC only | %  %  % | %  %  % | %  %  % | %  %  % |
| **Site 3** |  |  |  |  |
| Any exposure last 6 m | % | % | % | % |
| Mean info sources (if exposed) |  |  |  |  |
| Type of media  media only  both  IPC only | %  %  % | %  %  % | %  %  % | %  %  % |

**Table 5:** Recall of messages and attitude towards net care & repair (based on all surveyed households)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Variable and site** | **Baseline** | **12 months** | **24 months** | **36 months** |
| ***Site 1*** |  |  |  |  |
| Recalled “use net (every) night” | % | % | % | % |
| Recalled “nets prevent malaria” | % | % | % | % |
| Recalled “care for net” | % | % | % | % |
| Recalled “repair net” | % | % | % | % |
| Attitude score care and repair  mean (95% CI)  % with score > 1.0 | ( )  % | ( )  % | ( )  % | ( )  % |
| ***Site 2*** |  |  |  |  |
| Recalled “use net (every) night” | % | % | % | % |
| Recalled “nets prevent malaria” | % | % | % | % |
| Recalled “care for net” | % | % | % | % |
| Recalled “repair net” | % | % | % | % |
| Attitude score care and repair  mean (95% CI)  % with score > 1.0 | ( )  % | ( )  % | ( )  % | ( )  % |
| ***Site 3*** |  |  |  |  |
| Recalled “use net (every) night” | % | % | % | % |
| Recalled “nets prevent malaria” | % | % | % | % |
| Recalled “care for net” | % | % | % | % |
| Recalled “repair net” | % | % | % | % |
| Attitude score care and repair  mean (95% CI)  % with score > 1.0 | ( )  % | ( )  % | ( )  % | ( )  % |

**Table 6:** Household experience with care and repair of any nets and actual repairs made in damaged campaign nets (n.a. =not applicable due to small sample size)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Variable and site** | **Baseline** | **12 months** | **24 months** | **36 months** |
| ***Site 1*** |  |  |  |  |
| Ever experienced holes in net | % | % | % | % |
| Ever discussed care and repair | % | % | % | % |
| Ever repaired (if had holes) | % | % | % | % |
| Damaged campaign nets repaired | n.a. | % | % | % |
| ***Site 2*** |  |  |  |  |
| Ever experienced holes in net | % | % | % | % |
| Ever discussed care and repair | % | % | % | % |
| Ever repaired (if had holes) | % | % | % | % |
| Damaged campaign nets repaired | n.a. | % | % | % |
| ***Site 3*** |  |  |  |  |
| Ever experienced holes in net | % | % | % | % |
| Ever discussed care and repair | % | % | % | % |
| Ever repaired (if had holes) | % | % | % | % |
| Damaged campaign nets repaired | n.a. | % | % | % |

## Net Use and Ownership

**Table 7:** Hanging and use of campaign nets from cohort

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Variable** | **Baseline** | **12 months** | **24 months** | **36 months** |
| ***Site 1*** |  |  |  |  |
| Hanging | % | % | % | % |
| Taken down or stored | % | % | % | % |
| Still in package | % | % | % | % |
| Used last night | % | % | % | % |
| Used every night (last week) | % | % | % | % |
| ***Site 2*** |  |  |  |  |
| Hanging | % | % | % | % |
| Taken down or stored | % | % | % | % |
| Still in package | % | % | % | % |
| Used last night | % | % | % | % |
| Used every night (last week) | % | % | % | % |
| ***Site 3*** |  |  |  |  |
| Hanging | % | % | % | % |
| Taken down or stored | % | % | % | % |
| Still in package | % | % | % | % |
| Used last night | % | % | % | % |
| Used every night (last week) | % | % | % | % |

**Table 8:** Hanging and use of non-cohort nets

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Variable** | **Baseline** | **12 months** | **24 months** | **36 months** |
| ***Site 1*** | N=XX | N=XX | N=XX | N=XX |
| Hanging | % | % | % | % |
| Taken down or stored | % | % | % | % |
| Still in package | % | % | % | % |
| Used last night | % | % | % | % |
| Used every night (last week) | % | % | % | % |
| ***Site 2*** | N=XXX | N=XXX | N=XXX | N=XXX |
| Hanging | % | % | % | % |
| Taken down or stored | % | % | % | % |
| Still in package | % | % | % | % |
| Used last night | % | % | % | % |
| Used every night (last week) | % | % | % | % |
| ***Site 3*** | N=XXX | N=XXX | N=XXX | N=XXX |
| Hanging | % | % | % | % |
| Taken down or stored | % | % | % | % |
| Still in package | % | % | % | % |
| Used last night | % | % | % | % |
| Used every night (last week) | % | % | % | % |

**Table 9:** Ownership of non-campaign nets and where households obtained them

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Variable** | **Baseline** | **12 months** | **24 months** | **36 months** |
| ***Site 1*** |  |  |  |  |
| Household has any other nets | % | % | % | % |
| Source public sector | % | % | % | % |
| Source other campaign\* | % | % | % | % |
| Source private sector | % | % | % | % |
| Source family or friends | % | % | % | % |
| ***Site 2*** |  |  |  |  |
| Household has any other nets | % | % | % | % |
| Source public sector | % | % | % | % |
| Source other campaign\* | % | % | % | % |
| Source private sector | % | % | % | % |
| Source family or friends | % | % | % | % |
| ***Site 3*** |  |  |  |  |
| Household has any other nets | % | % | % | % |
| Source public sector | % | % | % | % |
| Source other campaign\* | % | % | % | % |
| Source private sector | % | % | % | % |
| Source family or friends | % | % | % | % |

\*Previous or subsequent to cohort campaign

**Figure 3a:** Proportion of non-cohort nets among all owned nets in surveyed households

**Table 10:** Net users of campaign cohort nets

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Variable** | **Baseline** | **12 months** | **24 months** | **36 months** |
| ***Site 1*** |  |  |  |  |
| Children only\* | % | % | % | % |
| Children + adults\*\* | % | % | % | % |
| Adults only\*\* | % | % | % | % |
| ***Site 2*** |  |  |  |  |
| Children only\* | % | % | % | % |
| Children + adults\*\* | % | % | % | % |
| Adults only\*\* | % | % | % | % |
| ***Site 3*** |  |  |  |  |
| Children only\* | % | % | % | % |
| Children + adults\*\* | % | % | % | % |
| Adults only\*\* | % | % | % | % |

\* Age 0-9 years; \*\* includes adolescents 10-19

**Table 11:** Net users of non-cohort nets (n.a.=not applicable)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Variable** | **Baseline** | **12 months** | **24 months** | **36 months** |
| ***Site 1*** | N=XXX | N=XXX | N=XXX | N=XXX |
| Children only\* | % | % | % | % |
| Children + adults\*\* | % | % | % | % |
| Adults only\*\* | % | % | % | % |
| ***Site 2*** | N=XXX | N=XXX | N=XXX | N=XXX |
| Children only\* | % | % | % | % |
| Children + adults\*\* | % | % | % | % |
| Adults only\*\* | % | % | % | % |
| ***Site 3*** | N=XXX | N=XXX | N=XXX | N=XXX |
| Children only\* | % | % | % | % |
| Children + adults\*\* | % | % | % | % |
| Adults only\*\* | % | % | % | % |

\* Age 0-9 years; \*\* includes adolescents 10-19

## Durability of Campaign LLINs

Figure 4: Status of cohort nets recruited at baseline [Site 1]



Figure 5: Status of cohort nets recruited at baseline in [Site 2]



Figure 6: Status of cohort nets recruited at baseline in [Site 3]



**Table 12:** Attrition (including LLINs lost between campaign and baseline but excluding LLINs for which a definite outcome is not known)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Variable** | **Campaign – baseline** | **Campaign –**  **12 months** | **Campaign –**  **24 months** | **Campaign –**  **36 months** |
| ***Site 1*** | N=XXX | N=XXX | N=XXX | N=XXX |
| Given away | % | % | % | % |
| Discarded (wear & tear) | % | % | % | % |
| Unknown | % | % | % | % |
| **Total** | **%** | **%** | **%** | **%** |
| ***Site 2*** | N=XXX | N=XXX | N=XXX | N=XXX |
| Given away | % | % | % | % |
| Discarded (wear & tear) | % | % | % | % |
| Unknown | % | % | % | % |
| **Total** | **%** | **%** | **%** | **%** |
| ***Site 3*** | N=XXX | N=XXX | N=XXX | N=XXX |
| Given away | % | % | % | % |
| Discarded (wear & tear) | % | % | % | % |
| Unknown | % | % | % | % |
| **Total** | **%** | **%** | **%** | **%** |

Figure 7: Trends in all cause attrition and wear and treat (discarded LLINs) as a function of time since distribution

Figure 8: Type of damage mechanisms reported for damaged campaign nets (multiple responses possible)



**Table 13:** Physical condition (integrity) of surviving cohort nets (pHI=proportionate Hole Index)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Variable** | **Baseline** | **12 months** | **24 months** | **36 months** |
| ***Site 1*** | N=XXX | N=XXX | N=XXX | N=XXX |
| Any holes | % | % | % | % |
| Median pHI (if any hole) |  |  |  |  |
| Good (pHI<64) | % | % | % | % |
| Too torn (pHI>642) | % | % | % | % |
| **Serviceable (pHI≤642)** | **%** | **%** | **%** | **%** |
| ***Site 2*** | N=XXX | N=XXX | N=XXX | N=XXX |
| Any holes | % | % | % | % |
| Median pHI (if any hole) |  |  |  |  |
| Good (pHI<64) | % | % | % | % |
| Too torn (pHI>642) | % | % | % | % |
| **Serviceable (pHI≤642)** | **%** | **%** | **%** | **%** |
| ***Site 3*** | N=XXX | N=XXX | N=XXX | N=XXX |
| Any holes | % | % | % | % |
| Median pHI (if any hole) |  |  |  |  |
| Good (pHI<64) | % | % | % | % |
| Too torn (pHI>642) | % | % | % | % |
| **Serviceable (pHI≤642)** | **%** | **%** | **%** | **%** |

**Table 14:** Nets surviving in serviceable condition (including nets discarded before baseline)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Variable** | **Baseline** | **12 months** | **24 months** | **36 months** |
| ***Site 1*** | N=XXX | N=XXX | N=XXX | N=XXX |
| Survival estimate | % | % | % | % |
| 95% CI | – | – | – | – |
| Only nets ever used | N=XXX | N=XXX | N=XXX | N=XXX |
| Survival estimate | % | % | % | % |
| 95% CI | – | – | – | – |
| ***Site 2*** | N=XXX | N=XXX | N=XXX | N=XXX |
| Survival estimate | % | % | % | % |
| 95% CI | – | – | – | – |
| Only nets ever used | N=XXX | N=XXX | N=XXX | N=XXX |
| Survival estimate | % | % | % | % |
| 95% CI | – | – | – | – |
| ***Site 3*** | N=XXX | N=XXX | N=XXX | N=XXX |
| Survival estimate | % | % | % | % |
| 95% CI | – | – | – | – |
| Only nets ever used | N=XXX | N=XXX | N=XXX | N=XXX |
| Survival estimate | % | % | % | % |
| 95% CI | – | – | – | – |

Figure 9: Estimated LLIN survival in serviceable condition with 95% confidence intervals (error bars) plotted against hypothetical survival curves with defined median survival.



**Table 14a:** Estimated median survival of LLIN in years using different methods

|  |  |  |  |
| --- | --- | --- | --- |
| **Variable** | **12 months** | **24 months** | **36 months** |
| ***Site 1*** |  |  |  |
| Estimated from Figure 91 | -.- | -.- | **-.-** |
| Calculated from last two data points (95% CI) | -.- | -.- | **-.-** |
| ***Site 2*** |  |  |  |
| Estimated from Figure 9 | -.- | -.- | **-.-** |
| Calculated from last two data points (95% CI) | -.- | -.- | **-.-** |
| ***Site 3*** |  |  |  |
| Estimated from Figure 9 | -.- | -.- | **-.-** |
| Calculated from last two data points (95% CI) | -.- | -.- | **-.-** |

## Insecticidal effectiveness of campaign nets

Figure 10: Results from WHO cone bio-assays: the box plot shows the median (horizontal line), Inter-Quartile-Range (box), adjacent values[[1]](#footnote-2) (whiskers) and outliers (circles)



**Table 15:** Results from bio-assays

|  |  |  |  |
| --- | --- | --- | --- |
| **Variable** | **12 months** | **24 months** | **36 months** |
| ***Site 1*** | N=XX | N=XX | N=XX |
| Knock down 60 minutes  Mean (95% CI)  Median (IQR) | % ( )  % ( ) | % ( )  % ( ) | % ( )  % ( ) |
| Mortality 24 hours  Mean (95% CI)  Median (IQR) | % ( )  % ( ) | % ( )  % ( ) | % ( )  % ( ) |
| Optimal effectiveness  Estimate (95% CI) | % ( ) | % ( ) | % ( ) |
| Minimal effectiveness  Estimate (95% CI) | % ( ) | % ( ) | % ( ) |
| ***Site 2*** | N=XX | N=XX | N=XX |
| Knock down 60 minutes  Mean (95% CI)  Median (IQR) | % ( )  % ( ) | % ( )  % ( ) | % ( )  % ( ) |
| Mortality 24 hours  Mean (95% CI)  Median (IQR) | % ( )  % ( ) | % ( )  % ( ) | % ( )  % ( ) |
| Optimal effectiveness  Estimate (95% CI) | % ( ) | % ( ) | % ( ) |
| Minimal effectiveness  Estimate (95% CI) | % ( ) | % ( ) | % ( ) |
| ***Site 3*** | N=XX | N=XX | N=XX |
| Knock down 60 minutes  Mean (95% CI)  Median (IQR) | % ( )  % ( ) | % ( )  % ( ) | % ( )  % ( ) |
| Mortality 24 hours  Mean (95% CI)  Median (IQR) | % ( )  % ( ) | % ( )  % ( ) | % ( )  % ( ) |
| Optimal effectiveness  Estimate (95% CI) | % ( ) | % ( ) | % ( ) |
| Minimal effectiveness  Estimate (95% CI) | % ( ) | % ( ) | % ( ) |

**Table 16:** Variables related to handling of bio-assay test nets

|  |  |  |  |
| --- | --- | --- | --- |
| **Variable** | **12 months** | **24 months** | **36 months** |
| ***Site 1*** | N=XX | N=XX | N=XX |
| Location found  hanging loose  hanging folded/tied | %  % | %  % | %  % |
| Type of sleeping place  bed  mattress  mat/ground | %  %  % | %  %  % | %  %  % |
| Net users  young child only  young child + adult  older child, adult only | %  %  % | %  %  % | %  %  % |
| ***Site 2*** | N=XX | N=XX | N=XX |
| Location found  hanging loose  hanging folded/tied | %  % | %  % | %  % |
| Type of sleeping place  bed  mattress  mat/ground | %  %  % | %  %  % | %  %  % |
| Net users  young child only  young child + adult  older child, adult only | %  %  % | %  %  % | %  %  % |
| ***Site 3*** | N=XX | N=XX | N=XX |
| Location found  hanging loose  hanging folded/tied | %  % | %  % | %  % |
| Type of sleeping place  bed  mattress  mat/ground | %  %  % | %  %  % | %  %  % |
| Net users  young child only  young child + adult  older child, adult only | %  %  % | %  %  % | %  %  % |

**Table 17:** Variables related to use of bio-assay test LLINs

|  |  |  |  |
| --- | --- | --- | --- |
| **Variable** | **12 months** | **24 months** | **36 months** |
| ***Site 1*** | N=XX | N=XX | N=XX |
| Used last night | % | % | % |
| Use last week  every night  most (5-6)  some (1-4)  not used  don’t know | %  %  %  %  % | %  %  %  %  % | %  %  %  %  % |
| Seasonal use  equally rain and dry  mainly rain  rain only | %  %  % | %  %  % | %  %  % |
| ***Site 2*** | N=XX | N=XX | N=XX |
| Used last night | % | % | % |
| Use last week  every night  most (5-6)  some (1-4)  not used  don’t know | %  %  %  %  % | %  %  %  %  % | %  %  %  %  % |
| Seasonal use  equally rain and dry  mainly rain  rain only | %  %  % | %  %  % | %  %  % |
| ***Site 3*** | N=XX | N=XX | N=XX |
| Used last night | % | % | % |
| Use last week  every night  most (5-6)  some (1-4)  not used  don’t know | %  %  %  %  % | %  %  %  %  % | %  %  %  %  % |
| Seasonal use  equally rain and dry  mainly rain  rain only | %  %  % | %  %  % | %  %  % |

**Table 18:** Variables related to washing of bio-assay test nets

|  |  |  |  |
| --- | --- | --- | --- |
| **Variable** | **12 months** | **24 months** | **36 months** |
| ***Site 1*** | N=XX | N=XX | N=XX |
| Ever washed | % | % | % |
| Washes last 6 month (all)  Mean  Median |  |  |  |
| Washes last 6 month (if washed)  Mean  Median |  |  |  |
| Soap used  country soap bar  detergent or bleach  mix | %  %  % | %  %  % | %  %  % |
| ***Site 2*** | N=XX | N=XX | N=XX |
| Ever washed | % | % | % |
| Washes last 6 month (all)  Mean  Median |  |  |  |
| Washes last 6 month (if washed)  Mean  Median |  |  |  |
| Soap used  country soap bar  detergent or bleach  mix | %  %  % | %  %  % | %  %  % |
| ***Site 3*** | N=XX | N=XX | N=XX |
| Ever washed | % | % | % |
| Washes last 6 month (all)  Mean  Median |  |  |  |
| Washes last 6 month (if washed)  Mean  Median |  |  |  |
| Soap used  country soap bar  detergent or bleach  mix | %  %  % | %  %  % | %  %  % |

# Summary and Conclusion

Synthesize results across sections

* Discuss interesting, striking, or noteworthy results; 2-3 pages
* Recommended paragraphs:
  + Summarize # of households and nets achieved against targets; describe household characteristics and any major differences
  + Summarize the demographic and socio economic characteristics – highlighting any significant differences between study sites or any differences between baseline and 36m result at any of the study sites.
  + Summarize % nets with holes, reasons for damage, main factors associated with net durability, and any differences between sites.
  + Continue describing repair behaviors, message exposure, attitudes, implications of these.
  + Net use messaging and proportions of nets in use, in packaging, possible explanations or implications of these. Frequency of net use.
  + Net condition and differences between sites; attrition and reasons for attrition; lost nets.
  + ITN universal coverage and population access as indicators of campaign success; proportion of nets serviceable at baseline, and estimate of campaign nets surviving in serviceable condition.
  + Include challenges and potential future issues that need to be addressed prior to future rounds of data collection
* Conclusion – were the study objectives met? What are the key findings related to the study objectives and the implications of these findings?

# References

Site all references in a consistent format.

1. Adjacent values: +/- 1.5 \* Inter-Quartile-Range [↑](#footnote-ref-2)