



West Kasai, DRC

**Post-Distribution Check-Up (PDCU)
at 6 (+2) months**

July 2015

**AMF TECHNICAL ANALYSIS
AND RECOMMENDATIONS**

**Prepared by: Andrew Garner
Rob Mather**

Contents

- 1. Executive Summary**
- 2. Background**
- 3. Operational stages**
 - 1) Questionnaire preparation**
 - 2) Data collection**
 - 3) Data management**
 - 4) Data transfer**
 - 5) Data analysis**
- 4. Results**
- 5. Analysis**
- 6. Recommendations**

Appendix

- 1. Detailed PDCU results (attached spreadsheet)**

1. Executive Summary

A post-distribution check-up (PDCU) takes place at six monthly intervals after a universal coverage distribution to monitor net presence, use and condition.

We have broad confidence that the West Kasai PDCU-06 indicates that, of the nets distributed in the universal coverage campaign (UCC) in October and November 2014, ~80% were hung and protecting people.

However,

1) The comprehensiveness and reliability of the data collected is less than expected and we recommend changes are made in a number of areas to improve the reliability of the data collected in the next PDCU.

2) We had hoped to see above ~80% coverage 8 months after distribution and the level of 'nets present but not hung' and/or 'missing' at 20% raises some concerns about barriers that may need to be overcome in order to achieve higher levels of sleeping space coverage.

This PDCU was the first to be carried out using electronic devices for data gathering and lessons have been learned.

2. Background

630,532 long-lasting insecticidal nets (LLINs) were distributed in West Kasai Province, DRC, in October and November 2014 to achieve universal coverage (coverage of all sleeping spaces). The first PDCU was carried out eight months after the distribution with 7% of the households that received nets during the distribution visited.

The following was agreed with IMA (and the NMCP):

The PDCU would be carried out in five Health Zones (Kitangwa, Mutena, Banga Lubaka, Kanzala and Tshikapa) of the eight that received nets, so as not to duplicate post-distribution follow-up already scheduled by the Swiss Tropical Institute in the other three Health Zones (Kamonia, Kamuesha and Kalonda West).

The proportion of households that originally received nets that would be visited was increased from 5% to 7% to act as a buffer against inaccurate data given electronic devices were being used for the first time to collect data in a PDCU and it was felt likely there might be less than 100% data accuracy.

3. Operational stages

There were five stages: Questionnaire preparation, data collection, data management, data transfer and data analysis.

1) Questionnaire preparation

AMF passed to IMA the specific questions to be asked in the PDCU for IMA to incorporate in an ODK-based registration form. AMF and IMA technical staff liaised during this process.

Comments

The IMA technical lead and ODK expert assured AMF that all questions had been transferred to the ODK software and would be included in the PDCU, along with some requested by the NMCP.

Absences of several members of IMA leadership and technical staff led to delays and the PDCU was ultimately delayed by two months.

The agreed question set was changed with some AMF-required questions left out. AMF was not sent the final question set for approval and sign off.

Key questions excluded were: i) Is this a net distributed in the universal coverage campaign (UCC) or not? (i.e. is this an AMF net or not.) ii) a set of validation questions to ensure the data entered for a household was consistent e.g. number of people in household = sum of no. of adults and no. of children).

AMF management, both general and technical, could have done a better job of staying close to progress and foreseeing potential problems.

2) Data collection

Data collectors were selected and trained on the use of the smartphones, the structure of the ODK-based registration form and on data entry and the procedures to be followed in collecting data at each household.

7% of HHs were targeted to be visited (vs 5% as per our agreement) as a buffer against a portion of the data being inaccurate.

Comments

The data collectors did not have a consistent approach to categorising nets, specifically: 'Present but not hung' vs 'worn out' vs 'missing'. Poor wording of questions contributed to this as the question said (translated from the French) 'Is the net available?' which was interpreted differently by the data collectors.

No distinction was made between the recently distributed nets and pre-existing nets when establishing which nets were present in the household and when recording the condition of the nets.

Data was not collected in the quantities per village agreed with some villages having more households visited than required, some fewer.

3) Data management

As well as the data lead at IMA, a number of individuals were involved in aggregating data collected in the field and passing it to a central point. There were also a number of individuals within the NMCP's data team who received information before it was passed to the IMA team.

Comments

The IMA technical lead was not allocated full time to the PDCU preparation.

The IMA technical team experienced problems including receiving data in different formats and partially cleaned that required raw data and back-up copies to be requested which delayed data aggregation and led to additional manual formatting and cleaning of data.

Data was held on a number of different computers which travelled with their owners to other projects delaying the data aggregation process.

The transfer of data from one format to another (the latter being required to allow import and processing by AMF) by the IMA technical team did not go smoothly and impacted accuracy and timeliness.

4) Data transfer

Data was aggregated, part cleaned and formatted (from ODK files to multiple excel spreadsheets) and then emailed to AMF.

Data transfer took several months due to the data aggregation issues mentioned above.

106 separate excel files were received, requested by AMF to speed up data receipt.

5) Data analysis

No data analysis was done at IMA.

4. Results

The aim of the PDCU is to establish:

1. The % of the recently distributed (AMF-funded) nets present:

Between 79% and 100% (likely <95% and maybe as low as 79%)

2. The % of the recently distributed nets hung:

79%

3. The condition of the recently distributed nets (those found)

Very good - 48%, Good - 18%, Viable – 35%

Very good = <2 holes 0.5 to 2cms

Good = Any hole bigger than 2cms OR >2 holes 0.5 to 2cms

Viable = If has hole bigger than 10cms

The condition of the nets was assessed by direct observation of the data collectors and we assume this is reliable. We have not had this independently verified (for example as would have been achieved with a 105% data collection approach).

*Caveat: These figures assume that all of the nets surveyed were AMF-funded nets. We do not believe that was the case because the PDCU questionnaire did not distinguish between nets that existed prior to the 2014 UCC distribution and those that were distributed in the 2014 UCC distribution (AMF-funded nets). As a result, we are not able to quantify the proportion of nets that were pre-existing. However, the pre-distribution registration survey indicated that the existing level of net coverage was low at 2.6% (average, range 0 to 20% by Health Area). This is consistent both with the anecdotal information from the field and the likely longevity of nets distributed during the previous (incomplete-coverage) mass distribution that took place in 2010/11.

The key data from the PDCU-06 are:

Households required to be visited (to achieve 5% target): **6,515**

Households agreed to be visited (7%, giving error buffer): **9,121**

Households visited: **9,393** (103% of agreed)

Households with clean data: **5,491** (58% of those visited, 84% of 5% required)

Clean data:

Nets received: **12,345**

Nets hung: **9,752 (79%)**

Nets present but not hung OR missing: add number **2,593 (21%)**

5. Analysis

1) Lack of clarity in the questions

A number of questions in the ODK survey form were unclear.

For example, the meaning of ‘# of nets available’ was variously interpreted as:

The number of nets ‘hung’ plus the number of nets ‘present but not hung’

The number of nets ‘hung’ i.e. available to use

The number of nets ‘present but not hung’ i.e. available to replace others

Recommendation: Clear phrasing of questions and possible answers to ensure there can be no confusion.

2) Inconsistent data

The data entry process did not have i) adequate validation checks or ii) adequate data-accuracy prompts. The ODK registration form should be adapted to include them.

i) ‘Validation checks’

These help to eliminate data inconsistency errors.

Some data collected within the household are questions and possible responses need to be structured to ensure consistency. For example, the number of nets hung in the household and the number of nets for which the condition is collected should be the same. Warning messages can alert the data collector to inconsistencies to allow them to be corrected while in the household and before a household record is saved.

ii) ‘Data-accuracy prompts’

These help to avoid data entry errors.

Some data responses are logically possible but unlikely, or at a minimum deserve review by the data collector. For example: “# of children in the household =22”. A set of threshold criteria should be attached to a question which when not met or exceeded prompt review of the data entered.

Recommendation: Change the ODK survey form both in structure and phrasing of the questions

3) Inaccurate data

Some householders reported inaccurate information. This was possible because some questions were asked outside the household, without data accuracy being verified through observation within the household. Even though subsequent questions were asked inside the household, data had already been saved and was not able to be edited. IMA also believes some householder may not have been truthful in the hope of obtaining more nets.

Examples of questions sometimes not answered accurately:

A lower number of nets present (hence more nets missing) than was the case

A higher number of sleeping spaces than was actually the case

A lower number of nets received than was the case

Recommendation: Ensure all questions are asked inside the household.

6. Recommendations

Ensure there is a dedicated (for the term of the project) in-country technical lead/data manager.

Closer liaison between AMF and IMA with dual sign-off on the type and format of data to be collected, and the procedure used by the data collectors to obtain the data to ensure it meets the requirements of the PDCU agreement. This would include testing the software and examining test data generated.

Rework the ODK survey form both in structure and phrasing of the questions

Ensure clear phrasing of all questions and possible answers to ensure data clarity.

Ensure the data is collected within the household with data collection observation and verification required for all data entered.