M&E Activities Back Check Protocol

Background

Every month, MLIS visits households in 1.5% of the total waterpoints serviced by an office. Approximately eight households are randomly selected and visited in the each of the selected waterpoint. The data collected is then analyzed and the result used to inform DSW on its KPIs such as, fraction of households chlorinating their drinking water, dispenser functionality and promoter performance. It is therefore important that data collected and used for this analysis is accurate and that customary protocol for data collection is adhered to by the Field Officer (FO) conducting the monthly evaluations.

To ensure that the set standard are meet and data collected is accurate, MLIS will from time to time conduct backcheck to selected office based on the result of the evaluations. There is two ways in which the back check can be conducted.

1. Random backcheck of a sample of the entire data
2. Targeted backcheck

This document discussed the targeted backchecks as well as outlines the objective of such backchecks and gives guidelines on:

- Where will be backchecks be conducted
- When will such backchecks be conducted
- How the backcheck will be conducted
- Analysis of backcheck data and
- Communication of back check results

For the rest of this document the word backcheck(s) will generally be used to refer to targeted backcheck(s).

Goals

The goals for the backchecks are to:

a. Verify the accuracy of the data collected
b. Verify adherence to set data collection protocol/standards e.g use of infield randomization protocol
c. Identify source of any irregularities in the data
d. Identify areas where further emphasis should be put during training or where retraining of data collection staff is needed
e. Performance evaluation-This will be used to fairly and objectively evaluate the performance of field teams based on accuracy of data collected that will initiate discussions about areas that are well done and those poorly done.

Determination of Outlier Adoption

In principle, back checks should be done to a random sample of the main activity. However in cases where there is unexplained anomalies in the data, MLIS will conduct backcheck what will be geared towards establishing the course/source of the anomaly. Since chlorine adoption is one of the key indicator for program performance, the advocated approach is in using adoption rates to check for glitches in the data. There are three cases that will be investigated,

1) When total adoption rates for one program differ significantly
2) When the free chlorine adoption rate differs significantly or from the total chlorine adoption rate
3) Cases of fluctuating adoption rates within a program

To determine cases that are worth investigation/backcheck the following analysis will be undertaken by Program Data Analysis (PDA) team:

a) Calculate adoption per program and waterpoint
b) Determine the interquartile range (Q3-Q1) of the program and waterpoint adoption rates.[1]
c) Determine the first boundary between ***Q1-1.5(Q3-Q1)andQ3+1.5(Q3-Q1)*** from program adoption
d) Determine the second boundary between ***Q1-3(Q3-Q1)and Q3+3(Q3-Q1)*** from program adoption
e) (Repeat the same for the deference in TCR and FCR adoption rates but using the generated difference)

Usually, adoption rate is explained by several factors. Key among these factors include: **where the households got the water** that was tested for presence of chlorine, **functionality of the dispenser** and whether **chlorine was present** at the time of the interview, **adoption boosting activities**, and other cases such an outbreak of waterborne disease.

Before an office is selected for targeted backcheck, the PDA team will analyses all the above factor to attempt to explain anomalies in adoption rate. The possible outcome of this analysis could be:

1. The "*outlier adoption"* is explained by these factors: in such a case the result of the analysis will be shared with the DIAL team for purposes of explaining the results when sharing with the program and management team.
2. Where such factors do not explain the "*outlier adoption"*, and the adoption rate or the difference in adoption lies outside the second boundary (point d above) such case will be categorized as major outlier and call for mediate back check by the Associate Data collection.
3. Where such factors do not explain the "*outlier adoption"*, and the adoption rate or the difference in adoption lies outside the first boundary (point c above) but within the second boundary such case will be categorized as minor outlier. If an office is categorized as a minor outlier for three consecutive months, then such will also call for backcheck by either the associate or his/her designate.

[1] Q1 is defined as the upper bound of the lower 25% of the data while Q3 is defined as the lower bound of the upper 25% of the data

a. In addition to categorization by adoption rates, changes in adoption rates for two consecutive months will be examined. Where such changes are statistically significant at 95% LOS (but with no evidence from the data explaining the change) and this happens for two consecutive period, then such office level adoption will be treated a minor outlier and will be evaluated for backcheck together with case 3 above.

Selection of waterpoints for Backcheck

The above analysis and classification will be done at country level, i.e. in the analysis to find out if there is an outlier in the data, only offices within a country will be considered.

- Where the TCR adoption rates are above the upper bounds (as defined above), waterpoints whose TCR adoption is in the upper percentile (within the program) will be visits for backcheck. If on the other hand the TCR adoption is below the lower bound, waterpoints whose adoption is in the lower percentile will be visited for backcheck.
- Where the will be a huge difference between TCR and FCR adoption that cannot be explained by the data, the waterpoints with lower percentile in FCR adoption will be visited. If the difference in TCR and FCR adoption is so small that is lies below the lower bound, then waterpoints with upper percentile in FCR adoption will be visited.

Households that were visited in the selected waterpoints will be revisited in the backcheck activity. Before visiting the households, the associate or the person doing the backcheck will verify that the infield randomization was done according to the protocol. Backcheck will cover the below areas:

a) FO properly used the infield randomization protocol (Examine the households visited are the same as those selected by the infield randomization)
b) Households visited use the waterpoint with the chlorine dispenser
c) FO made the visits to the households
d) FO tested the water for TCR and FCR
e) Result of the water test.

Timelines:

The analysis team shares the result of the monthly analysis by each 7th day of the month. Where the will be a "major outlier" or a "minor outlier" that has been persistent for three months, then DCT will be immediately be informed for preparation purposes and additional analysis conducted. The result will shared by the 9th day of the month. If there is no data that explains the outlier adoption, then backcheck analysis will be conducted to targeted waterpoints from the 11th to the 15th Day of the month.

Data cleaning for targeted backcheck will be prioritized and data availed to the analysis team 2 days after completion of the backcheck activity. Similarly the analysis team will provide the analysis to DCT senior associate with clear conclusion from the back check analysis.

Commented [P1]: We will edit this part after the first backcheck to include specific format.