



COLALIFE

OPERATIONAL TRIAL ZAMBIA

Improving use, access, availability and awareness
of ORS and zinc for the treatment of diarrhoea in the home

ENDLINE SURVEY REPORT

June 2014

Selected headlines from the ColaLife Operational Trial Zambia

>26k

kits sold into the two remote rural trial areas in 12 months.

45%

of children in trial areas received ORS/Zinc. Up from a baseline of <1%. Comparator sites stayed at <1%.

2.4km

The distance to ORS/Zinc in the trial areas was reduced by two-thirds from 7.3km to 2.4km.

93%

of Kit Yamoyo users mixed ORS correctly. Only 60% do when given 1 litre sachets.

14

The perception of ORS as an effective treatment for diarrhoea increased by 14 percentage points from 78% to 92%.

4%

Only 4% of kits went into Coca-Cola crates. It was the space in the market not the space in the crates that was important.

6

International awards for health and design innovation & 6 countries interested in replication.

...

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Additional and more in-depth analyses are being prepared for peer-reviewed academic publications. ColaLife Operational Trial Zambia (COTZ) Evaluation. Johns Hopkins Bloomberg School of Public Health, Baltimore. (Ramchandani, R et al - forthcoming)
Related correspondence should be sent to act@colalife.org.

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Acronyms

ADK	Anti-Diarrhoea Kit
CSO	Central Statistics Office
COTZ	ColaLife Operational Trial Zambia
CLTS	Community Led Total Sanitation
DAPP	Development Aid from People to People
EMLIP	Essential Medicines Logistics Improvement Programme
FMCGs	Fast Moving Consumer Goods
GPS	Geographic Positioning System/Satellite
GRZ	Government of the Republic of Zambia
KPIs	Key Performance Indicators
KYM	Kit Yamoyo
ODK	Open Data Kit
ORS	Oral Rehydration Salts
SEA	Standard Enumeration Area
SES	Socio-Economic Status
SPSS	Statistical Package for Social Sciences
PCA	Principal Components Analysis
VIP	Ventilated Pit Latrine
UNICEF	United Nations Children's Fund
WatSan	Water and Sanitation
WHO	World Health Organization

Acknowledgements

This is the final report for the Operational Research workpackage of the ColaLife Operational Trial Zambia (COTZ). This workpackage was managed by UNICEF Zambia and undertaken by RuralNet Associates Ltd.

We would like to thank all those who, in one way or another, contributed to the execution of this COTZ endline survey, and, consequently, to the creation of this report. These stakeholders have faithfully supported us from the time of the baseline. Firstly, we would like to extend our appreciation to the ColaLife team and UNICEF for consistently and professionally supporting us from the time of the baseline.

Mr Rohit Ramchandani (Principal Investigator) is appreciated for providing technical guidance, backstopping and support in the execution of the study. The team of research assistants/enumerators is also saluted for their part in the execution of the survey. Finally, all those we interviewed are greatly appreciated for giving us their time and the information we needed without which this document would not have been possible.

RuralNet Associates Ltd

Lusaka, January 2014



Executive Summary

Introduction

This endline survey report presents findings ('after'/post intervention) of the ColaLife Operational Trial Zambia (COTZ). Data collection was undertaken in August 2013, a year after the baseline data collection in August 2012 (which presented 'before' intervention measurements). Data collection took place in Kalomo (treatment district) and Monze (comparator district); both are in Southern Province. In Eastern Province, data collection was carried out in Katete (treatment) and Petauke (comparator). COTZ focuses on the community-level distribution of a new anti-diarrhoea kit (ADK) called Kit Yamoyo via Coca-Cola wholesalers in the district towns, and trained, existing rural micro-retailers, supported by community-based marketing of the new product. Kit Yamoyo contains the WHO/UNICEF recommended combination therapy of low osmolarity oral rehydration salts (ORS) sachets, zinc sulphate (10-day treatment) and a small bar of soap for hand washing.¹

Given that the baseline report provides the detailed methodology, this endline report focuses on points of diversion such as actual versus targeted sample size. Two quantitative surveys were used to collect data for the endline, namely the household and retail surveys found in Appendix 1 and 2 respectively. The household survey targeted primary caregivers of children under the age of 5 living in the above four named districts while the retail survey targeted private, community-level retailers in those four districts. The household survey used a multi-stage sampling methodology involving: purposeful sampling of survey districts using defined criteria; selection of sites/clusters; selection of households; selection of caregivers; and selection of children. The target sample size during endline was 2,300 while the actual was 2,477. The actual baseline sample size of 2,458 compares with the one at endline. In relation to the target of 180 retailers for all the four districts (i.e. 45 per district), a comparable proportion was interviewed at baseline and endline, 169 and 168 respectively.

The structure of this report follows the key research questions, each focusing on a specific outcome level, namely: use (final outcome), access (intermediate outcome), availability and awareness (immediate outcomes). As was the case during midline, this arrangement is deliberate as the emphasis is on highlighting the major changes that COTZ has brought about. Consequently, this format is linked to the higher-level indicators of the results framework. Where relevant, the difference-in-difference estimator is provided for key indicators within the body of the report, as part of the stratified (by district) pre-test/post-test analysis.

Household survey findings

The findings of the endline survey are presented in five key sections: demographics, use of ORS and zinc, access to ORS and zinc, availability of ORS and zinc via 'last mile' retailers, and awareness of ORS and zinc among caregivers of children under 5. These are briefly discussed in sequence. Analysis is predominantly focused on: (i) caregivers with a child who had diarrhoea in the two weeks preceding the survey and (ii) caregivers who used Kit Yamoyo. Figure 1 (page 7) provides insight into how the various samples are derived.

Demographics

Demographics in this study are contextual, providing background information to the survey and the variables of interest. No major shifts were expected to occur for these values between the baseline and endline, as the population being studied should have been comparable at both baseline and endline. Demographic information is provided to demonstrate comparability.

The variation in some demographic data between the towns in Southern Province (Kalomo and Monze) and those in Eastern Province (Katete and Petauke) is apparent. Education and wealth stand out. Household heads and respondents in Southern Province towns are generally more educated than their counterparts in Eastern Province. Those in Southern Province also appear wealthier than those in Eastern Province. While the differences between Southern Province and

1. Berry J, Berry S, Ramchandani R (2013): *Midline Report - ColaLife Operational Trial Zambia (COTZ); June 2013.*

Eastern Province are clear, analysis does demonstrate comparability between the intervention districts and their matched comparator districts.

Use

Five important points on use are worth highlighting:

- (i) The recommended combined use of ORS and zinc for treatment of diarrhoea has seen a significant increase from less than 1 per cent at baseline to 45 per cent at endline among caregivers who had a child with diarrhoea in the two weeks preceding the survey in the treatment districts of Kalomo and Katete.
- (ii) About 40 per cent of ORS users who use the entire contents of a typical 1 litre sachet (almost all of them from health centres - GRZ) when preparing ORS are not using the correct amount of water at home. On the other hand, an analysis of Kit Yamoyo users shows that only 7 per cent are not using the correct amount of water at home when preparing the solution for their child. This shows that providing the ORS/Z in a container that acts as a measure for the water helps the caregivers mix the ORS correctly.
- (iii) Focusing only on treatment districts (where Kit Yamoyo was available), at endline, of those caregivers with children with diarrhoea in the two weeks preceding the survey, who actually used ORS, 62 per cent of access occurred in the private sector from Kit Yamoyo. This suggests that there has been a clear shift in the source of ORS from government health centres to the private sector in the treatment districts.
- (iv) There was a dramatic increase in caregivers who used zinc for treatment of diarrhoea, from close to zero at baseline to 45 per cent at endline. The district analysis for Kalomo and Katete was 46 per cent and 44 per cent respectively. This suggests a positive impact of the project with respect to the promotion of zinc in the treatment of diarrhoea in the two districts. Usage of zinc was the limiting factor for the combination use of ORS and zinc.
- (v) At endline, one third (or 33 per cent) of those who used zinc used it correctly (i.e. for 10 days). The district analysis percentage values were 46 per cent and 25 per cent for Kalomo and Katete respectively.

Although taking the correct dosage of zinc for 10 to 15 days is optimal (as per the global recommendation from WHO and UNICEF) to ensure reduced duration, severity, and preventive effects over the subsequent three months, there is evidence to suggest that even a five-day treatment is as efficacious in achieving some of these benefits.² The findings suggest the need for better messaging related to zinc adherence.³ It should also be noted that there is no risk associated with not adhering to the proper regimen as there is with antibiotics (which are often prescribed in the public sector for diarrhoea).

Access

Three major issues are worth noting in relation to access:

- (i) There has been a general reduction in treatment delay for both treatment and comparator districts from an average of two days (at baseline) to one day (at endline). Though this may be as a result of spill-over effects related to radio messaging among others, there is need for further research on this.
- (ii) At endline the perceptions of Kit Yamoyo users/caregivers regarding the cost of Kit Yamoyo indicates that close to two thirds (64 per cent) considered Kit Yamoyo to be financially accessible as indicated by those who said Kit Yamoyo was either 'not expensive' or 'affordable'. At midline 59 per cent of Kit users considered the K5 price point to be either 'not expensive' or 'affordable'. This suggests that COTZ project is likely to be on a sustainable path as nearly two thirds of Kit Yamoyo caregivers expressed willingness to pay for Kit Yamoyo even after the phasing out of the voucher system. However, an assessment of effective demand as indicated by Willingness to Pay Studies would provide a better picture regarding the matter of sustainability. The COTZ Final Report of January 2014 provides more details on willingness to pay.
- (iii) The majority of caregivers did not spend anything on transport (85 per cent) nor food/drink (72 per cent) when going to the health centre as they walked and ate/drank nothing. Of those that did pay for transportation, the average amount spent was K14, and of those that paid for food, the average amount spent was K9.

2. Alam D S et al 'Zinc treatment for 5 or 10 days is equally efficacious in preventing diarrhea in the subsequent 3 months among Bangladeshi children'. *J Nutr.* 2011;141:312-5.

3. Although 10 days is optimum, some commentators think even a few days of zinc is therapeutic.

Availability

The project has had a positive impact on the availability of ORS and zinc to caregivers and mothers as can be evidenced by the reduction in distance to ORS/zinc access points. For instance, at endline, the reported overall mean distance travelled by caregivers to retail shops that stock ORS/zinc (Kit Yamoyo retailers/stockists) was 2.4 km in the intervention districts, while the reported distance traveled to an ORS/zinc access point (i.e. health centre) was 7.3km. This may have contributed to the halving of treatment delays from ~2 days at baseline to ~1 day at endline. However reductions were seen in both intervention and comparator districts, so further research would be required to confirm this. There has been a considerable increase in awareness by caregivers in terms of zinc treating diarrhoea, which clearly can be attributable to the project. In Kalomo, the proportion of caregivers who knew zinc as treatment for diarrhoea increased, by 55 percentage points, from 2 per cent at baseline to 57 per cent at endline. In Katete, the proportion increased by 50 percentage points from 1 per cent at baseline to 51 per cent at endline. The situation in the comparator districts of Monze and Petauke was totally different as the increase was marginal at 9 percentage points for Monze and no increase at all for Petauke.

The two promotional messages that were most cited in both Kalomo and Katete were: “Zinc is an appropriate treatment for diarrhoea”, by 58 per cent and 55 per cent respectively. The other message was “Give 1 tablet of zinc per day”, cited by 55 per cent and 27 per cent for Kalomo and Katete respectively. Both of these messages are critical to effective treatment of diarrhoea.

Awareness

Caregivers’ perceptions in treatment districts on the effectiveness of ORS in treating diarrhoea has gone up by 14 percentage points on average in the past one year, from 78 per cent at baseline to 92 per cent at endline. On the other hand, little variation has been noticed in comparator districts as the percentage marginally declined from 84 per cent to 83 per cent during the same period. This suggests that the project has made a contribution towards increasing caregivers’ perception of the effectiveness of ORS. The increased perception of effectiveness could have been due to a combination of the

following: the carers were mixing the ORS correctly; the ORS was coloured and flavoured; it was combined with zinc.

Retail survey findings

The following points are noted:

- (i) The feedback received by retailers on the use of Kit Yamoyo by customers was generally good. The number of retailers who reported customers describing Kit Yamoyo as “a very good product” was 31 out of 39 (or 79 per cent) in Kalomo and 35 out of 36 (or 97 per cent) in Katete.
- (ii) Out of all the retailers in Kalomo and Katete (i.e. 75), only one reported that customers said Kit Yamoyo was too expensive at the 5K price point.
- (iii) The behaviour of repeat purchases by customers may be considered a proxy indicator for customer satisfaction. In both Kalomo and Katete districts, 50 out of 75 retailers (or two thirds) reported that they had customers who had come to get more than one Kit Yamoyo.
- (iv) The overwhelming majority (70 out of 75 retailers) of retailers in the treatment districts cited “help children/ community” as a motivating factor to sell Kit Yamoyo. This is likely to further impact positively on the sustainability of the project as the frontline actors (retailers) are in it not just for profit (44 out of 75), but are also driven by passion to improve the welfare of their community. It is, therefore, not surprising that 71 out of 75 (95 per cent) retailers plan to continue selling Kit Yamoyo in future.

Conclusions

The findings presented in this report indicate that the COTZ project has realized the results the project set out to achieve. The results are at three levels of the objective hierarchy set out at the beginning of the project. Notably: (i) mothers in underserved rural communities have shown increased **use** of ORS and zinc in home treatment of diarrhoea [goal/final outcome]; (ii) target communities in two underserved rural districts (i.e. Kalomo and Katete) have improved **access** to ORS and zinc [intermediate outcome]; (iii) profit-driven supply chains improve **availability** of ORS and zinc (ADKs) in targeted communities in the two underserved rural districts of Kalomo and Katete [immediate outcome], and; (iv) mothers/caregivers have demonstrated **awareness** of ADKs and the benefits of the contents (ORS, zinc and soap) [immediate outcome]. Details are provided below.

Use

1. The combined recommended therapy of ORS and zinc for the treatment of diarrhoea in the intervention districts has significantly increased from nearly zero to 45 per cent among caregivers and mothers who had children with diarrhoea in the two weeks preceding the survey. This is by no means a small achievement in a space of one year. This success is clearly attributable to the project. No significant change was found in the comparator districts. ORS use (without zinc) and awareness were already high at baseline and no major impact was expected other than a change in the source of ORS. Nonetheless, an increase in usage was found in Kalomo, stayed relatively the same in Katete, and decreased in Petauke and Monze.
2. The design of the kit itself has led to improved use of ORS by providing tools for proper preparation. For instance, only 7 per cent of Kit Yamoyo caregivers did not measure the water properly when preparing ORS compared to 40 per cent among non-Kit Yamoyo users (i.e. 1 litre sachet users).
3. The project shifted ORS access from predominantly government health centres to private retailers, as evidenced by the 62 per cent of caregivers who had children under 5 with diarrhoea in the two weeks preceding the survey and accessed ORS from rural retailers at endline. This has positive implications on sustainability of ORS supply in the medium to long term.
4. The project had a positive impact on zinc utilization for diarrhoea treatment, which was little known before the intervention started. The increase in usage of zinc by caregivers in the two treatment districts of Kalomo and Katete has been impressive, from nearly zero before the project to 46 per cent and 44 per cent respectively one year later. Utilization remained less than 1 per cent in the comparator districts. However, more needs to be done with regard to facilitating correct adherence to the proper zinc regimen, which at endline, was only a third or 33 per cent (i.e. treatment for 10 days) across the intervention districts.

Access

5. The project saw a reduction in reported treatment delay from approximately two days at baseline to approximately one day at endline. It should be noted that a reduction in treatment delay was also noted among the comparator districts. This reduction may be correlated with promotional messages from the ColaLife intervention that comparator districts were also exposed to (i.e. radio messaging).
6. The project has indicated that caregivers are willing to purchase Kit Yamoyo using cash as well as vouchers. The majority (64 per cent) of caregivers thought K5 per kit was affordable/not expensive. Given that affordability is one key component of access, this has positive implications on setting the use of Kit Yamoyo on a sustainability path, yet more work/research is needed in this area to determine the demand curve for Kit Yamoyo in different markets and the associated need for vouchers in the long term.

Availability

7. Emerging evidence suggests that the project has increased availability to ORS and zinc for caregivers. This is partially demonstrated by a 65 per cent overall reduction in the reported distance travelled by caregivers to get to a source of ORS and zinc in the intervention districts (i.e. Kit Yamoyo retail shop). This has the potential to positively impact on household livelihoods and convenience as the time saved may be used for other activities including those that are economic in nature.

Awareness

8. Because awareness of ORS was already high, the project did not expect to have an impact on awareness of ORS for the effective management of diarrhea. High levels of ORS awareness among caregivers of children under 5 have largely been brought about by the rigorous promotion campaigns of the Ministry of Health before the project, as the COTZ baseline rightly observed. However, caregivers' perceptions

on the effectiveness of ORS in treating diarrhoea among children under 5 has increased in the treatment districts by 14 percentage points over the past one year, from 78 per cent to 92 per cent in the intervention districts. During the same period, the caregivers' perceptions in comparator districts on the effectiveness of ORS in treating diarrhoea have remained the same (83 per cent).

9. The project has also had a positive impact on raising awareness of zinc, which is relatively a new product in the underserved districts of Zambia. Over the past one year, the proportion of caregivers in Kalomo and Katete districts who have become aware of zinc has increased by 55 and 50 percentage points respectively, from a baseline of 2 per cent and 1 per cent respectively. The corresponding increases in zinc awareness in the comparators were zero in Monze and 9 per cent in Petauke.

Retail survey findings

10. The rural retail shops have a number of suitable conditions that facilitate the promotion of ORS and zinc usage among rural caregivers of children under 5. For instance, most of the shops (more than two thirds or 68 out of 75) operate for 12 hours in a day, thereby making it easier for caregivers to access ORS once in need of it. Only 2 out of 39 retailers in Kalomo indicated that there were some months in a year where they remain closed while in Katete it was 3 out of 36 of the retailers. In addition, retailers in the treatment districts now sell products for the treatment of diarrhea (i.e. Kit Yamoyo). At endline, 39 out of 41 of the retailers in Kalomo and all the 36 retailers in Katete compared to 4 out of 45 and 5 out of 46 in Monze and Petauke respectively, noted that they sold products for the treatment of diarrhoea.
11. A good proportion of retailers have taken up the sale of Kit Yamoyo seriously. For instance, no less than 75 per cent of retailers in the treatment districts were selling Kit Yamoyo at the time of the survey (30 out of 39 in Kalomo and 27 out of 36 in Katete). The majority of those who were not selling Kit Yamoyo at the time

of the survey cited "out of stock" as the main reason (5 out of 39 in Kalomo and 1 who had no money, and 8 out of 36 in Katete and 2 who had no money).

12. Restocking patterns by community-level retailers in the private sector also present advantages when compared to the public sector. For instance, retailers who restocked four times a month accounted for the highest proportion – one third of the retailers (or 33 per cent). Almost half of retailers (48 per cent) restocked three to four times a month compared to public sector health centres that restocked only once a month.
13. The feedback received from customers regarding Kit Yamoyo shows that the majority of retailers received positive feedback relating to Kit Yamoyo, specifically that it "was a very good product" – 79 per cent of retailers in Kalomo and 97 per cent of retailers in Katete reported this positive feedback.
14. The retail survey also reviewed that retailers have a positive attitude towards Kit Yamoyo. Their motivation for selling the kit lies in helping the community and as expected, for profit.
15. It is encouraging to note that 37 out of 39 (Kalomo) and 35 out of 36 (Katete) retailers plan to continue selling Kit Yamoyo even in the absence of a voucher system. This is surely a right step in enhancing sustainability of COTZ interventions.

1.0 INTRODUCTION

1.0 Introduction

1. Background to the endline evaluation

This report presents the findings of the COTZ endline survey. The survey took place in August 2013 in Kalomo and Monze (Southern Province) and in Katete and Petauke (Eastern Province). Using a pre-test/post-test design with comparators, as described in the baseline report, it provides results for a full, one-year course of COTZ implementation. The intervention of COTZ focuses on the distribution of a new anti-diarrhoea kit (Kit Yamoyo) via Coca-Cola wholesalers in district towns and trained, existing rural retailers, supported by community-based marketing of the new product. Kit Yamoyo contains the WHO/UNICEF recommended combination therapy of low osmolarity ORS sachets (200ml sachets), pediatric formulated zinc sulphate tablets (10-day treatment) and a small bar of soap for hand washing.⁴

The baseline survey represented the 'before' intervention measurements, the endline survey represents the 'after' intervention measurements of project implementation. Given that a detailed description of the methodology is presented in the baseline and midline reports, this report only gives a scaled-down description of the research methodology, such that only points of diversion are highlighted, such as the actual versus the targeted sample size. Further information may be obtained from sources at Appendix 6 of this report.

2. Methodology and approach

The respondents were selected from two main study groups. One group was exposed to the COTZ interventions. This was the treatment group, made up of Kalomo and Katete samples. The other group consisting of the Monze and Petauke samples was exposed to the comparator condition. The comparator condition was an absence of COTZ interventions (represents the counterfactual). Data for the endline was collected through quantitative surveys (See Appendices 1 and 2 for household and retail survey questionnaires). The quantitative surveys had two target groups: primary caregivers of children under 5 living in rural areas of four districts in Eastern and Southern Provinces (two in each), as well as private retailers in those four districts.

It is important to underscore that every effort was made to ensure that the data collection instrument remained the same between the baseline and endline surveys. This was critical if a comparative analysis between the two survey periods was to be undertaken. The modifications made to the instrument at endline were not to the questions, but rather to the filters/ explanations aimed at enhancing clarity only (see Appendix 4 for details).

Household survey sampling methodology: A multi-stage sampling methodology was used for this study. As outlined in the baseline report, Kalomo and Katete, the treatment districts, were chosen by the ColaLife team based on a number of inclusion criteria such as the presence of a SABMiller/Coca-Cola Wholesaler,⁵ willingness of that wholesaler to participate, rurality and distance from Lusaka, estimated diarrhoea rates, and accessibility within a day's drive (for logistical reasons). The choice of the comparator districts was done based on matching on various factors. The matched comparator districts were Monze and Petauke and, again as stated in the baseline report, their selection involved comparisons on various factors (including population, population density, road intensity, livelihoods, and culture) to determine which districts would provide the best conditions to be comparable with the treatment districts. Monze was selected as the ideal comparator for Kalomo and Petauke for Katete. These selections were also verified as the best possible comparators based on consultation with a number of local research institutions as well as with UNICEF.

Selection of sites/clusters: The second stage involved the selection of the survey sites within the selected districts. The selection of sites in the selected districts was done by purposively using criteria similar to that used in the selection of districts: i.e. population density, rurality, road network and presence of retailers. At midline and endline, the survey sites remained unchanged from baseline. The main criteria for the sites were that they were at least 10 km from town and that there were small-scale retailers within them. For each site, the number of households to be enumerated was proportional to the number of households in the sites based on the Central Statistics Office (CSOs) Standard Enumeration Areas

4. Berry J, Berry S, Ramchandani R (2013), *Midline Report - ColaLife Operational Trial Zambia (COTZ)*, June 2013.

5. SABMiller is the Coca-Cola bottler in Zambia and, whilst not involved operationally, advised the project, including recommending wholesalers from among independent outlets known to them and effecting an introduction to these.

(SEAs). Each site was defined as the presence of at least one retailer at the centre of the site, and its 6 km radius. Each district had approximately 10 to 12 sites covering around half of each district from a rural geographic perspective.

Selection of households: The next stage in the sampling procedure was the selection of households with children under 5. The 'Random Walk Method'⁶ was used to select households in the selected sites as a complete listing of rural households on which to base simple random sampling does not exist. In the random walk method, a sampling start point was randomly chosen from which random walk patterns radiated. Given the GPS coordinates of the centre of the site, the start points for enumerators were randomly chosen, usually at a point along the perimeter of the site, 6 km from the centre.⁷ The house closest to the start point with children under 5 is where enumerators began the interviews. A screening process was then employed to select households. Only households in which there were children under 5 were included. Once the first house had been selected, a sampling interval of 3 was used to determine the next house to select. As such, enumerators approached households that they passed and conducted a short interview with the head of the household (or some other responsible person). During this short screening interview, the enumerator determined whether or not the household had children under 5 and whether a primary caregiver of the child was around. Consent was then sought from the head of household and the caregiver, if not the same person. In Kalomo and Monze, distances were greater as communities were more spread out and population density was less than in Eastern Province. Thus, in Southern Province, the sampling interval was sometimes adjusted to 1 or 2 due to practicality and logistics.

Selection of caregivers: The next stage involved sampling of mothers/caregivers in the selected households. A listing of all caregivers/mothers of children under 5 in the selected house was made. During this listing, basic data on all the children under 5 in the house were collected. Caregivers who had a child under 5 with

diarrhoea in the two weeks preceding the survey were given priority. If there were multiple caregivers that met these criteria within the household, they were selected alphabetically. Caregivers had to be at least 15 years of age. No matter what the age of the caregiver, and given cultural norms, permission to interview the caregiver was also sought from the head of household. Where caregivers were unavailable, efforts were made to revisit the households.

Selection of children: The final stage involved selection of a reference child between the ages of 6 and 59 months (inclusive). Based on the list of the selected caregiver's children (if multiple), a child under 5 with diarrhoea in the two weeks preceding the survey was given priority, else a child under 5 was selected alphabetically.

Mobile data collection was undertaken using ODK software and Samsung Galaxy tablets running the Android operating system. This had several advantages including: data entry took place in the field thereby reducing the cost of computer data entry; the tablets were programmed in such a way that the skip patterns were automatically dealt with thereby minimizing error, and; linked to the previous point, there were higher efficiency levels thereby reducing the total survey time which further impacted positively on the overall survey cost reduction (see overall project baseline report for further advantages and lessons learned around innovative evaluation methods used).

Data analysis: Data analysis was conducted using statistical analysis software (SPSS and STATA) and where possible, data was stratified by district (intervention versus control). As described in the baseline report, for relevant indicators, the analysis will provide a basic difference-in-differences estimator (DiD)⁸ for each set of matched intervention and comparison districts. The DiD is based on repeated cross sectional analysis, thus we assume that unobservable individual effects are drawn from the same population distribution across periods before and after the treatment. This assumption holds given our sampling strategy.

6. Described in greater detail in the baseline report

7. The sites were generated using GIS software by creating 6 km circular buffers around retailers.

8. The difference in difference (or "double difference") estimator is defined as the difference in average outcome in the treatment group before and after treatment minus the difference in average outcome in the control group before and after treatment : it is literally a "difference of differences."
$$\hat{\delta DD} = (Y_1^T - Y_0^T) - (Y_1^C - Y_0^C)$$

3. Target versus achieved survey coverage

The targeted sample size per district was 575 households (equivalent to 575 caregiver respondents) and this was determined at the time of study design before the baseline was conducted based on the sample size calculation found in the baseline report. During survey implementation, the actual number of respondents interviewed was slightly more than 575 per district (to allow for error thereby ensuring the maintenance of the minimum sample size). During baseline, across all study districts, slightly more than 600 respondents were interviewed. For the sake of consistency, the endline targeted a minimum of 600 respondents. Table 1 below gives the targeted sample size versus the actual number sampled for the districts. The actual sample size for the endline was 2,477. The baseline sample size achieved was 2,458, which is slightly less than the endline sample but within the same range.

TABLE1: HOUSEHOLD SURVEY SAMPLE

Evaluation Type	District	Type of group	Target sample size	Actual sample size
Baseline	Kalomo	Treatment	575	620
	Katete	Treatment	575	623
	Monze	Comparator	575	611
	Petauke	Comparator	575	604
	Total		2300	2458
Endline	Kalomo	Treatment	575	614
	Katete	Treatment	575	626
	Monze	Comparator	575	604
	Petauke	Comparator	575	633
	Total		2300	2477

4. The retailer survey

At baseline, retailers operating in the four districts were mapped before the enumerators went into the field. This was aimed at providing an appreciation of the total numbers that existed as well as the general retailer characteristics. During project implementation, not all retailers identified and interviewed during baseline participated in the project as their participation was determined by market forces. Consequently, about two thirds of the retailers interviewed during baseline eventually became COTZ project retailers in treatment districts (Kalomo and Katete), and participated in the midline and the subsequent endline survey (with a small reduction for the endline due to non-availability). The remainder of retailers was newly recruited.

The targeted sample size of retailers versus the actual is presented in Table 2 below.

TABLE 2: RETAIL SURVEYS

Evaluation Type	District	Target sample size	Actual sample size
Baseline	Kalomo	45	43
	Katete	45	44
	Monze	45	37
	Petauke	45	45
	Total	180	169
Endline	Kalomo	45	41
	Katete	45	36
	Monze	45	45
	Petauke	45	46
	Total	180	168

5. Structure of the report

The structure of the report follows the four key questions of the study (see below) where each question is designed to deal with each of the following key areas; use, access, availability and awareness. At midline and endline, the order of the questions, and hence the above four outlined key areas were deliberately reversed as the emphasis is the change the project has brought about which is directly linked to the higher level indicators of the results framework as opposed to the lower level (see Table 3 below).

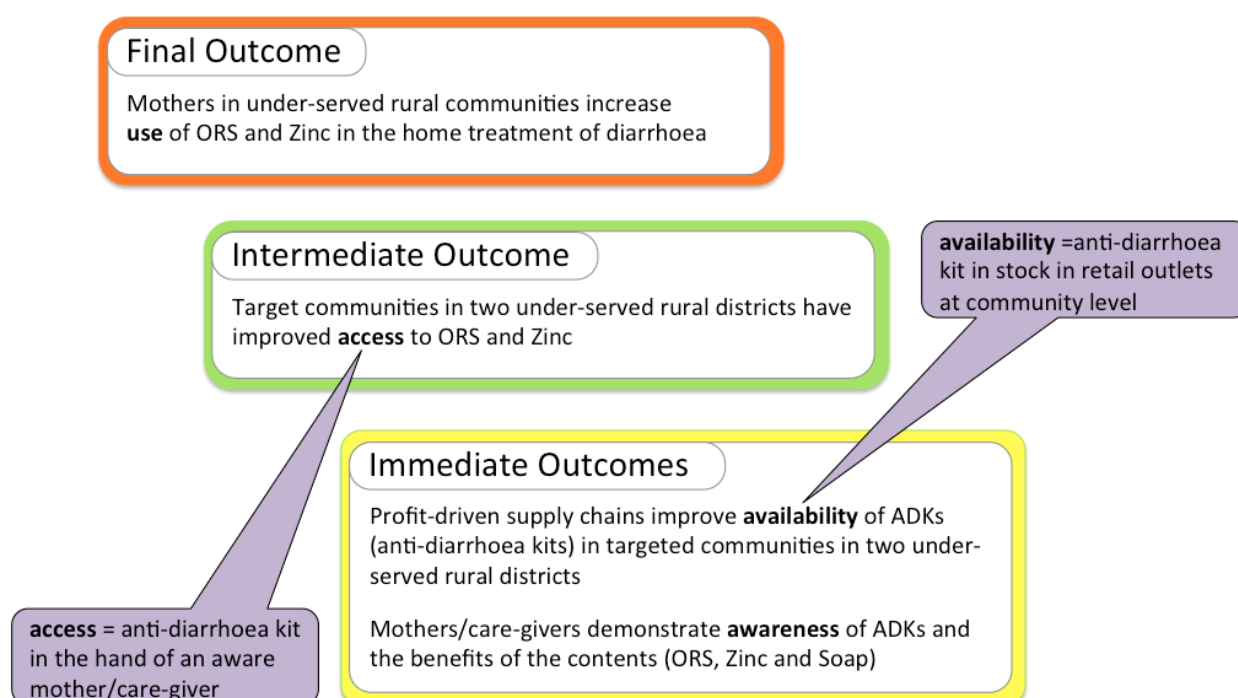
The four key questions that the study seeks to address (in their logical order) are presented below:

1. What effect does the project have on the **awareness** of the product, its benefits, its contents and how to use them, among mothers/caregivers of children under 5?

2. To what extent can leveraging the secondary distribution chain for products such as Coca-Cola improve **availability** of ORS and zinc via 'last mile' retailers in underserved, rural areas? (i.e. ADKs in stock in retail outlets at community level; high quality and effective medicines closer to home in sufficient quantities).
3. What effect does the project have on mothers'/ caregivers' **access** to ORS and zinc for home-based management of diarrhoea in children under 5?
4. What indications are there that mothers/caregivers in underserved communities have increased the proper **use** of ORS and zinc for home-based management of diarrhoea in children under 5?

The simplified COTZ results framework is summarized in Table 3 below.

TABLE 3: COTZ SIMPLIFIED RESULTS FRAMEWORK



6. Study limitations

There were no major study limitations except the logistical challenges faced in Kalomo and Monze during the random walk household selection process. The challenge comes about due to long walking distances between households in rural communities of Southern Province. This sometimes made it difficult to adhere to the sampling strategy of selecting every third household, and so in some instances this had to be relaxed and every other, or every household (with child under 5), was selected. Though this introduced some selection bias, it is felt that this was mitigated against by the long distances between households and also by the fact that only households with children under 5 were eligible for selection.

The random walk technique used for sampling households is amenable to various forms of bias (i.e. selection bias, variation in interviewer behaviour, potential for repeat testing). However, it was the optimal method given that there is no available database of all existing households and their locations, which made simple random sampling impossible. That said, attempts were made to mitigate against these forms of bias through rigorous training of enumerators and effective field supervision.

Finally, any future work (i.e. any potential scale-up) would aim to focus on a larger number of districts to improve external validity.

2.0 HOUSEHOLD SURVEY FINDINGS

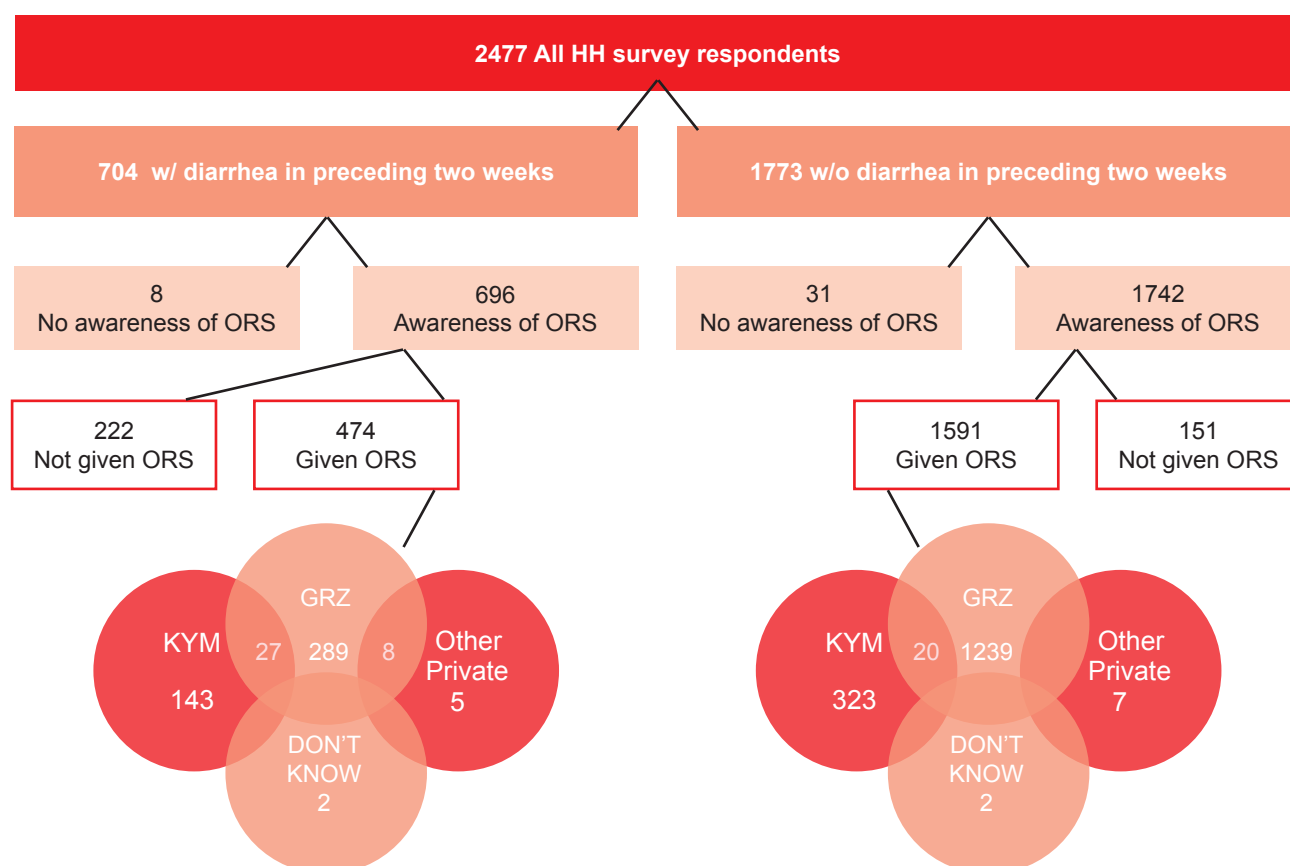
2.0 Household Survey Findings

The COTZ household endline survey report has five main sections, namely: (i) **demographics** (ii) **use** of ORS and zinc (iii) **access** to ORS and zinc (iv) **availability** of ORS and zinc via 'last mile' retailers and (v) **awareness** of ORS and zinc among caregivers of children under 5.

The sample sizes (n=number of respondents) vary depending on the section and variables of analysis (see denominator tree – Figure 1 below). It is important to note that with respect to the household survey, analysis has mainly been focused on three sub-samples: (i) caregivers with a child who had diarrhoea in the two weeks preceding the survey; (ii) caregivers without a child who had diarrhoea in the two weeks preceding the survey, and; (iii) caregivers who used Kit Yamoyo. The sub-sample of caregivers who used Kit Yamoyo is derived from the other two sub-samples mentioned in the foregoing sentence, that is, caregivers with a child with diarrhoea in the two weeks preceding the survey and caregivers without a child who had diarrhoea in the two weeks preceding the survey. All results presented clearly state what subset of the sample makes up the analysis.

Based on this categorization, the total household survey respondents were 2,477. Of these, 704 were caregivers with a child who had diarrhoea in the two weeks preceding the survey and 1,773 were caregivers with a child who did not have diarrhoea in the preceding two weeks. In terms of the caregivers who used Kit Yamoyo, there was a total of 517, broken down as follows: of those caregivers who had a child with diarrhoea in the two weeks preceding the survey, 174 had a child who used Kit Yamoyo in that two-week period, while 20 caregivers who had a child with diarrhoea in the preceding two weeks, had a child who had used it, but not during this most recent episode. Of those caregivers who did not have a child with diarrhoea in the preceding two weeks, 323 had a child who had at one time used it (i.e. ever used it). This brings the total number of caregivers who had ever used Kit Yamoyo to 517. For further details, refer to the tree diagram in Figure 1 which shows the number of respondents to various questions throughout the household survey. The tree diagram also provides the denominators used in most of the calculations in the analysis.

FIGURE 1: DENOMINATOR TREE



2.1 Demographics

The demographics section provides background information to the survey and the variables discussed here have the potential to serve as explanatory factors for the observed outcomes. No major shifts were expected to occur for these values between the baseline and the endline, as the population being studied should have been comparable at both baseline and endline. Demographic information is provided so as to demonstrate comparability. No major differences in demographic trends were found that would significantly impact the outcomes under investigation.

2.1.1 Respondent's relationship to head of household

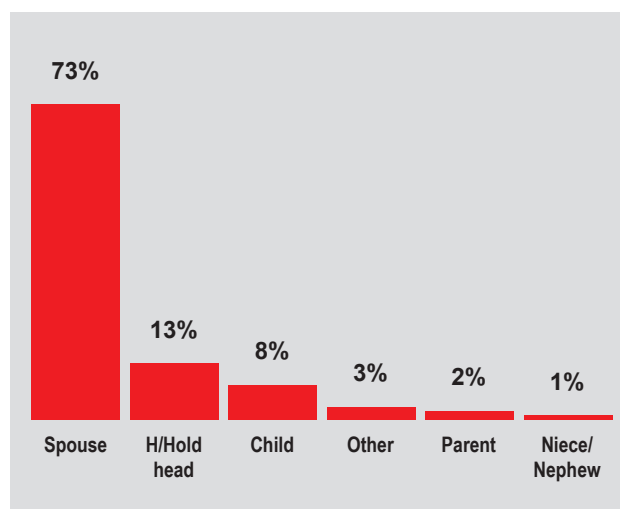
As can be seen from Table 4 and Figure 2, the majority of the respondents (73 per cent) were spouses of the head of household. Those respondents who identified themselves as heads of households were 13 per cent. Thus close to 9 out of 10 respondents was either a spouse or the head of the household themselves. Since most heads of households were male (see Figure 3), by implication the term 'spouse' may generally be understood to mean 'wife' in this context. There were very few cases where someone other than the spouse or the head of the household took the interview in the selected household. Of those interviewed, 94 per cent were female respondents. This implies that a few men (6 per cent) were interviewed and they identified themselves as caregivers of children under 5 in the house.

TABLE 4: RESPONDENT'S RELATIONSHIP TO THE HEAD OF THE HOUSEHOLD

Relation	DISTRICT				Total (=2477) %
	Kalomo (n=614)	Katete (n=626)	Monze (n=604)	Petauke (n=633)	
	%	%	%	%	
Household head	13	6	16	17	13
Spouse	75	82	61	73	73
Child	6	5	15	8	8
Niece/Nephew	1	0	1	0	1
Parent	3	5	1	0	2
Other	2	3	6	1	3
Total	100	100 ¹	100	100	100

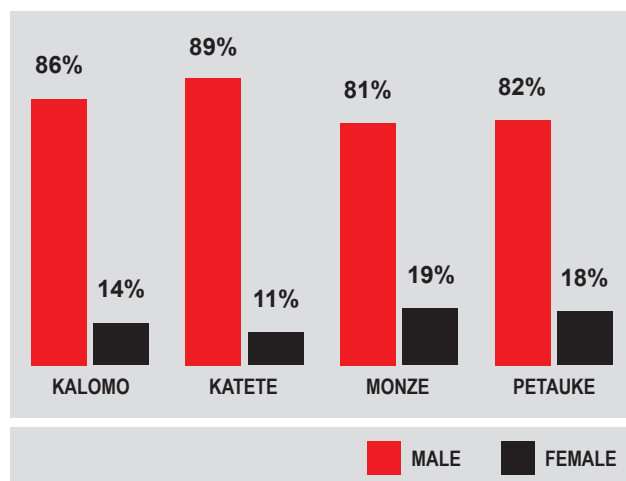
Values in this table (and all others following this) have been rounded to zero decimal places. Because of this, rounding errors may occur and some columns might not add up to 100. E.g. the Katete column adds up to 101. However, the figures rounded to three decimal places are 5.591, 81.789, 4.952, 0.319, 4.633, 2.716, which add up to 100.

Figure 2: RESPONDENT'S RELATIONSHIP TO THE HEAD OF THE HOUSEHOLD



With regards to the relationship of the respondents to the children under 5, 88 per cent of respondents were the child's mother, 5 per cent the child's father, 5 per cent the child's grandmother, 1 per cent the child's aunt, and the remainder was other relations including a mix of siblings, uncles, etc.

Figure 3: SEX OF HEAD OF HOUSEHOLD



2.1.2 Mean age

The overall mean age of respondents during endline was 29 years. There was very little variation across districts from the overall mean age. In fact, expressed to the nearest whole number, each district had a mean age of around 30. See Table 5 below for details.

TABLE 5: MEAN AGE OF RESPONDENTS

Evaluation type	District			
	Kalomo	Katete	Monze	Petauke
Baseline	31	31	33	29
Endline	30	29	30	29

The mean age of respondents' children who had had diarrhoea in the two weeks preceding the survey was 23 months.

2.1.3 Education of respondents

During the endline survey, the highest level of education completed by the greatest proportion of respondents was upper primary (Grade 5 to 7), which accounted for 36 per cent of respondents (was 35 per cent at baseline, see Table 6 for details). This is followed by the junior secondary school category (Grade 8 to 9) with 22 per cent of the respondents (23 per cent at baseline). Eighteen per cent had no formal education beyond Grade 4 (the same

as at baseline), while the percentage of those who had no formal education at all was 17 per cent compared to 15 per cent at baseline. Generally, Katete and Petauke had higher proportions of the population with no formal education than Kalomo and Monze. Southern Province seems to have more educated people than Eastern Province.

TABLE 6: EDUCATION LEVELS OF RESPONDENTS

Eval-uation type	District	Education level (%)						
		Grade 1-4	Grade 5-7	Grade 8-9	Grade 10-12	High-er ed	None	Don't Know
Baseline	Kalomo	13	43	25	9	4	6	0
	Katete	28	25	13	3	1	29	0
	Monze	7	41	38	13	2	0	1
	Petauke	26	32	14	4	1	24	1
	Overall	18	35	23	7	2	15	0
Endline	Kalomo	12	47	27	7	2	5	0
	Katete	31	28	13	3	0	26	0
	Monze	6	39	34	12	4	4	0
	Petauke	23	30	14	2	0	31	0
	Overall	18	36	22	6	1	17	0

2.1.4 Economic status of respondents

In this section, the asset index is used as a proxy for socio-economic status (SES). Because much of the commerce in developing countries is not cash-based and occurs outside the formal economy, measurement of income or consumption is difficult and is thus considered to be an unreliable measure of SES. Researchers, therefore, use 'asset indices' to measure household well-being. Such indices are developed by assessing household ownership of specific items (e.g., radios, bicycles, and cattle), the type of home construction (e.g., earthen versus brick walls, thatched versus metal roofs), location (urban versus rural), and other factors (Barat et al, 2004). Analyses of differential burden or impact of interventions by wealth status often divide households into quintiles based on their asset index. The Principal Components Analysis (PCA) was used to estimate weights for several assets which included farmland, number of rooms in the house, dwelling characteristics, sources of drinking water, type of toilet, source of energy for cooking, and ownership of several other household durables.

The weights for the assets were determined using a formula in the form:

$$A_i = w_1 a_{i1} + \dots + w_K a_{iK}$$

Where A_i is the asset index, a_{iK} are the individual assets, and the w_K are the weights (Sahn, et al., 2003).

It should be noted that the index is specific to our rural study areas and cannot be compared to the urban population, for example (i.e. this is not a national index). As may be noted from the figures below, the proportion of households within each quintile seemed more evenly spread than expected. This may be a case of truncation. Truncation implies a more even distribution of SES, but spread over a narrow range, making differentiating between socio-economic groups difficult (e.g. not being able to distinguish between the poor and the very poor). This is because many households do not own the durable items, have similar access to utilities and infrastructure, and similar housing characteristics, and so will be grouped together. Also, of the households that do own assets, they have the same ones, which make differentiating among them difficult. Clumping or truncation can result from using variables that are unable to distinguish households by SES, or it could reflect that households are in fact homogenous in terms of SES, which was the case in this particular situation. In this regard, the study population seems to be relatively homogenous in terms of SES. As a result, a limitation of our analysis is that it does not allow for distinction between poor and poorest of the poor.

The resulting index⁹ was used to group respondents into quintiles (see Appendix 4 for a *Technical Note on Computation of Wealth Quintiles*). Monze had the highest number of respondents in the upper wealth bracket (36 per cent) followed by Kalomo and Katete (both at 16 per cent– see Table 7). Petauke was at 13 per cent. On the other hand, Petauke had the highest concentration of respondents in the lowest wealth bracket (27 per cent), followed by Katete (25 per cent). Overall, however, the two districts in Southern Province had more respondents in the upper wealth bracket than those in Eastern Province. This finding appears to be consistent with the Living Conditions

Monitoring Survey findings (CSO, 2011) where a bigger percentage of residents in Southern Province had incomes in the higher income bracket than those in Eastern Province.

The pattern of wealth quintiles at endline is similar to the baseline findings. The shifts seen between baseline and endline are somewhat arbitrary. Given the homogeneity of the population (discussed above), these shifts could be expected based on sample variance alone.

TABLE 7: WEALTH QUINTILES BY DISTRICT

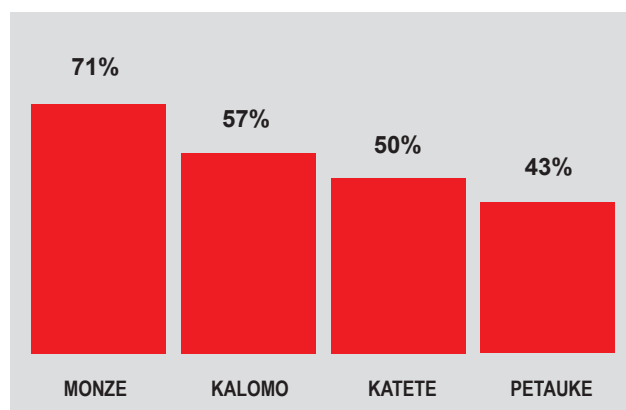
Evaluation type	District	Quintiles (%)					Total
		1st quin-tile	2nd quin-tile	3rd quin-tile	4th quin-tile	5th quin-tile	
Baseline	Kalomo (n=620)	27	16	16	20	21	100
	Katete (n=623)	23	18	20	23	17	100
	Monze (n=611)	17	18	18	22	26	100
	Petauke (n=604)	13	28	26	16	17	100
Endline	Kalomo (n=614)	19	19	25	22	16	100
	Katete (n=626)	25	22	18	20	16	100
	Monze (n=604)	9	13	17	25	36	100
	Petauke (n=633)	27	26	20	15	13	100

Ownership of radios

Given that part of the promotion of Kit Yamoyo was done through radio (started just prior to midline), of relevance to the study findings is radio ownership. There was variation by district for radio ownership. Kalomo and Katete had radio ownership of 57 per cent and 50 per cent respectively. Monze had the highest radio ownership with 71 per cent and Petauke the lowest with 43 per cent (see Figure 4).

9. The weights were calculated using Principal Components Analysis (using SPSS). The resulting index was used to rank households. The households were then put into five groups of 20 per cent each. For each district, the number and percentage of households falling into each group was calculated and that is what is presented in Table 7.

FIGURE 4: OWNERSHIP OF RADIO

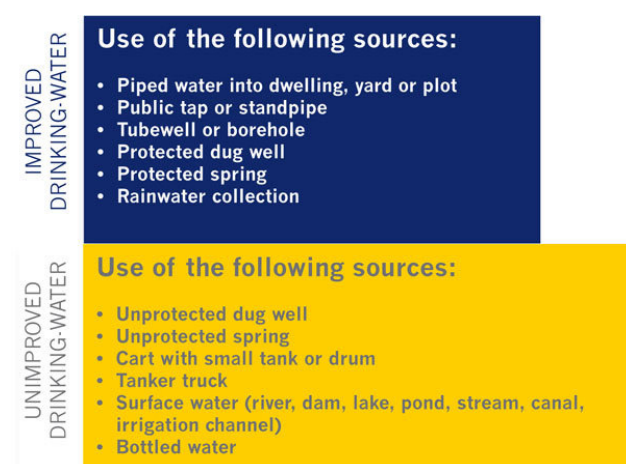


2.1.5 Water source and sanitation facilities

Water sources

Generally, drinking water sources can be categorized as improved and unimproved. The improved sources of drinking water in most communities include: piped water, public tap or standpipe, tube well or borehole, protected dug well, protected spring and rainwater collection. On the other hand, the unimproved drinking water sources include: unprotected dug well, unprotected spring and surface water (see Figure 5 below).

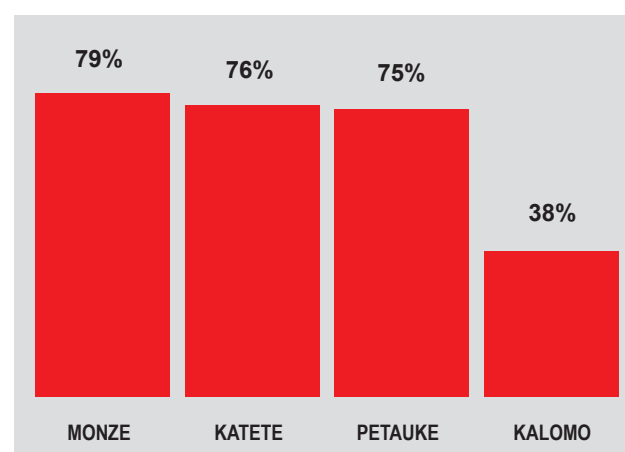
FIGURE 5: IMPROVED AND UNIMPROVED DRINKING WATER SOURCES



*Source: WHO, <http://www.wssinfo.org/definitions-methods/watsan-categories/>

Katete had more than double the respondents who had access to improved water sources compared to their counterparts in Kalomo (76 per cent versus 38 per cent). The proportion of respondents who used improved water sources was 79 per cent and 75 per cent respectively in Monze and Petauke (see Figure 6 for details). Conversely, Kalomo had the highest proportion of respondents (62 per cent) who used water from unimproved sources (see Table 8 and Figure 6).

FIGURE 6: PERCENTAGE OF RESPONDENTS/HOUSEHOLDS WHO USED IMPROVED SOURCES OF WATER BY DISTRICT – ENDLINE



Katete had the highest proportion of households who used water from borehole source at 74 per cent (compared to 78.2 per cent at baseline) while the corresponding value for Kalomo was 35 per cent (against 48.5 per cent at baseline). The difference in the percentage values between the two study points may be attributed to the fact that respondents sampled during endline had other alternative water points nearby which was not the case at baseline (i.e. households were sampled from different communities within the same site). The respective values for the comparator districts were 63 per cent (58.9 per cent at baseline) for Monze and 73 per cent (71.5 per cent at baseline) for Petauke (see Table 8 for details). Aside from Kalomo, no major differences were seen with regard to water source in the other districts.

TABLE 8: MAIN SOURCES OF DRINKING WATER FOR MEMBERS OF HOUSEHOLD – ENDLINE

		Kalomo (%)	Katete (%)	Monze (%)	Petauke (%)
Improved	Borehole	35	74	63	73
	Piped water in public tap	0	0	1	1
	Piped water in residence	1	0	1	
	Protected well	2	2	14	1
Unimproved	River, stream, canal or surface water	10	4	4	13
	Rainwater	0	0	0	0
	Unprotected well	52	19	17	12

Sanitation facilities

Sanitation facilities can also be categorized as improved and unimproved. The improved facilities include: flush or pour flush, ventilated improved pit latrine, pit latrine with slab and composting toilet. On the other hand, the unimproved facilities include: flush or pour-flush to elsewhere, pit latrine without slab/open pit, bucket, hanging toilet/latrine, shared facilities of any type and no facilities/bush/field (see Figure 7 below).

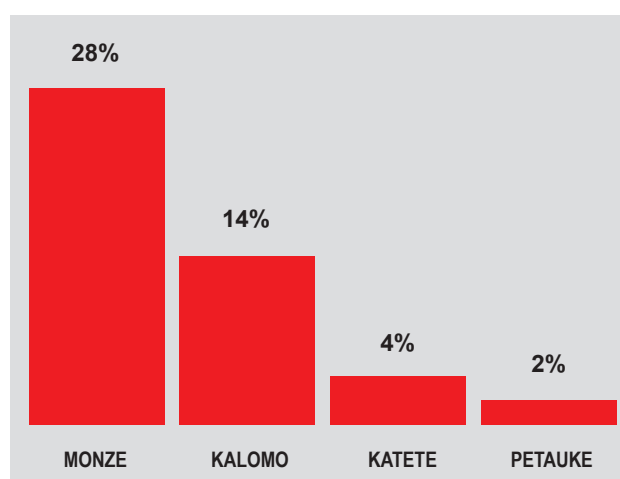
FIGURE 7: IMPROVED AND UNIMPROVED SANITATION FACILITIES



*Source: WHO, <http://www.wssinfo.org/definitions-methods/watsan-categories/>

In general terms, there was a much smaller percentage of households who used improved sanitation facilities as compared to those who used improved water sources in both target and comparator districts. For instance, in the case of Katete, 76 per cent of the households interviewed had access to improved water sources compared to 4 per cent who mostly used improved sanitation facilities. The corresponding figures for Kalomo are 38 per cent and 14 per cent (See Figures 6 and 7 for details).

FIGURE 8: PERCENTAGE OF RESPONDENTS/ HOUSEHOLDS WHO MOSTLY USED IMPROVED SANITATION FACILITIES BY DISTRICT – ENDLINE



Open defecation is a relatively common practice in all districts with 30 per cent (Petauke) to 49 per cent (Katete) of households not having any toilet facilities. The overall most common facility was a pit latrine without a slab (open pit), and this was relatively common in all districts, however, slightly less common in Monze (i.e. more pit latrines in Monze had slabs, see Table 9 for details). What is clear, is that unimproved sanitation facilities seem to be commonplace, pointing to the need for greater efforts in this area (e.g. CLTS).

TABLE 9: SANITATION FACILITIES MOSTLY USED BY MEMBERS OF HOUSEHOLD

		Kalomo (%)	Katete (%)	Monze (%)	Petauke (%)
Improved	Own flush toilet	0	0	0.5	0
	Pit latrine with concrete slab	13	4	26	2
	Ventilated improved pit latrine	1	0	1	0
Unimproved	Shared flush toilet	0		1	1
	Pit latrine without slab/open pit	46	46	25	67
	None/bush/field	40	49	46	30

2.1.6 Diarrhoea prevalence rate

In this study, the diarrhoea prevalence rate is defined as the proportion of children under 5 in the surveyed households who had diarrhoea (three or more loose or watery stools per day) in the two weeks preceding the survey (of all children under 5 in the household). Overall, the diarrhoea prevalence for the treatment districts was 27 per cent at endline, down from 34 per cent at baseline. In the comparator districts, the prevalence rate was 24 per cent at endline, down from 33 per cent at baseline (see Table 10 for details).

At endline, all districts seem to be relatively comparable on diarrhoea prevalence (see Table 10). In Kalomo (treatment district), the prevalence rate was 25 per cent, and the same figure was obtained in its comparator district (Monze). In Katete (treatment district), the prevalence rate was 28 per cent, while in Petauke (comparator district), it was 23 per cent. The decrease in the prevalence rate between the baseline and the endline in Katete (by 9 percentage points) was less than its comparator, Petauke (by 14 percentage points). The decrease in the prevalence in the treatment district of Kalomo (by 6 percentage points) was more than that in the comparator district of Monze (3 percentage points). There was no expected impact on prevalence of diarrhoea, although in the long term, there may be an effect due to the introduction of zinc, which has the potential of conferring protection against reinfection for up to three months after use. Further study will likely explore this potential effect, which may have contributed to reductions in prevalence, although changes seen in the comparator districts suggest other factors are likely to be at play.

TABLE 10: RATE OF DIARRHOEA PREVALENCE

Has your child under 5 had diarrhoea in the two weeks preceding the survey?				
District	Baseline	Endline	Percentage point Change	DiD Estimator (*8DD)
Kalomo	31%	25%	6	-3
Katete	37%	28%	9	5
Overall	34%	27	8	
Monze	28%	25%	3	
Petauke	37%	23%	14	
Overall	33%	25%	9	

Summary on demographics

Demographics in this study are contextual, providing background information to the survey and the variables of interest. No major shifts were expected to occur to their values between the baseline and the endline. They are assessed and presented here to ensure comparability between samples relating to outcomes of interest. No major differences were noted that would impact outcomes of interest, and baseline and endline samples within each district can be considered comparable. Intervention districts and their comparators can also be considered relatively well matched (given a real world situation), and where relevant noted differences have been considered.

The variation in some demographic data between the towns in Southern Province (Kalomo and Monze) and those in Eastern Province (Katete and Petauke) is apparent. Education and wealth stand out. Household heads and respondents in Southern Province towns are generally more educated than their counterparts in Eastern Province. Those in Southern Province also appear wealthier than those in Eastern Province.

2.2 Use

Key question 4:

What indications are there that mothers/caregivers in underserved communities increased the **use** of ORS and zinc for home-based management of diarrhoea in children under 5?

A number of key performance indicators (KPIs) relating to 'use' were identified and tracked at baseline and endline. These KPIs focus on areas important for measuring mothers'/caregivers' use of ORS and zinc for home-based management of diarrhoea in children under 5. These include: use of both ORS and zinc (Kit Yamoyo-combination therapy), and the use of ORS and the use of zinc independently.

2.2.1 Caregivers who used both ORS and zinc as treatment for diarrhoea

Kit Yamoyo contains the WHO/UNICEF recommended combination therapy of low osmolarity ORS sachets (4.2g mini sachets), zinc sulphate (10-day treatment) and a small bar of soap for hand washing.¹⁰

Ever kit users

The ever kit users are all those caregivers of children under 5 who used the kit irrespective of whether or not they had a child who had diarrhea in the two weeks preceding the survey. There were 517 such users. All but one of them (516) were from the treatment (intervention) districts of Kalomo and Katete. The other caregiver who ever used the kit was from Monze. For practical purposes, this is considered an outlier. The Monze caregiver got the kit from a friend, but the origin of the kit must have been from one of the intervention districts.

The 516 caregivers who ever used the kit equates to 42 per cent of the total respondents in the intervention districts (1240) having ever tried the kit over a period of approximately one year. These 42 per cent used at least one of the components of Kit Yamoyo (ORS, zinc or soap). From a district perspective these are broken down as follows: 309 out of the 626 respondents in Katete (about 49 per cent) used at least one of the components of Kit Yamoyo. Similarly, 207 out of 614 caregivers in Kalomo (about 34 per cent) used at least one of the contents of the kit (see Table 11).

TABLE 11: CAREGIVERS IN INTERVENTION DISTRICTS WHO EVER USED KIT YAMOYO

District	Baseline	Endline
Kalomo	0	34% (207/626)
Katete	0	49% (309/614)
Intervention (Katete + Kalomo)	0	42% (516/1240)

10. Berry J, Berry S, Ramchandani R (2013): *Midline Report - ColaLife Operational Trial Zambia (COTZ); June 2013.*

Thus, the overall ever use of Kit Yamoyo by caregivers increased from 0 to 42 per cent between the baseline and endline in the treatment districts.

Caregivers who ever used both ORS and zinc

Of particular interest are those who used combined therapy of ORS and zinc. Note that the previous section discussed those who used at least one item from the kit, not necessarily a combination of ORS and zinc. In fact, they may just have used soap and left out the other items. The fact is that they used something from the kit, irrespective of what it was, and were therefore counted as ever users of the kit. This section specifically looks at those who used both ORS and zinc from the kit to treat diarrhoea.

There were 495 caregivers who had ever used a combined therapy of ORS and zinc from the kit. This is approximately 40 per cent of the total respondents in the intervention districts. There were relatively more caregivers who used both ORS and zinc in Katete than in Kalomo district by endline (302 out of 626 or 48 per cent for Katete and 193 out of 614 or 31 per cent for Kalomo) – see Table 12 below.

TABLE 12: CAREGIVERS WHO EVER USED BOTH ORS AND ZINC FROM KIT YAMOYO

District	Baseline	Endline
	Used both ORS and zinc	Used both ORS and zinc
Kalomo	0	31% (193/614)
Katete	0	48% (302/626)
Treatment (Katete + Kalomo)	0	40% (495/1240)

Caregivers with children under 5 with diarrhoea in past two weeks who used ORS and zinc

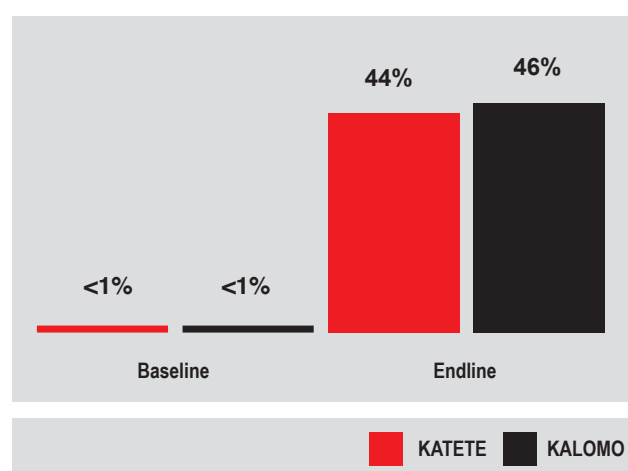
From a public health perspective, of greater interest than ever users are those caregivers of children under 5 who had a child with diarrhoea in the two weeks preceding the survey and used the combined therapy of ORS and zinc to treat that child. There were 369 caregivers in the intervention districts with children under 5 who had diarrhoea in the two weeks preceding the survey. Of these, 175 were from Kalomo and 194 were from Katete. As

indicated in Table 13 and Figure 9 below, the percentages of caregivers with children under 5 with diarrhoea in the past two weeks who used ORS and zinc were 46 per cent and 44 per cent in Kalomo and Katete respectively. Of those caregivers from the intervention districts (Kalomo and Katete) who had a child with diarrhoea in the previous two weeks, 45 per cent overall used both ORS and zinc sulphate at endline.¹¹ At baseline, this figure was less than 1 per cent.

TABLE 13: USE OF ORS AND ZINC AS TREATMENT FOR DIARRHOEA AMONG CHILDREN UNDER 5 IN THE PRECEDING TWO WEEKS

Proportion of caregivers with children under 5 with diarrhoea in the last two weeks who used both ORS and zinc as treatment for diarrhoea			
District	Baseline	Endline	DiD Estimator
Kalomo	<1%	46% (81/175)	45
Katete	<1%	44% (86/194)	44
Total	<1%	45% (167/369)	
Monze	<1%	1% (2/173)	
Petauke	<1%	<1% (1/162)	
Total	<1%	<1% (3/335)	

FIGURE 9: USE OF ORS AND ZINC AS TREATMENT FOR DIARRHOEA (BASELINE VS ENDLINE)



11. Note that this 45 per cent differs from the 40 per cent mentioned earlier in that it refers to those whose children had diarrhea in the two weeks preceding the survey and had used the combined therapy of ORS and zinc, while the 40 per cent refers to all caregivers who ever tried the kit, irrespective of whether or not they had a child with diarrhea in the two weeks preceding the survey.

2.2.2 Caregivers who used ORS as treatment for diarrhoea

The previous section has dealt with the use of ORS and zinc in combination. In this regard, as zinc was predominantly acquired through Kit Yamoyo, combination therapy usage was almost exclusively by those who used kit. In this section, the findings on the use of ORS, irrespective of whether or not it is from the kit, are presented.

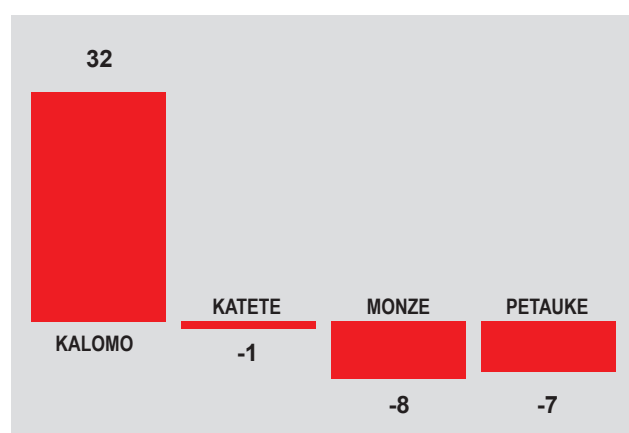
Use of ORS by children under 5 with diarrhoea in the two weeks preceding the survey

No major impact on ORS use was hypothesized, as ORS use was already fairly high at baseline. What was hypothesized was a shift in source and point of access of ORS (see section on ORS source). Nonetheless, the district-based analysis shows that Kalomo experienced a significant increase (p-value = 0.000) in the proportion of ORS use from 50 per cent at baseline to 82 per cent at endline. This represents a 32 percentage point increase. This is contrasted to the comparator district of Monze which saw an 8 per cent decrease in ORS use from 63 per cent at baseline to 55 per cent at endline (though the p-value of 0.8889 from a t-test shows the decrease was not statistically significant). No significant change took place in terms of the proportion using ORS in Katete, where usage seems to have stayed relatively constant. At baseline 71 per cent of those with diarrhoea in the two weeks preceding the survey used ORS and at endline 70 per cent did (p=0.1135). In Petauke, the comparator district for Katete, a statistically significant decline in ORS usage took place from 69 per cent at baseline to 62 per cent at endline (-7 percentage points, P-value =0.0105). See Table 14 and Figure 10 below for details.

TABLE 14: ORS USE IN CHILDREN UNDER 5 WITH DIARRHOEA IN THE TWO WEEKS PRECEDING THE SURVEY

ORS use in children under 5 with diarrhoea in the two weeks preceding the survey					
District	Baseline (n=830)	Endline (n=696)	Percentage points	P-values (endline-baseline difference)	DiD Estimator
Kalomo	50% (114/230)	82% (144/175)	+32%	0.000	40
Katete	71% (174/245)	70% (135/194)	-1%	0.1135	6
Monze	63% (122/194)	55% (95/173)	-8%	0.8889	
Petauke	69% (180/261)	62% (100/162)	-7%	0.0105	

FIGURE 10: ORS USE IN CHILDREN UNDER 5 WITH DIARRHOEA IN THE TWO WEEKS PRECEDING THE SURVEY (CHANGE IN PERCENTAGE POINTS BETWEEN BASELINE AND ENDLINE)



Based on these findings, it can be inferred that ORS utilization rates in children under 5 with diarrhoea stayed more or less constant or increased in the treatment districts, while they declined in the comparison districts. The improvement is particularly pronounced in the treatment district of Kalomo. The notable improvement could be attributed to the following: (i) there was a poor supply of ORS in Kalomo in the public sector prior to COTZ (EMLIP-JSI/USAID project), and (ii) at baseline, Kalomo's use of ORS was significantly lower than the other three districts, at only 50 per cent (which supports the EMLIP data).¹²

12. Discussed further in the COTZ project midline and endline reports.

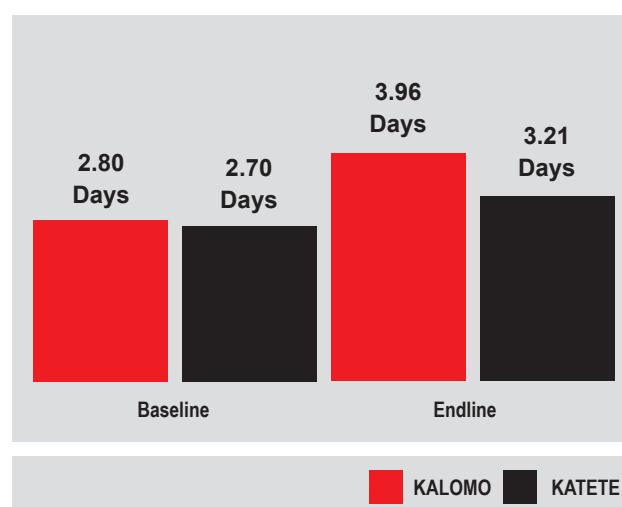
Length of ORS use

The average reported number of days that the caregivers gave ORS solution to their children under 5 who had diarrhoea in the two weeks preceding the survey was 3.55 days for Kit Yamoyo users (at endline). Comparing this to the average length of ORS use in the intervention districts at baseline – 2.75 days – we note an increase in length of use of ORS associated with Kit Yamoyo. Eighty eight percent (88 per cent) of kit ORS users gave ORS for up to a maximum of 5 days. The district-based analysis shows that the average days of ORS use for Kit Yamoyo users was 3.96 days for Kalomo and 3.21 days for Katete, compared to 2.8 days for non-Kit Yamoyo users in Kalomo and 2.7 days in Katete during baseline survey. See Table 15 and Figure 11 below for details.

TABLE 15: AVERAGE DAYS OF ORS USE

District	How many days did you give ORS to the child under 5 who had diarrhoea (ever kit users)?	
	Baseline (non-Kit Yamoyo users)	Endline (Kit Yamoyo users)
Kalomo	2.80	3.96
Katete	2.70	3.21
Total Intervention	2.75	3.55

FIGURE 11: AVERAGE DAYS OF ORS USE: BASELINE VERSUS ENDLINE



These results show that there is an increasing trend in the number of days of usage of ORS. This could imply that ORS is being used for a longer period of time while the child has diarrhoea, thereby decreasing the likelihood of dehydration. The multiple sachets, which each make up smaller quantities of solution, increase the likelihood of the ORS being prepared and used correctly. With 1 litre sachets, it is likely that they do not last as long. If they do, it is likely due to the 1 litre preparation being stored past 24 hours (which increases the likelihood of contamination), or the sachet being prepared in parts (which increases the likelihood of the solution being prepared in incorrect concentration).

Caregivers who prepared ORS solution in the correct concentration

Ideally, the entire contents of the GRZ (1 litre sachet) should be mixed with 1 litre of water. The entire contents of Kit Yamoyo (200 ml) sachet should be mixed with 200ml of water. This is important as it ensures the efficacy of the oral rehydration salts. Of the caregivers who had a child under 5 with diarrhoea in the two weeks preceding the survey and did not use (or had never used) a Kit Yamoyo (n=296), 80 per cent used the entire contents of one GRZ sachet (these would all have been 1 litre sachets) when they prepared ORS, 11 per cent used half of the sachet, while about 4 per cent used less than half of the sachet. Similar proportions (83 per cent, 11 per cent, 4 per cent respectively) were seen in those who did not have a child with diarrhoea in the previous two weeks, but had used ORS previously (excluding those who used Kit Yamoyo, n= 1268).

The amount of water used and the amount of the sachet contents used were cross-tabulated. Of those with a child under 5 with diarrhoea in the past two weeks who did not use Kit Yamoyo, gave ORS, and used 1 full sachet (1 litre GRZ brand from health centre in majority of cases) (n=237), only about 60 to 62 percent used the correct amount of water when preparing the ORS. Similarly, of those without diarrhoea in past two weeks who had never used Kit Yamoyo, but gave ORS to their children previously, and used 1 full sachet (n=1057), about 58–64 per cent used the correct or approximately the correct amount of water.¹³

Based on the above analysis, it can be safely conclude that **about 40 per cent of ORS users who use the entire contents of a sachet (the vast majority from GRZ health centres) when preparing ORS are not using the correct amount of water at home**. This may have important implications in terms of efficacy of the medicines being used.¹⁴ It is clear from these results that a substantial proportion of non-Kit Yamoyo users are administering ORS that is either too diluted or too concentrated. This may have implications on getting the full benefit of the medicine and in some cases, potentially making the diarrhoea worse.¹⁵ This is a matter that needs further research.

When these figures are compared with Kit Yamoyo users, a different picture emerges. Analysis showed that 93 per cent of those who used a full sachet of Kit Yamoyo ORS used the correct amount of water when preparing the solution for their child. Only 7 per cent did not use the correct amount of water when preparing the ORS solution from Kit Yamoyo. Clearly, provision of the container to measure the correct amount of water has significant benefits with regard to the probability of preparing the solution correctly, maximizing efficacy, and reducing risks associated with incorrect preparation.

Source of ORS for those who used ORS

The sources of ORS in the surveyed districts were health centres (GRZ), private rural retailers selling the ColaLife Kit Yamoyo and to a much smaller degree, other private outlets (e.g. chemists in urban areas selling the Novalyte brand). At baseline, almost all ORS was sourced from health centres. However, at endline, 62 per cent of caregivers in the treatment group (Kalomo and Katete) who gave ORS to their children under 5 used ORS from Kit Yamoyo. With the exception of one caregiver in Monze who had obtained a Kit Yamoyo, all ORS in the comparators was sourced from health centres.

13. Though direct measurements of water used were provided in the majority of cases, in some cases only a description of the container was provided, leading to an approximation of the amount of water used. The resulting proportion that prepared solution incorrectly is conservative.

14. The acceptable sodium concentrations for ORS solution is 30–120mmol (A decision process for establishing policy on fluids for home therapy of diarrhoea. Unpublished document WHO/CDD/SER/87.10)

15. Barroos, FC et al. Management of childhood diarrhoea at the household level: A population-based survey in north-east Brazil. Bull World Health Organ. 1991; 69(1): 59–65.

Table 16 shows the various sources of ORS by district. At baseline, 98 per cent of caregivers in Kalomo who gave ORS to their children under 5 sourced it from a GRZ-related source (clinic or community health worker), while 2 per cent got it from some other private source. Similarly for Katete, at baseline, 98 per cent of caregivers sourced it from a GRZ-related source (clinic or community health worker), while 2 per cent got it from some other private source. In Monze and Petauke, all caregivers obtained the ORS from a GRZ-related source (health centre or community health worker). At endline, there was a clear shift in the source of ORS for Kalomo and Katete (the intervention districts), while the situation remained almost unchanged in Monze and Petauke. Thus, 48 per cent of caregivers in Kalomo obtained the ORS from a GRZ source, down from 98 per cent at baseline. A majority of caregivers in Kalomo (58 per cent) shifted to a new source – rural private retailers selling the Kit Yamoyo brand of ORS.¹⁶ Similarly for Katete, 47 per cent of caregivers obtained the ORS from a GRZ source, also down from 98 per cent at baseline. Sixty six per cent of Katete ORS users sourced from private rural retailers selling the Kit Yamoyo brand of ORS.

TABLE 16: SOURCE OF ORS BY DISTRICT FOR THOSE WHO USED ORS

District	Baseline		Endline		
	GRZ	Other	GRZ	KYM	Other
Kalomo	98% (109/111)	2% (2/111)	48%(69/144)	58%(84/144)	0.7%(1/144)
Katete	98%(169/172)	2%(3/172)	47%(63/135)	66%(89/135)	1.5%(2/135)
Monze	100%	0	100%	1%(1/95)	11%(10/95)
Petauke	100%	0	100%	0	0

Individuals may get ORS from multiple sources

2.2.3 Use of zinc as treatment for diarrhoea

At endline, the proportion of caregivers with children less than 5 years of age with diarrhoea in the past two weeks before the survey who used zinc was 46 per cent in Kalomo and 44 per cent in Katete (Table 17). This is contrasted with the baseline findings that showed that only less than 1 per cent of caregivers used zinc to treat diarrhoea. Readers will notice that these are the same percentages as those who used both zinc and ORS as given in Table 13 above. This is on account of the fact that

there were more caregivers who used ORS than zinc and therefore the combined use of ORS and zinc inevitably equates to zinc use, as zinc was the limiting factor.

TABLE 17: USE OF ZINC AS TREATMENT FOR DIARRHOEA AMONG CHILDREN UNDER 5 IN THE PRECEDING TWO WEEKS

Proportion of caregivers with children under 5 years of age with diarrhoea in the last two weeks who used zinc as treatment for diarrhoea			
District	Baseline	Endline	DiD Estimator
Kalomo	<1%	46% (81/175)	45
Katete	<1%	44%% (86/194)	44
Total ^f	<1%	45% (167/369)	
Monze	<1%	1% (2/173)	
Petauke	<1%	<1% (1/162)	
Total ^g	<1%	<1% (3/335)	

It should be noted that the data on the use of zinc in the two weeks preceding the survey may slightly underestimate the use of zinc from health centres, as many mothers still do not know the term 'zinc'. It may not have been mentioned/explained to them when prescribed by the health centres, nor properly identified by that name during promotional campaigns. The term 'pill' was more commonly used (*ma pilisi in Nyanja*), although an attempt was made to remedy this after midline (i.e. provision of picture). That said, we also know from discussions with health facilities that stock outs of zinc were very common, and that it was rarely being prescribed for diarrhoea even when it was available. This trend seems to be slowly changing, as health workers undergo training in community case management.

Correct use of zinc

The globally recommended zinc regimen is 1 tablet per day for 10 days in children over 6 months. Among Kit Yamoyo users, it was found that overall, one third or 33 per cent (163/496) gave zinc for 10 days. At district level, Kalomo had 46 per cent (89/194) correct adherence while Katete had 25 per cent (74/302) who followed the proper regimen (see Table 18 and Figure 12 below).

¹⁶ Note that at endline, multiple sourcing was possible and therefore the percentages do not add up to 100.

TABLE 18: PROPORTION OF CAREGIVERS WHO ADHERED TO RECOMMENDED ZINC REGIMEN (1 TABLET PER DAY FOR 10 DAYS) AMONG KIT YAMOYO USERS

District	Baseline		Endline	
	%	No. of caregivers	%	No. of caregivers
Kalomo	0	0	46	89
Katete	0	0	25	74
Monze	0	0	0	0
Petauke	0	0	0	0
Total	0%	0	33%	163

FIGURE 12: PROPORTION OF CAREGIVERS WHO ADHERED TO RECOMMENDED ZINC REGIMEN (1 TABLET PER DAY FOR 10 DAYS) AMONG KIT YAMOYO USERS (%)

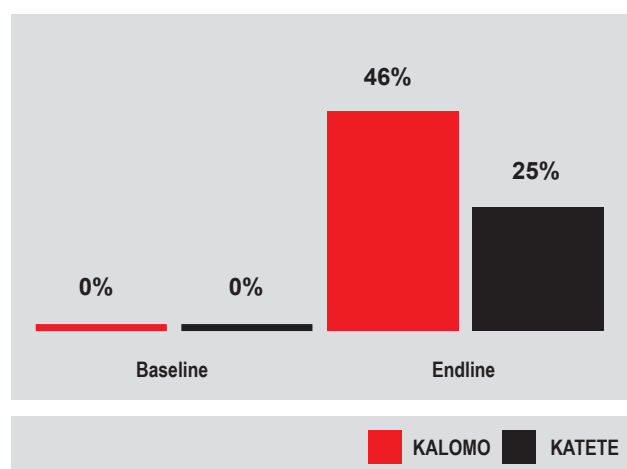
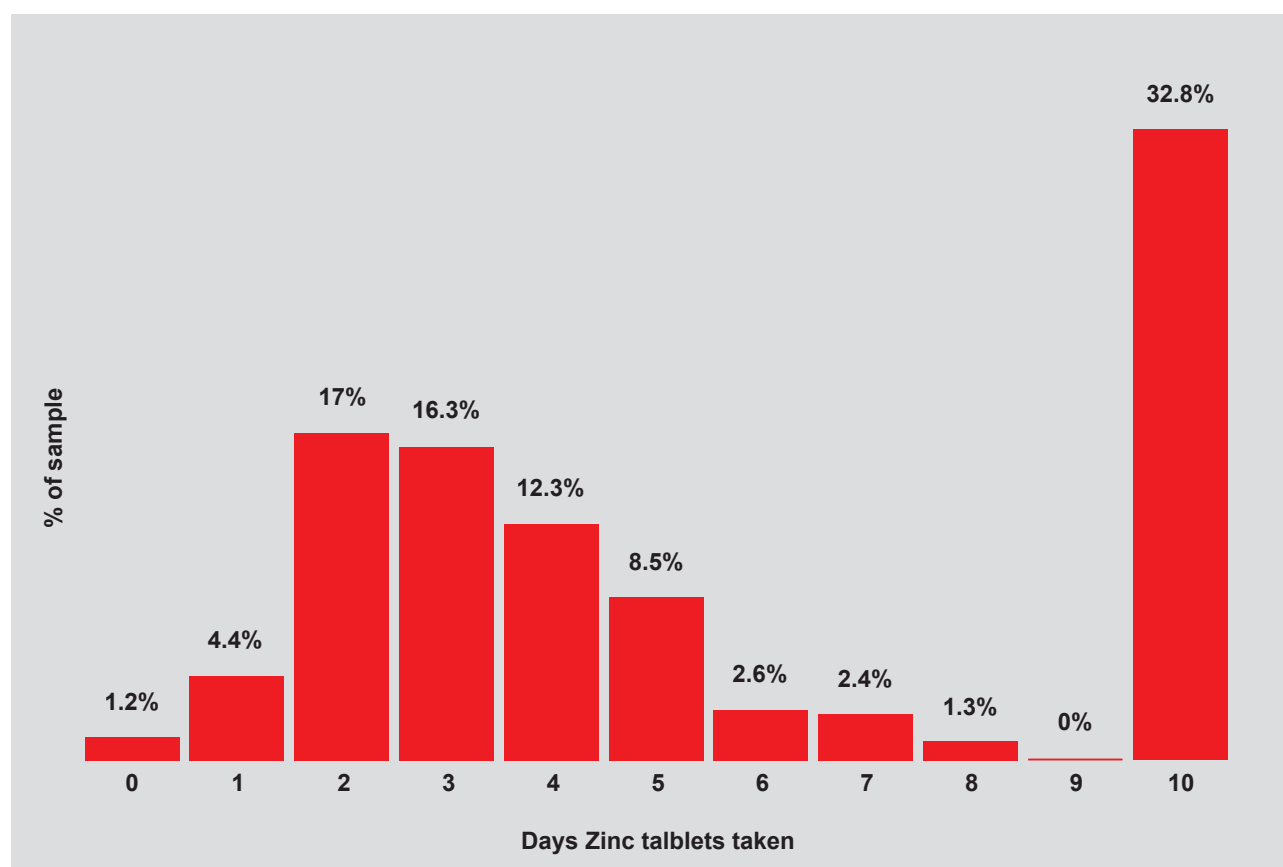


TABLE 19: DAYS OF ZINC USE FROM THE START OF DIARRHOEA TREATMENT FOR CHILDREN UNDER 5 WITH DIARRHOEA IN THE TWO WEEKS PRECEDING THE SURVEY

Number of days	Kalomo	Katete
0 days	1%	1%
1 day	3%	6%
2 days	6%	24%
3 days	11%	19%
4 days	11%	13%
5 days	13%	6%
6 days	5%	1%
7 days	3%	2%
8 days	2%	0
9 days	0	0
10 days	46%	25%

Table 19 and Figure 13 below present detailed distribution of days of zinc usage. It is clear that the deviations from the correct usage (10 days) were more pronounced in Katete than Kalomo. For instance, in Katete, those who took zinc for two days only were a sizeable proportion, i.e. 24 per cent compared to 6 per cent in Kalomo.

FIGURE13: NUMBER OF DAYS A CHILD USED ZINC – ENDLINE



The proportion of the sample that adhered to the correct utilisation of zinc for Kalomo is about two times that of Katete. Overall the analysis demonstrates that there will still be a need for messaging on adherence to the recommended regimen among Kit Yamoyo users, as well as exploring other innovative mechanisms for improving adherence to the recommended regimen. Although taking the correct dosage of zinc for 10 to 15 days is optimal (as per the global recommendation from WHO and UNICEF) to ensure reduced duration, severity, and preventive effects over the subsequent three months, there is evidence to suggest that even a five-day treatment is as efficacious in achieving some of these benefits.¹⁷

Summary on use

Five important points on use are worth highlighting:

- (i) The recommended combined use of ORS and zinc for treatment of diarrhoea has seen a significant increase

from less than 1 per cent at baseline to 45 per cent at endline by caregivers who had a child with diarrhoea in the two weeks preceding the survey for the treatment districts of Kalomo and Katete.

- (ii) About 40 per cent of ORS users who use the entire contents of a 1 litre sachet (the vast majority from health centres) when preparing ORS are not using the correct amount of water at home. On the other hand, an analysis of Kit Yamoyo users shows that only 7 per cent are not using the correct amount of water at home when preparing the solution for their child. This shows that provision of the container helps caregivers to measure the correct amount of water, which in turn increases the probability of preparing the solution correctly.
- (iii) Focusing only on treatment districts (where Kit Yamoyo was available) at endline, of those caregivers with children who had diarrhoea in the two weeks preceding

17. Alam D.S. et al. 'Zinc treatment for 5 or 10 days is equally efficacious in preventing diarrhoea in the subsequent 3 months among Bangladeshi children'. *J Nutr.* 2011;141:312–5.

the survey, who actually used ORS in the intervention districts, 62 per cent of ORS access occurred in the private sector from Kit Yamoyo. This suggests that there has been a clear shift in the source of ORS from government health centres to the private sector in the treatment districts.

(iv) There was a dramatic increase in caregivers who used zinc for treatment of diarrhoea, from close to zero at baseline to 45 per cent at endline. The district analysis for Kalomo and Katete were 46 per cent and 44 per cent respectively. This suggests a positive impact of the project with respect to the promotion of zinc in the treatment of diarrhoea in the two districts.

(v) At endline, one third (or 33 per cent) of those who used zinc utilized it correctly (i.e. for 10 days). The district analysis percentage values were 46 per cent and 25 per cent for Kalomo and Katete respectively. The findings suggest the need for better messaging related to zinc adherence. It should also be noted that there is no risk associated with not adhering to the proper regimen as there is with antibiotics (which are often prescribed in the public sector for diarrhoea).

2.3 Access

Key question 3:
What effect does the project have on mothers'/caregivers' access to ORS and zinc, for home-based management of diarrhoea in children under 5?

In the context of COTZ, access is defined as ADKs being in the hands of an aware mother/caregiver. That is, the caregiver knows it is there, has the means to acquire it and does so at the right time. KPIs relating to 'access', which were identified and tracked at both baseline and endline, include treatment delay and cost of Kit Yamoyo. The idea here is to measure the mothers'/caregivers' access to ORS and zinc for home-based management of diarrhoea in children under 5.

2.3.1 Treatment delays

For caregivers with children under 5 who had diarrhoea in the preceding two weeks to the survey, and sought treatment at a health centre (non-Kit Yamoyo users), the

average number of days taken by a mother/caregiver to provide ORS from the onset of diarrhoea was 1.24 days (at endline) compared to 1.9 days during the baseline. On the other hand, the average number of days taken by a mother/caregiver to provide Kit Yamoyo (access at local retailer) from the onset of diarrhoea was 1.25 days at endline (see Table 20 below).

TABLE 20: TREATMENT DELAYS (AVERAGE DAYS) FOR NON-KIT YAMOYO AND KIT YAMOYO USERS

How many days after the diarrhoea began did the child under 5 get ORS?		
Type of user	Baseline	Endline
Non-Kit Yamoyo users	1.9	1.24
Kit Yamoyo users	NA	1.25

The declining levels in treatment delay are seen in both treatment and comparator districts. The treatment delay at endline in Kalomo and Katete for Kit Yamoyo users was 1.11 and 1.35 days respectively. When compared with the baseline values for the non-Kit Yamoyo users, Kalomo had treatment delay of 2.41 days and Katete had 1.72 days.

As for the comparator districts of Monze and Petauke, the average treatment delays for the non-Kit Yamoyo users were 1.42 and 1.05 days respectively (at endline), compared to 2.20 and 1.62 days respectively (at baseline). See Table 21 for details.

TABLE 21: TREATMENT DELAY DAYS FOR NON-KIT YAMOYO AND KIT YAMOYO USERS BY DISTRICT

How many days after the diarrhoea began did your child first get ORS/ use Kit Yamoyo?				
District	Baseline	Endline		DiD Estimator
	Average days (non-Kit Yamoyo users)	Average days (non-Kit Yamoyo users)	Average days (Kit Yamoyo users)	
Kalomo	2.41	1.02	1.11	-0.52
Katete	1.72	1.52	1.35	0.37
Monze	2.20	1.42	N/A	
Petauke	1.62	1.05	N/A	
TOTAL	1.93	1.24	1.25	

It is therefore evident that there has been a general reduction in treatment delay for both treatment and comparator districts from an average of two days (at baseline) to one day (at endline).¹⁸ There is a possibility that the use of radio messages may have positively impacted on the reduction in treatment delays in comparator districts as the coverage of the radio messages could not necessarily be confined to treatment districts only. There could have been some other spill-over effects from the treatment to comparator districts that may have affected treatment delays in comparator districts. However, notwithstanding this discussion and though a difference in treatment delay was seen at midline, there is insufficient evidence to attribute the change to the project at endline. In addition, the average treatment effect for Kalomo versus Monze is negative, while that of Katete versus Petauke seems to be positive, making a clear interpretation of effect on treatment delay difficult.

In addition, 66 per cent of Kit Yamoyo users said they would have tried Kit Yamoyo without a voucher, while 34 per cent said they would not have. This is important for the sustainability of the COTZ interventions even after the project life as two thirds of the caregivers who used Kit Yamoyo were willing to pay for Kit Yamoyo without the aid of the voucher system.

2.3.3 Other expenses

An assessment was undertaken on other expenses incurred when going to the health centre for the caregivers whose children under 5 had diarrhoea in the previous two weeks as well as those caregivers whose children had not had diarrhoea in the previous two weeks. For those with diarrhoea in the previous two weeks, on average they spent K2.18 on transport to the health centre (15 per cent) while the majority (85 per cent) did not spend anything on transport as they walked. The same category of caregivers

TABLE 22: RETAIL PRICE OF KIT YAMOYO (ENDLINE)

What do you think of the retail price of Kit Yamoyo (5,000 Kwacha or 5 KR)?							
District	Not expensive	Affordable	Expensive	Too expensive	No opinion	Don't know	Total
Kalomo	13 (6%)	141 (68%)	36 (17%)	14 (7%)	1	2 (1%)	207
Katete	8 (3%)	171 (55%)	105 (34%)	19 (6%)	0	6 (2%)	309
Total	21 (4%)	312 (60%)	141 (27%)	33 (6%)	1 (0.2%)	8 (2%)	516 (100%)

2.3.2 Cost of Kit Yamoyo

The cost of Kit Yamoyo was KR 5 (rebased Zambian Kwacha) at the time of endline survey. Of the Kit Yamoyo users (n=517), 34 per cent thought that the retail price of KR 5 was either expensive or too expensive while 64 per cent thought it was either not expensive or affordable. See Table 22 for details. In addition, the trend from midline to endline might suggest that as vouchers became less available in the system, the price of the kit became more acceptable.

spent on average K2.42 on food/drink during a trip to the health centre (28 per cent) while the rest (72 per cent) did not spend anything on food.

On the other hand, those with children without diarrhoea in the last two weeks preceding the survey spent on average K2.62 on transport (by 22 per cent) while the majority (78 per cent) did not spend anything on transport to get to the health centre given that they walked. The same category of caregivers spent an average of K2.7 on food/drink during hospital visits (by 38 per cent) while 62 per cent didn't spend anything on food/drink.

18. It is known from EMLIP data and conversation with health centre personnel that public sector stocks of ORS were poor around the time of baseline; therefore it is possible that mothers/carers put off the journey to the health centre, as it was commonly known that ORS was out of stock.

Summary on access

Three major issues are worth noting:

- (i) The perceptions of Kit Yamoyo users/caregivers regarding the cost of Kit Yamoyo indicates that close to two thirds (64 per cent) considered Kit Yamoyo to be accessible as indicated by those who said Kit Yamoyo was either 'not expensive' or 'affordable'. The perception of affordability seemed to increase between midline and endline. More detailed information on willingness to pay for Kit Yamoyo is contained in COTZ Final Report of January 2014.
- (ii) The majority of caregivers did not spend anything on transport (85 per cent) or food/drink (72 per cent) when going to the health centre as they walked and ate/drank nothing. The respective corresponding percentage values for the caregivers with children without diarrhoea in the same period were 78 per cent and 62 per cent (based on a larger sample size).
- (iii) There has been a general reduction in treatment delay for both treatment and comparator districts from an average of approximately two days (at baseline) to approximately one day (at endline).

2.4 Availability

Key question 2:
To what extent can leveraging the secondary distribution chain for products such as Coca-Cola improve availability of ORS and zinc via 'last mile' retailers in underserved, rural areas? (i.e. ADKs in stock in retail outlets at community level; high quality and effective medicines closer to home in sufficient quantities).

2.4.1 Distance to Kit Yamoyo source

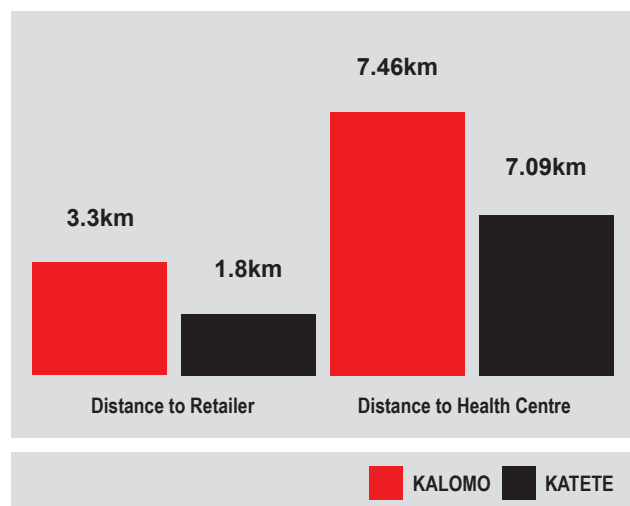
Both at midline and endline, the caregivers were asked how far from their household the ORS/zinc access point was located. In the intervention districts, at midline, vouchers were given to individual caregivers after conducting the interviews. GPS locations were recorded for the household, and for the location of the retailer where the voucher was redeemed. This allowed for a precise Euclidean distance calculation. When the distances reported/estimated by caregivers were compared to the Euclidean distances, they were in fact, very much in line, thus providing more confidence in the estimated distance provided by caregivers.

At endline, results show that caregivers who accessed ORS from health centres (non-Kit Yamoyo users) traveled a mean reported distance of 7.3 km. On the other hand, Kit Yamoyo users had traveled a mean reported distance of 2.41 km (to retail shops). At endline, the district analysis shows a mean travel distance (to retail shops) of 3.3 km for Kalomo and 1.8 km for Katete (see Table 23 and Figure 14 below). In both cases, there was a reduction in the travel distances for Kit Yamoyo users, implying that the project has made it easier for caregivers with children under 5 with diarrhoea to obtain ORS as more retail shops at endline had begun to sell the kit. Note that reported distances at endline were in line with the Euclidean distances measured by GPS at midline.

TABLE 23: DISTANCE TO ORS/ZINC ACCESS POINT (ENDLINE)

District	Mean estimated distance to retailer access	Mean estimated distance to health centre access
Kalomo	3.3 km	7.46 km
Katete	1.8 km	7.09 km
TOTAL	2.41 km	7.30 km

FIGURE 14: AVERAGE ESTIMATED DISTANCE IN KM TO ORS/ZINC ACCESS POINT (ENDLINE)



Summary on availability

The project has had a positive impact on the availability of ORS and zinc for caregivers/mothers as is evidenced by the reduction in distance to ORS/zinc access points. For instance, at endline, the reported overall mean distance traveled by caregivers to retail shops that stock ORS/zinc was more than two times less compared to the distance to health centres. This has likely played a role in the reduction in treatment delay, although a general reduction in both treatment and comparator districts was seen. Reductions seen in comparator districts may be a result of spillover effects related to radio messaging in the comparators as well, but further research would be required to assess this. This suggests that the project has made it easier for caregivers to obtain ORS/zinc once their children have diarrhoea.

2.5 Awareness, promotion, messaging and knowledge

Key question 1:

What effect does the COTZ project have on awareness of ORS and zinc, their benefits, their contents and how to use them, among mothers/caregivers of children under 5?

This section focuses on caregivers' awareness and knowledge of ORS, zinc, and related matters.

The knowledge about ORS among caregivers whose children had diarrhoea two weeks preceding the survey was relatively high (i.e. above 90 per cent on average) at baseline. Consequently, the project was not designed to enhance awareness of ORS among caregivers. Awareness of ORS was already high as noted by the COTZ Baseline Report, which stated that "clinics in all of the districts were found to be active in sensitizing women about the use of ORS". However, in treatment districts, caregivers' (who had a child with diarrhoea in the two weeks preceding the survey) perceptions on the effectiveness of ORS in treating diarrhoea has notably increased by 14 percentage points on average from 78 per cent over the past year, to 92 per cent, while in comparator districts there was a non-significant increment of 3 percentage points (See Table 24 below). This suggests that the project has made a positive contribution in enhancing perceptions of caregivers on the effectiveness of ORS in treating diarrhoea. This is likely attributable to the fact that a greater proportion of caregivers are preparing the ORS correctly (i.e. in the correct concentration), thereby increasing the possibility of efficacy of the medicine. Combining the ORS with zinc therapy may also contribute to this perception. The orange flavouring of the ORS may also contribute to children consuming the solution more readily. Previous research would also suggest that a private sector product (that people pay for) might be perceived as being more effective (and more valued) than a product that is free through the public sector.

TABLE 24: PERCEPTION OF EFFECTIVENESS OF ORS AMONGST MOTHERS WITH CHILDREN UNDER 5 WITH DIARRHOEA

Evaluation Type	District	Do you think ORS treatment is effective in treating diarrhea?			DiD Estimator
		Don't know (%)	No (%)	Yes (%)	
Baseline	Kalomo (n=205)	4	23	73	21
	Katete (n=239)	6	11	82	6
	Overall for intervention	5	17	78	
	Monze (n=189)	2	8	91	
	Petauke (n=257)	10	17	73	
	Overall for comparator	7	13	80	
Endline	Kalomo (172)	2	9	90	
	Katete (192)	0.5	5	94	
	Overall for Intervention	1.3	7	92	
	Monze (172)	5	8	87	
	Petauke (160)	4	17	79	
	Overall for comparator	5	13	83	

2.5.1 Awareness of zinc

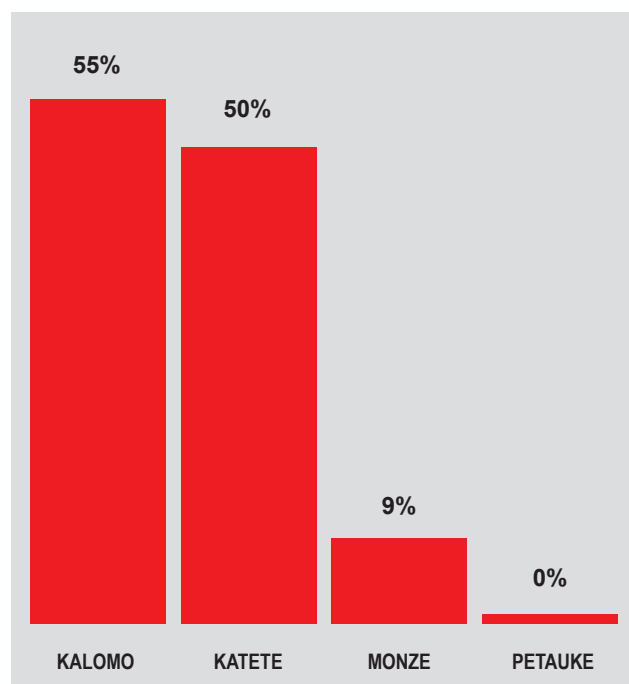
At baseline, though very few caregivers in the treatment districts knew about zinc as a treatment for diarrhoea in children under 5 due to the fact that it is a new product, at endline this was not the case anymore. For instance, the proportion of those who knew about zinc in Kalomo increased by 55 percentage points, from 2 per cent at baseline to 57 per cent at endline. Similarly, the proportion of those in Katete who knew about zinc increased by 50 percentage points, from 1 per cent at baseline to 51 per cent at endline. The increase in percentage points over the same period in the two comparator districts of Petauke and Monze was 9 and 0 percentage points respectively. See Table 25 for details.

TABLE 25: AWARENESS OF ZINC AMONGST THOSE WITH A CHILD WHO HAD DIARRHOEA IN THE PRECEDING TWO WEEKS

Have you ever heard about zinc as a treatment for childhood diarrhoea?				DiD Estimator
District	Baseline (%)	Endline (%)	Change (Percentage points)	
Kalomo	2	57	55	46
Katete	1	51	50	50
Monze	1	10	9	
Petauke	2	2	0	

Figure 15 provides a graphic presentation of the change in percentage points between treatment and comparator districts, which shows a glaring difference between the two.

FIGURE 15: AWARENESS OF ZINC AMONGST THOSE WITH A CHILD WHO HAD DIARRHOEA IN THE PRECEDING TWO WEEKS (PERCENTAGE POINTS CHANGE BETWEEN BASELINE AND ENDLINE)



In both treatment districts, two benefits of zinc were cited the most by caregivers of children under 5 who used Kit Yamoyo: (i) “Zinc is appropriate treatment for diarrhoea” cited by 58 per cent and 55 per cent in Kalomo and Katete respectively, and; (ii) “A complete 10-day course should be administered” cited by 55 per cent and 27 per cent in Kalomo and Katete respectively (see Table 26 below). The latter gives an average of 41 per cent caregivers in the treatment districts who knew about the need to administer a complete 10-day course for zinc. It is not surprising that those who had the correct utilization of zinc (i.e. 1 tablet per day for 10 days) were less than 41 per cent (i.e. 33 per cent, see Table 18) given that adoption usually lags behind knowledge/awareness. Knowledge relating to the benefits of zinc seems to have been better in Kalomo than in Katete.

TABLE 26: PROPORTION OF CAREGIVERS WHO KNEW THE BENEFITS OF ZINC (KIT YAMOYO USERS) IN THE INTERVENTION DISTRICTS

Benefits of zinc	Kalomo (207)	Katete (309)
Zinc reduces the duration of the diarrhoeal episode	36%	8%
Zinc reduces the severity of diarrhoea	46%	18%
The risk of new episode in the future is reduced	30%	1%
Zinc is available in health centres	3%	0%
Zinc should be taken with ORS/ORT	26%	5%
A complete 10-day dose should be administered	55%	27%
Zinc is an appropriate treatment for diarrhoea	58%	55%
Zinc is a micronutrient	16%	1%
Zinc is used for malnutrition	27%	0.3%

Kit users who said they had heard of zinc prior to learning about Kit Yamoyo were 31 per cent while 69 per cent had never heard about zinc as treatment for diarrhoea prior to Kit Yamoyo. Ninety four percent of caregivers who used Kit Yamoyo noted that it was the first time their child had ever taken zinc for diarrhoea. This figure should be taken with caution, given that many caregivers just don't know zinc by name, and a small minority may have been prescribed zinc previously but didn't know what medicine they were specifically taking. That said, as mentioned, where this was the case, it would have been on a very small level, if at all.

2.5.2 Awareness of Kit Yamoyo

With regard to the key messages obtained from the promotion events, Kit Yamoyo users cited the listed promotional message without prompting as shown in Table 27. In Kalomo, the two highest proportions were linked to: use ORS and zinc together to treat diarrhoea (72 per cent) and give 1 tablet of zinc per day (70 per cent). In Katete, the same two messages had the highest proportion of Kit Yamoyo users citing them with “Use ORS and zinc together to treat diarrhoea” (46 per cent) and “Give 1 tablet of zinc per day” (49 per cent), see Table 27 for details. While we would expect the first message in the table below to align with the fifth benefit listed in Table 26 above, as do other overlapping messages, the discrepancy may be due to the differing format/ comprehension of the questions posed.

container full of water (13 per cent); and 1 tablet of zinc per day (10 per cent). The lowest proportion was “Give ORS after each watery stool/loose motion (0.3 per cent)”.

TABLE 27: KEY PROMOTIONAL MESSAGES AMONG KIT YAMOYO USERS¹⁹

Key promotional messages	Proportion of Kit Yamoyo users citing key messages by district		
	Kalomo (n=207)	Katete (n=309)	Total/ Average (n=516)
Use ORS and zinc together to treat diarrhoea	72%	46%	56%
Can buy Kit Yamoyo at local shop	31%	39%	36%
Mix 1 Kit Yamoyo ORS sachet with one kit full of water	35%	43%	40%
Give 1 tablet of zinc per day	70%	49%	57%
Finish all ten pills of zinc	48%	21%	32%
Give ORS after each loose motion/ liquid stool	37%	1%	16%
Wash hands with soap	61%	34%	45%
Give antibiotic	0	0	0
Give more than usual amount of fluids	2	1%	1%
Continue breastfeeding	6%	1%	3%
Take to clinic/health centre when danger signs arise (i.e. blood in stool, severe dehydration, vomiting, fever, etc)	16%	0	7%

In Kalomo, the proportion of Kit Yamoyo users who described key steps related to Kit Yamoyo usage at endline were highest for the following steps: wash hands prior to preparing (39 per cent); 1 tablet of zinc per day (39 per cent), and ensure water is clean/purify water/boil water (38 per cent). On the other hand, the lowest proportion in Kalomo with regards to key steps related to Kit Yamoyo usage was “Shake to mix contents of sachet with water with lid on” (21 per cent), see Table 28 for details.

The corresponding highest proportions in Katete were linked to the following: wash hands prior to preparing (13 per cent); mix contents of 1 full sachet with Kit Yamoyo

TABLE 28: KEY STEPS RELATED TO KIT YAMOYO USAGE – ENDLINE

Key steps related to Kit Yamoyo usage	Proportion of Kit Yamoyo users who described the process by district		
	Kalomo	Katete	Intervention Average
Wash hands prior to preparing	39%	13%	26%
Remove seal	30%	9%	20%
Mix contents of 1 full sachet with Kit Yamoyo container full of water	30%	13%	22%
Ensure water is clean/purify water/boil water	38%	9%	24%
Shake to mix contents of sachet with water with lid on	21%	5%	13%
Let boiled water cool before pouring into Kit Yamoyo	33%	6%	20%
Give ORS after each watery stool/loose motion	28%	0.3%	28%
One tablet of zinc per day	39%	10%	25%
Zinc tablets to be taken for 10 days	33%	4%	19%

Summary on awareness

Caregivers' perceptions in treatment districts on the effectiveness of ORS in treating diarrhoea has gone up by 14 percentage points on average in the past one year (i.e. baseline to endline), from 78 per cent to 92 per cent. On the other hand, little variation has been noticed in comparator districts as the percentage only marginally increased from 80 per cent to 83 per cent during the same period. This suggests that the project has made a contribution towards increasing caregivers' perception of the effectiveness of ORS. The increased perception could have been partly as a result of improved preparation of ORS concentrations as well as the combination of zinc and ORS therapy in the treatment of diarrhoea in children under 5, among other factors.

19. Unprompted

There has been a considerable increase in awareness by caregivers in terms of zinc treating diarrhoea, which clearly may be attributable to the project. In Kalomo, the proportion of caregivers who knew about zinc as treatment for diarrhoea increased by 55 percentage points, from 2 per cent at baseline to 57 per cent at endline. In Katete, the proportion increased by 50 percentage points from 1 per cent at baseline to 51 per cent at endline. The situation in the comparator districts of Monze and Petauke was totally different as the increase was marginal at 9 percentage points for Monze and no increase at all for Petauke. Messaging/knowledge seems to have been better in Kalomo versus Katete and any differences in promotion between the two intervention districts should be explored further during any potential next phase.

The two promotional messages that were cited the most cited in both Kalomo and Katete were: "Zinc is an appropriate treatment for diarrhoea", by 58 per cent and 55 per cent respectively. The other message was "Give 1 tablet of zinc per day", by 55 per cent and 27 per cent for Kalomo and Katete respectively. Both of these messages are critical to effective treatment of diarrhoea.

Retailer Survey Findings

This section presents findings from the retail survey. The retail survey ran concurrently with the household survey. Retailers are a fundamental component of the COTZ project in its strategic thrust. They are not only the channel through which Kit Yamoyo passes to eventually find itself in the hands of mothers and caregivers in rural underserved communities, but also an important conduit for both market and product use sensitization information. With regard to project management, the retailer survey provided excellent contextual information that is useful for both operational and strategic decisions. On account of small numbers, absolute figures have been used in this section of the report although proportions are also presented from time to time.

2.6 Retailer demographics and shop characteristics

An overwhelming majority of shops (over 80 per cent) described themselves as grocery shops (see Table 29). The remainder included hardware, drug store, clothing shop, general store and tavern. Grocery shops generally sell products in the fast moving consumer goods (FMCGs) category that involve customers making frequent, repeat purchases and therefore have frequent contacts with the seller. These frequent visits and contacts with shopkeepers are potentially advantageous in getting a new product – like Kit Yamoyo – known to customers and para-skilling retailers to pass along basic information/ messages. The type of shop should, therefore, expectedly have an (indirect) influence on awareness, access and use. The study noted that 56 out of 77 participating retailers (73 per cent) in treatment districts were registered with their local council while the remainder was not. Of those retailers that were interviewed, just over two thirds were the owner; just under a third was family members and the remainder was employees. The majority of the owners were male (three quarters).

TABLE 29: TYPE OF SHOP – FROM THE POINT OF VIEW OF WHAT IS SOLD

District	Type of Shop (frequency)*					
	Grocery	Hardware	Drug store	Clothing shop	General store	Tavern
Kalomo (n=41)	40	3	3	6	8	1
Katete (n=36)	30	0	0	1	6	0
Monze (n=45)	44	1	1	13	0	0
Petauke (n=46)	46	4	1	10	1	0

**Respondents were able to identify the shops as more than one type.*

With regard to awareness, the frequent visits to a shop by customers give them increased exposure to the product, particularly when this is combined with promotional materials (posters) and word-of-mouth messages by the retailer. Combined with product availability, increased awareness may lead to product purchase by customers and, of course, to product use.

Another important factor which has an influence on purchase patterns is the hour at which the shops open and close. This information was collected by the survey. The mean time for which a shop remained open in Kalomo and Katete was 12 and 13 hours respectively (Table 30). The majority of the shops (68 out of 75 or more than two thirds) in the treatment districts operated for more than 12 hours. In both Monze and Petauke shops remained open for an average of 12 hours as well. These are long work hours, far above the national average of 8 hours per day for the formal employment sector. If other factors remain the same, these long hours for which shops remain open should lead to increased sales and also increased access.

The mean opening time was 07:41 in Kalomo, 06:27 in Katete, 07:10 in Monze and 07:07 in Petauke. Clearly, shops in these rural communities remain open for a time that is long and convenient enough to provide good service to customers.

TABLE 30: AVERAGE LENGTH OF TIME SHOPS REMAIN OPEN

District		What time do you usually open the shop?	What time do you usually close the shop?	Length of time shop is open
Kalomo	Mean	7:41	19:15	12
	Median	7:30	19:00	12
	Minimum	6:00	16:55	7
	Maximum	10:00	22:30	15
Katete	Mean	6:27	19:25	13
	Median	6:00	20:00	13
	Minimum	6:00	16:00	10
	Maximum	8:00	22:00	16
Monze	Mean	7:10	19:08	12
	Median	7:00	19:00	12
	Minimum	6:00	17:00	9
	Maximum	9:00	22:00	16
Petauke	Mean	7:07	19:23	12
	Median	7:00	20:00	12
	Minimum	6:00	16:00	6
	Maximum	10:00	22:00	16

It is also interesting to note that only four shops (two in each of the two treatment districts) did not operate for the full 12 months in a year (Table 31). Clearly, the mean time in which a shop remains open was far longer than of health centres (9 hours). Though in theory a number of health centres are supposed to remain open for longer hours than retail shops, in practice, logistical support is only available between 08:00 to 17:00 hours as critical staff knock off.

TABLE 31: ARE THERE ANY MONTHS OF THE YEAR WHEN THE SHOP IS CLOSED?

District	Are there any months of the year when the shop is closed	Frequency (n)
Kalomo (n=41)	Yes	2
	No	39
Katete (n=36)	Yes	3
	No	33
Monze (n=45)	Yes	2
	No	43
Petauke (n=46)	Yes	3
	No	43

Of the few shops that were not open 12 months of the year, January was the most common month in which they were closed.

2.7 Education of respondent

The education level of the retailer is important in many ways, not least because of the implications for correctly communicating product information to users. In Kalomo, all the respondents had some form of education. The highest proportion of respondents (20 out of 41 or 49 per cent) had completed the junior secondary school category (Grade 8 to 9), with a sizeable proportion (9 out of 41 or 22 per cent) having successfully completed senior secondary school education (Grade 10 to 12). Katete had some respondents who did not have formal education at all (4 out of 36 or 11 per cent) while the largest proportion of respondents (14 out of 36 or 39 per cent) had completed upper primary school (see Table 32 below for details).

TABLE 32: HIGHEST LEVEL OF SCHOOL SUCCESSFULLY COMPLETED BY RESPONDENT

District	What is the highest level of school you have successfully completed?	Number (n)
Kalomo (n = 41)	Grade 1 to 4	1
	Grade 5 to 7	6
	Grade 8 to 9	20
	Grade 10 to 12	9
	Higher learning	5
Katete (n = 36)	Grade 1 to 4	6
	Grade 5 to 7	14
	Grade 8 to 9	6
	Grade 10 to 12	5
	Higher learning	1
Monze (n = 45)	None	4
	Grade 1 to 4	1
	Grade 5 to 7	13
	Grade 8 to 9	16
	Grade 10 to 12	13
Petauke (n = 46)	Higher learning	1
	None	1
	Grade 1 to 4	3
	Grade 5 to 7	15
	Grade 8 to 9	12
	Grade 10 to 12	12
	Higher learning	1
	None	3

2.8 Procurement of general medicines

Whilst the shops in the survey mostly identified themselves as grocery shops, some of them sold non-prescription medicines. This is true not only for shops in the treatment districts but also in the comparator districts. In Kalomo, 20 out of 41 (49 per cent) of retailers purchased medicines in the purchase trip preceding the survey. Similarly, 18 out of 36 (50 per cent) retailers in Katete purchased medicines in the purchase trip preceding the survey (see Table 33). Shops in the comparator districts also purchased medicines in the purchase trip preceding the survey. In Monze, 21 out of 45 (47 per cent) shops purchased medicines while in Petauke, 17 out of 46 (37 per cent) did.

TABLE 33: PURCHASE OF MEDICINES IN THE PURCHASE TRIP PRECEDING THE SURVEY

District	Did you purchase any medicines in your last purchase trip?	Frequency (n)
Kalomo (n=41)	Yes	20
Katete (n=36)	Yes	18
Monze (n=45)	Yes	21
Petauke (n=46)	Yes	17

The most common types of medicines purchased included Cafemol and Panado, cited by over a third (35 per cent) and just under half (42 per cent) of the respondents respectively in both treatment and comparator districts.

2.9 Retailers and availability of diarrhoea medicines

As noted earlier, retailers are an important player in the marketing of many products, especially FMCGs. In underserved rural areas where the survey was undertaken, retailers are proving to be an important channel for over-the-counter health products. In both treatment and comparator districts, interviewed retailers sold one or more types of diarrhoea medicines. In Kalomo and Katete, 39 and 36 retailers sold diarrheal medicines (as they were Kit Yamoyo retailers), while in Monze, 4 out of 45 (9 per cent) said they sold diarrhoea medicines, and in Petauke, the corresponding figure was 5 out of 46 (11 per cent) (see Table 34). Of those retailers in the treatment districts that said they sold diarrhoea treatment, Kit Yamoyo were of course identified.

Other medicines that were identified as diarrhoea treatment, although in small proportions, included Panado (paracetamol) – 2 per cent in Kalomo, 6 per cent in Katete, and 4 per cent in Petauke; Stomache (2 per cent of retailers in Kalomo, 6 per cent in Katete, and 0 in Monze and 2 per cent in Petauke), and the antibiotic Flagyl (2 per cent of retailers in Kalomo, 39 per cent in Katete, 9 per cent in Monze, and 7 per cent in Petauke). Flagyl is not an over-the-counter medicine²⁰ and is, therefore, being sold illegally by rural retailers. However, the fact that one or more shops in all the districts were selling it is an indicator of the extent to which these areas are underserved by the designated providers of such medicines.

20. <http://www.medicinenet.com/metronidazole/article.htm>

TABLE 34: SALE PRODUCTS FOR THE TREATMENT OF DIARRHOEA

District	Do you sell any products for the treatment of Diarrhoea	Frequency
Kalomo (n=41)	Yes	39
	No	2
	Total	41
Katete (n=36)	Yes	36
Monze (n=45)	Yes	4
	No	41
	Total	45
Petauke (n=46)	Yes	5
	No	41
	Total	46

With regard to Kit Yamoyo, 30 out of 39 retailers (74 per cent) in Kalomo and 27 out of 36 (75 per cent) in Katete were selling it at the time of interview (Table 35).

TABLE 35: RETAILERS WHO WERE SELLING KIT YAMOYO AT THE TIME OF INTERVIEW

Are you currently selling Kit Yamoyo?	
District	Those currently selling Kit Yamoyo
Kalomo (n=39)	30
Katete (n=36)	27

The reasons given by those who were not selling it were either that they had no money to purchase the medicines from the wholesaler, had run out of stock, or were experiencing other challenges. At district level, the largest proportion of retailers in both Kalomo and Katete gave the reason of having run out of stock (see Table 36 below for details).

TABLE 36: REASONS FOR NOT SELLING KIT YAMOYO

District	Reason for not selling Kit Yamoyo	Frequency
Kalomo (n=39)	No money available to buy from wholesaler	1
	Out of stock	5
	Other (family problems + low demand; away for extended period; shop closed; unknown)	4
	Total	10
Katete (n=36)	No money available to buy from wholesaler	2
	Out of stock	8
	Total	10

The average number of days Kit Yamoyo retailers had run out of stock during the previous 30 days was 11 days for Kalomo and 9 days for Katete (see Table 37). Thus on average, shops ran out of stock for slightly over a week in a month (not necessarily consecutive). Stock outs are clearly not good as they have the potential to discourage customers from going to the shop if they repeatedly do not find the product they want each time they visit a given shop. At the community though, most have more than one shop, so although an individual shop may have a stock out, the community may not.

TABLE 37: DAYS OF KIT YAMOYO STOCKOUTS DURING THE PAST MONTH (30 DAYS)

How many days during the past month (30 days) did you not have any Kit Yamoyos in stock?					
District	Mean	N	Median	Minimum	Maximum
Kalomo (n=39)	11	39	0	0	90
Katete (n=36)	9	36	0	0	30
Total	10	75	0	0	90

2.10 Retailers and product use and access

Being the point of contact with the user (caregivers) in Kit Yamoyo distribution, retailers are a valuable source of product use and access information. The survey gathered information on customer feedback (complaints and commendations) and repeat purchase behaviour.

Feedback provided by customers on Kit Yamoyo (Commendations)

The customers provided positive feedback on use and access of Kit Yamoyo to the retailers. The key reasons cited for product use included: (i) “stops the child’s diarrhoea” (ii) “very good product”, and (iii) “better than what the health centre has”. There were variations in terms of proportions between the feedback provided by customers in Kalomo and Katete district. In Kalomo and Katete district, 13 out of 39 (33 per cent) and 17 out of 36 (47 per cent) respectively reported that Kit Yamoyo stopped their child’s diarrhoea.

The proportion of retailers who reported customers that said Kit Yamoyo is a “very good product” was 31 out of 39 (79 per cent) in Kalomo and 35 out of 36 (97 per cent) in Katete. This demonstrates that the customers overwhelmingly appreciated Kit Yamoyo.

The number of retailers who said that Kit Yamoyo is “better than what the health centre has” was 7 in Kalomo and 15 in Katete. Again the proportion for Katete was higher than Kalomo district. See Table 38 for details.

TABLE 38: FEEDBACK RECEIVED AT ENDLINE BY RETAILERS FROM CUSTOMERS WITH REGARD TO KIT YAMOYO

District	Stopped child’s diarrhea (frequency)	Very good product (frequency)	Better than what the health centre has (frequency)
Kalomo (n=39)	12	31	7
Katete (n=36)	17	35	15

Feedback provided by customers on Kit Yamoyo (Complaints)

The complaints that were received by retailers selling Kit Yamoyo varied and were minimal. Only seven retailers reported that they received negative feedback of any kind. These included: (i) desire for vouchers (only in Kalomo); (ii) non-availability of Kit Yamoyo in the shops (stock outs); (iii) failure for the child to recover after administering Kit Yamoyo; (iv) ignorance about the use of Kit Yamoyo; and (v) cost of Kit Yamoyo. Of all these complaints, the stock out levels in shops were the most frequently cited problems among the customers as shown in Table 39. It is also evident that most complaints (six out of seven) came from customers in Katete as opposed to Kalomo district.

TABLE 39: CUSTOMER COMPLAINTS ABOUT KIT YAMOYO

District	What was the complaint?	Frequency (n)
Kalomo (n=39)	Want vouchers	1
	Non-availability of Kit Yamoyo in the shop/ stock outs	3
Katete (n=36)	The child has not recovered after administering the kit	1
	It is expensive	1
	Ignorance about the use of Kit Yamoyo	1

Clearly, the low level of these complaints (while worth reviewing) is not likely to have a negative impact on the overall performance of future project activities.

Customer satisfaction

The attitude of customers to go to the retailer to buy more than one (repeat purchases) Kit Yamoyo can be considered a proxy indicator for customer satisfaction. In Kalomo, 26 out of 39 (66 per cent) retailers and 24 out of 36 (66 per cent) retailers in Katete district reported that they had customers who had come to get more than one Kit Yamoyo (see Table 40).

TABLE 40: HAVE YOU NOTICED CUSTOMERS WHO HAVE COME TO GET MORE THAN ONE KIT YAMOYO?

Endline	
District	Frequency (Yes)
Kalomo (n=39)	26
Katete (n=36)	24

2.11 Attitude of retailers towards Kit Yamoyo

The attitudes of retailers towards a product have a profound effect on its availability. It is expected that positive attitudes towards a product would enhance the stocking levels and negative attitudes will probably result in high stock out levels.

Positive attitude of retailers

The retailers were asked what they liked about selling Kit Yamoyo. Without prompting, the key responses included: helping the community, profit and personal interest. The district analysis revealed that 34 out of 39 (87 per cent)

retailers in Kalomo and 34 out of 36 (94 per cent) retailers in Katete district were motivated to sell Kit Yamoyo for the sake of helping their community and for the sake of making profits [28 (72 per cent) in Kalomo and 16 (44 per cent) in Katete]. These factors are likely to positively impact on the availability of Kit Yamoyo at community level (see Table 41 for details).

TABLE 41: THE MOST IMPORTANT MOTIVATING FACTORS LEADING TO SELLING KIT YAMOYO BY RETAILERS (ENDLINE)

	Profit (frequency)	Help children/ community (frequency)	Personal interest (frequency)
Kalomo (n=39)	28	34	1
Katete (n=36)	16	36	3

**Respondents were allowed to provide more than one motivating factor.*

Negative attitude of retailers

When asked about what they did not like about selling Kit Yamoyo, the majority of retailers (87 per cent) in Kalomo and 69 per cent of retailers in Katete said “nothing”. This is indicative of the fact that Kit Yamoyo is highly appreciated by the retailers who are part of the distribution channel of the product down to the community level (see Table 42 for additional details).

TABLE 42: REASONS FOR DISLIKING SELLING KIT YAMOYO

District	Other reasons for disliking selling Kit Yamoyo	Frequency
Kalomo (n=39)	Not enough demand	2
	Not enough profit	2
	Nothing	34
	Sales are very slow	1
Katete (n=36)	Difficulties in redeeming a voucher	1
	Not enough demand	3
	Nothing	25
	People stopped buying when the vouchers finished	1
	Sales are very slow	1
	Seasonal business	1
	The vouchers finished	1
	Vouchers are very few in my area	1
	When people abuse the medicine	1

On the contrary, there are various things that made the retailers dislike selling Kit Yamoyo in the treatment districts of Kalomo and Katete. Again these were mentioned to a small degree (one-offs for the most part) and included: (i) not enough demand for the product/sales; (ii) not enough profit; (iii) challenges with the voucher system; and (iv) abuse of the medicine in Kit Yamoyo. With reference to iii these included vouchers being finished, difficulties in redeeming the vouchers and insufficient vouchers in the area.

In spite of this, 92 per cent of retailers in Kalomo and 97 per cent of retailers in Katete said they plan to continue selling Kit Yamoyo (see Table 43).

TABLE 43: RETAILER PLANS WITH REGARDS TO CONTINUED SELLING OF KIT YAMOYO (WHETHER THEY WOULD WANT TO CONTINUE SELLING KIT YAMOYO?)

Endline	
	Frequency (Yes)
Kalomo (n=39)	36
Katete (n=36)	35

This clearly demonstrates the fact that the business of selling Kit Yamoyo is a sustainable business venture for the retailers and it is likely to continue even after the project life, provided there is constant supply of Kit Yamoyo to the treatment districts.

Desired price of Kit Yamoyo by retailers

Retailers were asked how much they would sell Kit Yamoyo for if they were to determine the price. The majority said K5 (33 out of 39 in Kalomo and 19 out of 36 in Katete). It is interesting to note that the desired price of Kit Yamoyo by retailers is the same as the current set price at which Kit Yamoyo is being sold in the treatment districts.

Proportion of retailers that attended training conducted by the project and Keepers Zambia Foundation

The retailers were asked whether they had attended the training conducted by the project and Keepers Zambia Foundation. The majority or 59 out of 75 (79 per cent)

retailer respondents attended the training. When further broken down at district level, 33 out of 39 (85 per cent) were from Kalomo and 26 out of 36 (72 per cent) were from Katete district. It is evident that most Kit Yamoyo retailers were part of the training session, which was mainly aimed at raising awareness of Kit Yamoyo. It is for this reason that the retailers' perception regarding ORS and zinc sulphate was high. Where the respondent did not attend the training session, someone else who worked in the store had.

Close to 96 per cent of the retailers thought ORS was effective in treating diarrhoea in children under 5 in the treatment districts. The district analysis was 100 per cent and 91 per cent for Kalomo and Katete respectively. Retailers who said 10 days was the minimum number of days zinc should be given to children under 5 with diarrhoea were 39 out of 39 (100 per cent) in Kalomo and 33 out of 36 (96 per cent) in Katete. In Monze and Petauke districts all retailers (100 per cent) did not know this fact.

Summary on retail survey

The following points are noted:

- (i) The feedback received by retailers on the use of Kit Yamoyo by customers was generally good. Thirty one out of 39 retailers in Kalomo and 35 out of 36 retailers in Katete reported that customers said that Kit Yamoyo is a "very good product".
- (ii) The feedback received by retailers on access to Kit Yamoyo was such that there were no customers who said that Kit Yamoyo was too expensive at the price of K5.
- (iii) The attitude of customers to go to the retailer to buy more than one (repeat purchase) Kit Yamoyo can be considered a proxy indicator for customer satisfaction. In both Kalomo and Katete districts, 50 out of 75 (or two thirds) retailers reported that they had customers who had come to get more than one Kit Yamoyo.²¹
- (iv) The overwhelming majority of retailers (70 out of 75) in the treatment districts cited "help children/ community" as a motivating factor leading them to sell Kit Yamoyo. This is likely to further impact positively

on the sustainability of the project as the frontline actors (retailers) are in it not just for profit (44 out of 75), but are driven by passion to improve the welfare of their community. It is, therefore, not surprising that an equally overwhelming majority of retailers (71 out of 75) plan to continue selling Kit Yamoyo in future.

21. This may also be because they got multiple vouchers.

3.0 CONCLUSIONS

3.0 Conclusions

The findings presented in this report indicate that the COTZ project has realized the results the project set out to achieve. The results are at three levels of the objective hierarchy set out at the beginning of the project. Notably: (i) mothers in underserved rural communities have increased their **use** of ORS and zinc in home treatment of diarrhoea [final outcome]; (ii) target communities in two underserved rural districts (Kalomo and Katete) have improved **access** to ORS and zinc [intermediate outcome]; (iii) profit-driven supply chains have improved **availability** of ADKs in targeted communities in the two underserved rural districts of Kalomo and Katete [immediate outcome]; and (iv) mothers/caregivers have demonstrated **awareness** of ADKs and the benefits of the contents (ORS, zinc and soap) [immediate outcome]. Details are provided below.

Use

1. The combined recommended therapy of ORS and zinc for the treatment of diarrhoea has significantly increased from nearly zero to 45 per cent among caregivers and mothers who had children with diarrhoea two weeks preceding the survey. This is by no means a small achievement in a space of one year. This success is clearly attributable to the project. ORS use and awareness is already high and no major impact was expected, nonetheless an increase was seen in Kalomo and usage rates were maintained in Katete and decreased in both comparator districts. A substantial increase in the combination therapy of ORS and zinc for diarrhea treatment was seen. A substantial increase in ORS was also seen in Kalomo.
2. The increase in use of ORS from Kit Yamoyo (as opposed to health centre ORS) may be attributed to the on-going sales and promotional activities by the project and/or known interruptions and lack of supply in the public sector. The design of the kits itself has led to improved use of ORS by providing the tools for proper preparation. For instance, only 7 per cent of Kit Yamoyo caregivers did not measure the water properly when preparing ORS compared to 40 per cent among non-Kit Yamoyo users.
3. The project has shifted ORS access from predominantly government health centres to private retailers as evidenced by the 62 per cent caregivers

who had children under 5 with diarrhoea two weeks preceding the survey who accessed ORS at endline from rural retailers. This has positive implications on sustainability of ORS supply in the medium to long term.

The project has had a positive impact on promoting use of zinc for diarrhoea treatment, which was little known before the intervention started. The increase in usage of zinc by caregivers in the two treatment districts of Kalomo and Katete has been impressive, from nearly zero before the project to 45 per cent one year later. However, more needs to be done in messaging to increase the correct utilization of zinc by caregivers, which at the endline was only a third or 33 per cent (i.e. treatment for 10 days).

Access

4. The project has shown that caregivers are willing to purchase Kit Yamoyo using cash rather than through the voucher system. This was clearly shown by the majority (64 per cent) of caregivers who thought K5 per kit was affordable/not expensive. This has positive implications for setting the use of Kit Yamoyo on a path of sustainability.
5. The project has increased the possibility of saving lives through its apparent contribution to the reduction in treatment delay from two days at baseline to one day at endline. The reduction in treatment delay has also been noted among non-Kit Yamoyo users, which could be as a result of spill-over effects related to radio messaging. This suggests that the project has potential for considerable impact (both planned and unplanned) in the medium to long term. However, there is need for further research to ascertain this.

Availability

6. Emerging evidence suggests that the project has increased accessibility by caregivers to ORS and zinc. This has come about by a more than two-fold reduction in the distance covered by caregivers to the source of ORS and zinc through the use of retail shops. This has potential to positively impact on household livelihoods as the time saved may be used for other activities including those that are economic in nature.

Awareness

7. As expected, because awareness of ORS was already high, the project's impact on creating awareness in the use of ORS has been negligible/ unnoticeable. This may be attributed to the well-known high levels of ORS awareness among caregivers of children under 5 largely brought about by the rigorous promotion campaigns by the Ministry of Health before the project. However, caregivers' perceptions of the effectiveness of ORS in treating diarrhoea among children under 5 has gone up in the treatment districts by 14 percentage points over the past one year. During the same period, the caregivers' perceptions in comparator districts on the effectiveness of ORS in treating diarrhoea have remained the same.
8. The project has also had a positive impact on raising awareness of zinc, which is a relatively new product in the underserved districts of Zambia. Over the past one year, the proportion of caregivers in Kalomo and Katete districts who have become aware of zinc has increased by 55 and 50 percentage points respectively from nearly zero.

39 in Kalomo against 1 who had no money and 8 out of 36 in Katete against 2 who had no money).
11. The awareness levels of ORS and zinc among the retailers were high.
12. The feedback received by the retailers from customers regarding Kit Yamoyo shows that the majority of customers said that "Kit Yamoyo was a very good product".
13. The retail survey also reviewed that retailers have a positive attitude towards Kit Yamoyo. Their motivation for selling Kit Yamoyo lies in helping the community and as expected, maximizing profits.
14. It is encouraging to note that 37 out of 39 (Kalomo) and 35 out of 36 (Katete) retailers plan to continue selling Kit Yamoyo even in the absence of a voucher system. This is surely a right step in enhancing sustainability of COTZ interventions.

Retail survey findings

9. Rural retail shops have a number of suitable conditions that facilitate the promotion of ORS and zinc among rural caregivers of children under 5. For instance, most of the shops (more than two thirds) operate for 12 hours a day, thereby making it easier for caregivers to access ORS when they need it. Only 2 out of 39 retailers in Kalomo indicated that there were some months in a year where they remain closed while in Katete it was 3 out of 36 retailers. In addition, retailers in the treatment districts sell products for the treatment of diarrhoea (at endline 39 out of 41 retailers in Kalomo and all the 36 retailers in Katete compared to 4 out of 45 and 5 out of 46 in Monze and Petauke respectively).
10. A good proportion of retailers have taken up the sale of Kit Yamoyo seriously. For instance, not less than three quarters in both treatment districts were selling Kit Yamoyo at the time of the survey. The majority of those who were not selling Kit Yamoyo at the time of the survey cited "out of stock" as the main reason (5 out of

4.0 APPENDICES

Appendix 1

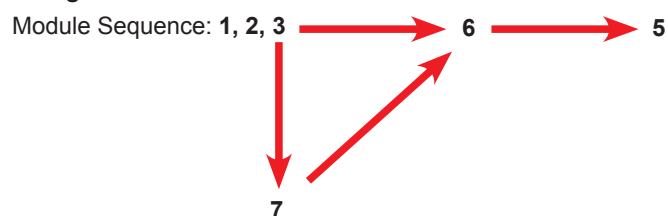
Baseline Household Survey

Note: The paper-based versions of the surveys below (i.e. household and retailer) may differ slightly from final versions as they were entered onto tablets in electronic format using ODK software. Any additional updates based on field-testing were made in the electronic version specifically. The questionnaires below should be considered near final.

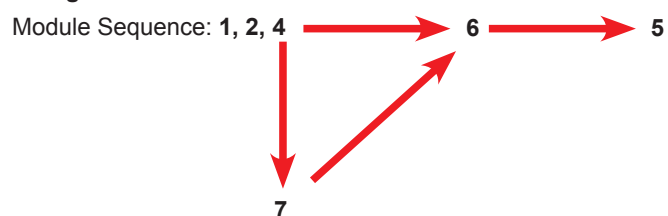
Appendix 1: Household Survey Questionnaire

Note: Module response sequences depend on respondent. Each respondent will not have to go through every module:

Caregivers with a child who had diarrhoea in the two weeks preceding survey



Caregivers without a child who had diarrhoea in the two weeks preceding survey



Caregivers who used Kit Yamoyo

Children w/ diarrhoea in past two weeks: 1, 2, 3, 7, 6, 5

Children w/out diarrhoea in past two weeks: 1, 2, 4, 7, 6, 5

Interviewer: Ask to speak to head of household. If head of household is not available, ask to speak to a household member who can assist. Read the following:

Good day, I am (insert name). I am representing UNICEF, Keepers Zambia Foundation, and RuralNet Associates as part of a research partnership here in Zambia, for a study approved by Ministry of Health. I am part of a team interviewing people about health products. The information will be used to improve health products and services for people like you. Can you please tell me if there are any children between 6 and 59 months old who live in this household? These are **children born on or after 18 August 2008 and before February 17 2013**.
If no, thank the respondent and move to next household.

If Yes, How many children in this household are between the ages of 6 and 59 months?

CONTINUE

Your household has been selected to participate in this study randomly. The information gathered here and your details will be kept confidential, and you do not have to answer any questions that you do not want to. Your participation in the study is voluntary and you will not be affected in any way if you decide not to participate. It is your choice. If you agree to help, I will ask you a series of questions related to your access to health products and services. We will use this electronic tablet to enter your responses to our questions. The interview will take about 1 hour.

I would first like to ask some questions about your household, and then ask about diarrhea in children to the main caregiver of a child within your household. The answers will help us to learn more about opinions and experiences concerning diarrhea in children, and will be used to improve health products and services for people like you.

Do you have any questions? You may contact Stephen Tembo of RuralNet Associates [give business card if they would like] if you have any further questions or concerns related to this work. You may contact the Ethics Committee which approved this study about any problems or concerns as well. Would your household like to help by participating in the study?

If “No”, STOP.

Interviewer: Can I ask why you would **not** like to participate in this survey?

Not interested	1
Busy	2
Other	3 _____

Thank the respondent and move to next household.

If yes, get signature and administer screening matrix in tablet and say: “Okay, let’s begin”.

MOVE TO SURVEY.

_____ (Signature of head of household/assistant) _____ (Date)

(Signature of caregiver) _____ (Date) _____

Q001. Individual code	Please give the FIRST NAME ONLY of the children between the ages of 6 and 59 months who usually live in this home. These are children born on or after 18 August 2008 and before February 17 2013.	Q002. What age is (NAME)? Exact number of months MONTHS	Q003. Please give the FIRST NAME ONLY of the child's primary caregiver.	Q004. Please give the age of the child's primary caregiver. YEARS	Q005. Is the caregiver around? 0 No 1 Yes	Q006. Has (NAME) had diarrhea in the last two weeks? (Verify with caregiver that diarrhea = 3 or more loose or watery stools per day) 0 No 1 Yes 2 Don't know
01		[][] months Give legend: 12 months = 1yr 24 months = 2 yrs 36 months = 3 yrs 48 months = 4 yr		[][]	0 1 2	0 1 2
02						
03						
04						
05						
06						

INTERVIEWER:

- If no caregivers are aged 15 years or older, thank the respondent and move to next household.
- If there is a caregiver aged 15 years or older in the house, select 1 caregiver aged 15 years or older to participate based on the sampling strategy below.
- Caregiver Sampling Order:
 - o Caregiver who is present
 - o Main caregiver of Child between 6 and 59 months of age with diarrhea in the past two weeks who is available (verify with caregiver that diarrhea = 3 or more loose or watery stools in a day)
 - o Main caregiver of Child between 6 and 59 months who is available
 - o If multiple caregivers with children between 6-59 months who had diarrhea, and are available, select alphabetically by first name
- Reference child sampling order:
 - o If the caregiver selected has more than one child between 6-59 months of age with diarrhea, select the reference child alphabetically by first name
- If the caregiver selected is different from the initial person you spoke with, get them to sign the informed consent as well.
- Diarrhea is defined as *3 or more loose or watery stools in one day. Review this definition with caregiver to make sure you are talking about the same thing.

QUESTIONNAIRE FOR MOTHERS/CARERS - baseline

Module 1: QUESTIONNAIRE IDENTIFICATION DATA & FILTERS

001

Question for Care givers : Do you agree to participate in this survey ?

YES → Move on to Questions below. Ensure that Caregiver has signed the consent form.

NO → Terminate Interview

002

Questionnaire Identification Number (From your assigned block of Ids)

003

SiteNumber

We would like to start by asking some background questions about your household.

004

Name of head of household (First and Last Name)

Q1001.	Enumerator's name			
Q1002.	Supervisor Name			
Q1003.	Province Code	1. Southern 2. Eastern		
Q1004.	District Code	1. Kalomo 2. Katete 3. Monze 4. Petauke		
Q1005.	What is the name of your Village/Community?			
Q1006.	Time Started: <input type="text"/>			
Q1007.	Respondent's relationship to head of household	<div>Head of Household 1</div> <div>Spouse 2</div> <div>Child 3</div> <div>Niece/Nephew 4</div> <div>Parent 5</div> <div>Other 999</div> <div>(specify) <input type="text"/></div>		
Q1008.	Sex of respondent	<div>Male 1</div> <div>Female 2</div>		
Q1009.	How old are you? (Interviewer: Record age in completed years)	<input type="text"/> Years		

NO	Questions & Filters	Responses		Skip To
Q1010.	Sex of Head of Household	Female Male	1 2	If answer to Q1007 is 1 (respondent is head of household skip this question)
Q1011.	<p>What is the highest level of school successfully completed by the head of household?</p> <p>Interviewer, please note the following equivalent standards and grades for: Sub A to standard 3 = Grades 1-5 Standards 4 to 6 = Grades 6-8 From 1 to 3 = Grades 8-10 From 4 to 5 = Grades 11- 12</p>	Grade 1 to 4 Grade 5 to 7 Grade 8 to 9 Grade 10 to 12 Higher learning None Don't know Other (specify)_____	1 2 3 4 5 6 888 999	If answer to Q1007 is 1 (respondent is head of household skip this question)
Q1012.	How old is the head of household? (in completed years)	[_____] Years Don't Know	888	f answer to Q1007 is 1 (respondent is head of household skip this question)
Q1013.	What is the highest level of school you have successfully completed?	Grade 1 to 4 Grade 5 to 7 Grade 8 to 9 Grade 10 to 12 Higher learning None Don't know Other (specify)_____	1 2 3 4 5 6 888 999	
	<p>Interviewer, please note the following equivalent standards and grades for: Sub A to standard 3 = Grades 1-5 Standards 4 to 6 = Grades 6 - 8 From 1 to 3 = Grades 8-10 From 4 to 5 = Grades 11- 12</p>			

Q1014.	What was the main activity of the head of household during the past month?	Unemployed	1	Q1016																																		
		Housewife	2	Q1016																																		
		Student	3	Q1016																																		
		Retired/Pensioner	4	Q1016																																		
		Farmer/Gardener/Fisher	5																																			
		Civil servant (government worker)	6																																			
		Formal private company employee	7																																			
		Informal small business owner	8																																			
		Informal Small business employee	9																																			
		Piece worker	10																																			
		Brick layer/builder	11																																			
		Teacher	12																																			
		Other (specify)_____	999	Q1016																																		
Q1015.	What is the nature of this work? That is, is it permanent, temporary, or occasional?	Permanent	1																																			
		Temporary/Occasional	2																																			
		Don't Know	888																																			
		Other (specify)_____	999																																			
Q1016.	How many hectares of farmland does your family/household own?	[] hectares																																				
		Don't know	888																																			
1 Lima or ¼ hectare = half a football pitch 1 hectare = 2 football pitches 1 acre = 0.4 hectares 1 lima = 0.25 hectares																																						
Q1017.	How many of the following animals does your household own: Goats? Sheep? Cows?chickens?pigs? (Interviewer: READ LIST AND RECORD RESPONSE FOR EACH ITEM. If none, enter « 00 ». If 96 or more, enter « 96 ». If number is not known, enter « 888»).	<table><tr><td></td><td>Animal</td><td>#</td><td></td></tr><tr><td>A</td><td>Goats</td><td></td><td></td></tr><tr><td>B</td><td>Sheep</td><td></td><td></td></tr><tr><td>C</td><td>Cows/oxen</td><td></td><td></td></tr><tr><td>D</td><td>Chickens</td><td></td><td></td></tr><tr><td>E</td><td>Pigs</td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr></table>				Animal	#		A	Goats			B	Sheep			C	Cows/oxen			D	Chickens			E	Pigs												
			Animal	#																																		
		A	Goats																																			
		B	Sheep																																			
		C	Cows/oxen																																			
		D	Chickens																																			
		E	Pigs																																			
Q1018.	Do you own or rent your home?	Own	1																																			
		Rent	2																																			
		Family/relative	3																																			
		Institution (e.g. church, company, govt)	4																																			
		Other (specify)_____	999																																			

Q1019.	How many rooms are in your dwelling? Interviewer: Dwelling is defined as the individual unit that the caregiver lives in. Note: this is different from a family property with multiple units	Number of Rooms [][] Don't Know	888																					
Q1020.	(INTERVIEWER: OBSERVE AND REPORT. IF UNCLEAR READ LIST IF NECESSARY) What is the main material of the floor in the dwelling where your household lives?	Earth/Sand/ Mud/Dung Parquet or Polished Wood Carpet Ceramic Tiles Cement/Concrete Other (specify)_____	1 2 3 4 5 999																					
Q1021.	(INTERVIEWER: OBSERVE AND REPORT. IF UNCLEAR READ LIST IF NECESSARY) What is the main material of the roof in the dwelling where you household lives?	Concrete/Cement Metal Sheet Clay Straw/grass Asbestos Other (specify)_____	1 2 3 4 5 999																					
Q1022.	Does your household have: (INTERVIEWER: READ LIST AND RECORD RESPONSE FOR EACH ITEM)	<table><tr><td></td><td></td><td>Yes</td><td>No</td></tr><tr><td>A</td><td>Electricity</td><td>1</td><td>2</td></tr><tr><td>B</td><td>Radio</td><td>1</td><td>2</td></tr><tr><td>C</td><td>Television</td><td>1</td><td>2</td></tr></table>			Yes	No	A	Electricity	1	2	B	Radio	1	2	C	Television	1	2						
		Yes	No																					
A	Electricity	1	2																					
B	Radio	1	2																					
C	Television	1	2																					
Q1023.	Does any member of your household own: (INTERVIEWER: READ LIST AND RECORD RESPONSE FOR EACH ITEM)	<table><tr><td></td><td></td><td>Yes</td><td>No</td></tr><tr><td>A</td><td>Bicycle</td><td>1</td><td>2</td></tr><tr><td>B</td><td>Motorcycle/ Scooter</td><td>1</td><td>2</td></tr><tr><td>C</td><td>Car or Mini-Truck</td><td>1</td><td>2</td></tr><tr><td>D</td><td>Mobile Phone</td><td>1</td><td>2</td></tr></table>			Yes	No	A	Bicycle	1	2	B	Motorcycle/ Scooter	1	2	C	Car or Mini-Truck	1	2	D	Mobile Phone	1	2		
		Yes	No																					
A	Bicycle	1	2																					
B	Motorcycle/ Scooter	1	2																					
C	Car or Mini-Truck	1	2																					
D	Mobile Phone	1	2																					
Q1024.	What is the main source of drinking water for members of your household? [SINGLE RESPONSE]	Piped water in residence/house Piped water in public tap Protected well Unprotected well Borehole River, stream, canal, or surface water Rainwater Other (specify)_____	1 2 3 4 5 6 7 999																					
Q1025.	What kind of toilet do most members of your household use? [SINGLE RESPONSE]	Own flush toilet Shared flush toilet Pit latrine with concrete slab Pit latrine without slab/open pit Ventilated improved pit latrine Integrated Latrine (toilet and hand-washing together) None/Bush Other (specify)_____	1 2 3 4 5 6 7 999																					

Q1026.	What do you use as your main source of fuel for cooking in this household? [SINGLE RESPONSE]	Kerosene Electricity Coal charcoal Wood/Straw Other (specify)_____	1 2 3 4 5 999	
Q1027.	What are the main health issues for children under 5 yrs of age in your community? [MULTIPLE RESPONSES ALLOWED - DO NOT READ LIST]	Diarrhea Malaria Pneumonia Malnutrition Measles Eye disease Coughing Epilepsy/Fits Don't know Other (Specify)_____	1 2 3 4 5 6 7 8 888 999	

Module 2: Child Diarrhoea Status→ Make change of module obvious in tab. Ensure Heading shows up. Delete these comments in paper version to be printed.

	Questions/Filters	Codes/Responses		Skip To
Q2001.	What is the first name of the selected child between 6 and 59 months of age Selected using sampling strategy: first precedence – child with diarrhea in last two weeks; 2nd precedence - alphabetical	Name: _____		
Q2002.	Please circle the sex of (NAME).	Male Female	1 2	
Q2003.	What is (NAME's) date of birth?	Day [_____] Month [_____] Year [_____] Don't Know	888	
Q2004.	What is your relationship with (NAME) ? INTERVIEWER: WE ARE ASKING WHAT IS THE CAREGIVER'S RELATIONSHIP TOTHECHILD	Mother Father Grandmother Grandfather Auntie Sister/brother Other (specify)_____	1 2 3 4 5 6 999	
Q2005.	Thinking back over the past 3 months, have you seen or heard any messages about treatment for diarrhea?	Yes No	1 2	→2007

Q2006.	Where did you hear/see the message(s) about treatment for diarrhea? Interviewer: Multiple responses allowed. Note all that apply. Do not read list.	Radio Television Community education session/health talk Community health worker Health clinic nurse/doctor/clinical officer Neighbor/friend Newspaper School Church Banner/poster/etc Private shop/Community Retailer/Intemba Kit Yamoyo Promoter Other specify)_____	1 2 3 4 5 6 7 8 9 10 11 12 999	→2007 →2007 →2006a →2006a →2006a →2006a →2007 →2006a →2006a →2006b →2006a →2006a →2007
2006.a	Was the person delivering the message wearing a t-shirt that looked like this? SHOW PICTURE OF ORANGE PROMOTERS T-Shirt& RED SHOPKEEPER T-SHIRT (Include on tablet if possible)	YES NO Don't remember	1 2 3	→2007 →2007 →2007
2006.b	Was it one of these posters? Show Picture of Kit Yamoyo promotional posters (include on tablet if possible)	YES NO Don't remember	1 2 3	
Q2007.	Has (NAME) had diarrhea in the last two weeks? Interviewer: Diarrhea is defined as 3 or more loose or watery stools in one day. Review that definition with caregiver.	Yes No	1 2	→Mod 3 →Mod 4

Module 3: Children under 5 with diarrhea in past two weeks

Q3001.	How many days ago did the diarrhea start? <i>(Interviewer: If the same day, record '00.)</i> Probe: try to help them remember the exact number of days, as opposed to saying 1 week or two weeks.	<input type="text"/> <input type="text"/> days Don't Know	888	
Q3002.	For how many days did the child have diarrhea? <i>(Interviewer: if the child still has diarrhea, ask "How many days has the child had diarrhea")</i>	<input type="text"/> <input type="text"/> days		

3002aa	When (NAME) had diarrhea over the past two weeks, on average, how many loose or watery stools did he/she have per day ?	<input type="text"/> <input type="text"/> loose or watery stools		
3002a	Has the child had diarrhoea on and off for more than 4 weeks?	Yes No Don't Know	1 2 888	→3003 →3003
3002b	How long has the child had diarrhea on and off for? 1 Month = 4 weeks 2 Months = 8 weeks 3 Months = 1two weeks 4 Months = 16 weeks	_____ weeks Don't Know	888	
Q3003.	Has (NAME) also had a fever in the last two weeks?	Yes No Don't Know	1 2 888	
Q3004.	Did (NAME) have any blood in the stool when he or she had diarrhea in the last two weeks?	Yes No Don't know	1 2 888	
Q3005.	How much fluid/liquid was (NAME) given to drink during the recent episode of diarrhea? Was he or she given less than usual to drink, about the same amount, more than usual to drink, or nothing to drink? <i>(Interviewer: If "less," probe: Was (NAME) given much less than usual to drink or somewhat less?)</i>	Much less Somewhat less About the same More Nothing to drink Don't know	1 2 3 4 5 888	
Q3006.	Did (NAME) breastfeed during the recent episode of diarrhea? <i>(Interviewer: If Yes, Probe: More? Less? Or about the same? If No, find out why – see responses)</i>	<u>YES</u> Breastfed more Breastfed less Breastfed about the same <u>No</u> Never breastfed Stopped breastfeeding due to diarrhea Does not breastfeed anymore/weaned/too old Other (Specify) Don't know	1 2 3 4 5 6 999 888	
Q3007.	When (NAME) had diarrhea, was he or she given less than usual to eat, about the same amount, more than usual, or nothing? Interviewer: If "less," probe: Was child given much less than usual to eat or somewhat less?	Much less Somewhat less About the same More Nothing to eat Don't know	1 2 3 4 5 888	

Q3008.	Do you know what ORS is? (Interviewer: refer to it in different ways – local name (Manzi yamoyo), Oral Rehydration Salts, and show image of local ORS packets on screen noting that they sometimes look like this.	Yes No	1 2	→3017A
3008b	In the past 3 months have you heard any messages about ORS?	Yes No	1 2	→3009a
Q3009.	Have you ever heard any messages about ORS?	Yes No	1 2	→Q3010
Q3009a	Where did you hear/see the message(s) about ORS? Interviewer: Multiple responses allowed. Note all that apply. Do not read list.	Radio Television Community education session/health talk Community health worker Health clinic nurse/doctor/clinical officer Neighbor/friend Newspaper School Church Banner/poster/etc Private shop/Community Retailer/Intemba Kit Yamoyo Promoters Other specify)_____	1 2 3 4 5 6 7 8 9 10 11 12 999	→3010 →3010 →3009b →3009b →3009b →3009b →3010 →3009b →3009b →3009c. →3009b →3009b →3010
3009.b	Do you remember if the person delivering the message was wearing a t-shirt that looked like this? SHOW PICTURE OF ORANGE PROMOTERS T-Shirt (Include on tablet if possible)	YES NO Don't remember	1 2 3	→3010 →3010 →3010
3009.c	Was it one of these posters? Show Picture of Kit Yamoyo promotional poster (include on tablet if possible)	YES NO Don't remember	1 2 3	

Q3010.	<p>Please tell me if you agree or disagree with each of these statements.</p> <p>Interviewer: Read this list.</p>	<p style="text-align: right;">Ag Dis DK</p> <p>ORS is medicine that gives good health 1 2 888</p> <p>ORS is a treatment for diarrhea 1 2 888</p> <p>ORS stops Diarrhea 1 2 888</p> <p>My child does not like the taste of ORS 1 2 888</p> <p>ORS prevents Dehydration 1 2 888</p>		
Q3011.	<p>Can you describe the process of how to make ORS Solution in as detailed a way as possible?</p> <p><i>(multiple answers allowed. check all that are mentioned by caregiver. Do not read responses. Only check boxes that are mentioned by respondent)</i></p>	<p>Mix contents of ORS package with water 1</p> <p>Ensure water is clean/Purify water 2</p> <p>Ensure proper measurement of water 3</p> <p>Wash hands prior to preparing 4</p> <p>Respondent explains how to use Kit Yamoyo 5</p> <p>Sprinkle over food 6</p> <p>Swallow Powder 7</p> <p>Don't know 888</p> <p>Other (specify)_____ 999</p>		
Q3012.	<p>Do you think ORS is effective in treating diarrhea?</p>	<p style="text-align: right;">Yes 1</p> <p style="text-align: right;">No 2</p> <p style="text-align: right;">Don't know 888</p>	→3013	→3014
Q3013.	<p>Why do you think ORS is effective in treating diarrhea?</p> <p><i>(Do not read responses. Multiple responses allowed. Only check boxes that are mentioned by respondent)</i></p>	<p>Diarrhea stops quickly 1</p> <p>Child recovers quickly 2</p> <p>Child regains appetite 3</p> <p>Prevents dehydration 4</p> <p>Don't know 888</p> <p>Other (specify)_____ 999</p>	→3015	→3015
Q3014.	<p>Why don't you think ORS is effective in treating diarrhea?</p> <p><i>(Do not read responses. Multiple responses allowed. Only check boxes that are mentioned by respondent)</i></p>	<p>It only prevents dehydration 1</p> <p>It is only for giving strength 2</p> <p>Diarrhea does not stop soon/diarrhea continues 3</p> <p>Child doesn't like the taste 4</p> <p>Too hard to administer 6</p> <p>Don't know 888</p> <p>Other (specify)_____ 999</p>		
Q3015.	<p>Do you plan on using ORS the next time your under 5 child has diarrhea?</p>	<p style="text-align: right;">Yes 1</p> <p style="text-align: right;">No 2</p> <p style="text-align: right;">Don't know 888</p>		

Q3016.	Was [NAME] given any ORS solution to drink since he or she started having diarrhea? (Interviewer: Show examples of ORS – Images on tablet and probe: “These are some local examples of ORS, did you give any of these?”)	Yes No Don't know	1 2 888	→3017 →3017A →3017A
Q3017.	Which ORS product(s) was given to (NAME)? <i>(Interviewer: Multiple responses allowed. If they don't know, you can show them the poster with samples of local products (ORS packets and the actual kit yamoyo sachet, and ask respondent to select any/all used during the recent episode of diarrhea.)</i> <i>If more than one answer is selected, confirm that they used two different types of ORS during the most recent episode of diarrhoea</i>	GRZ (Health Centre) From Kit Yamoyo Other from Private shop (e.g. Novalyte)? Don't know	1 2 3 888	→Mod 7
3017A	Thinking back over the past 6 months , have you heard a message/received information about an anti-diarrheal kit called Kit Yamoyo? Interviewer: Show Image of Kit Yamoyo	YES NO Don't Know	1 2 888	→3017C; and If also NO to 3016 skip to 3031 →3017C
3017B	Did you use the Kit Yamoyo to treat [NAME] when he/she had diarrhoea in the past two weeks?	YES NO Don't Know	1 2 888	→Mod 7
3017C	Have you ever used the Kit Yamoyo to treat any of your children under 5 with diarrhoea?	YES NO Don't know	1 2 888	→3017C2 →3017D →3017E
3017 C2	If you used the Kit Yamoyo previously to treat diarrhoea in one of your children, but not during the most recent episode, why did decide not to buy one during the most recent episode?	Kit is too expensive Kit was not available at my local shop I prefer to go to the health centre I did not have a voucher I did not know I could buy it Don't Know Other, Specify_____	1 2 3 4 5 888 999	ALL to Mod 7

3017D	<p>If no, why did you not use the Kit Yamoyo to treat your child's diarrhoea?</p> <p>Interviewer. Do not read list. Multiple responses allowed.</p>	<p>Child has not had diarrhoea 1</p> <p>Kit is too expensive 2</p> <p>Kit was not available at my local shop 3</p> <p>I prefer to go to the health centre 4</p> <p>I have not heard about it/Do not know what it is 5</p> <p>Don't Know 888</p> <p>Other, Specify _____ 999</p>	<p>If NO to 3016 skip to 3031. Rest to next question.</p>
3017E	<p>How many days after the diarrhea began did (NAME) first get ORS?</p> <p>Interviewer: if same day mark '00'</p>	<p>()</p> <p>Don't Know 888</p>	
Q3018.	<p>How many packets of ORS did you prepare for (NAME) during the episode of diarrhea?</p> <p>If they say one, probe: did you use the whole packet?</p>	<p>_____</p> <p>Don't Know 888</p>	
Q3019.	<p>Did you use ordinary water or did you use treated water when you prepared the ORS?</p>	<p>Ordinary (Non-purified) Water 1</p> <p>Treated Water (chlorine) 2</p> <p>Treated Water (Boiled) 3</p> <p>Other (specify) _____ 999</p>	
Q3020.	<p>How much of the ORS packet/ sachet did you use each time you prepared the ORS?</p> <p>(Interviewer: If they don't know how to respond, you may give examples from the list)</p>	<p>Entire contents of packet 1</p> <p>Half of the packet 2</p> <p>Less than half 3</p> <p>Other Specify _____ 999</p>	
Q3021.	<p>What quantity of water did you mix the ORS with each time you prepared the solution?</p> <p>Interviewer: If they don't know the particular metric measurement, probe as to what type of container they used to measure the amount of water. Do not read list of responses.</p>	<p>Used 1 standard household drinking cup/mug/ glass 1</p> <p>Used Kit Yamoyo Container 2</p> <p>Used a large bottle of cola/soda (full) 3</p> <p>200 Milliliters 4</p> <p>750 Millilitre 5</p> <p>1 Litre 6</p> <p>2 Litres 7</p> <p>2.5 litre container (full) 8</p> <p>Don't Know 888</p> <p>Other Specify _____ 999</p>	
Q3022.	<p>How many days did you give the child the ORS?</p>	<p>□□</p>	
Q3023.	<p>How often did you give the ORS solution to (NAME)?</p> <p>(Interviewer: Read the list and ask respondent to select one response.)</p>	<p>Frequently 1</p> <p>After each liquid stool 2</p> <p>Morning, mid-day, and night 3</p> <p>Whenever the child wanted it 4</p> <p>Don't know 888</p> <p>Other (specify) _____ 999</p>	

Q3024.	From where was the ORS originally obtained?	Health center/clinic/hospital Community health worker Private pharmacy Neighbor/friend/family member Traditional Healer NGO/ Faith-based organization/CBO Private shop/Community Retailer/Intemba Don't know Other (specify)_____	1 2 3 4 5 6 7 888 999	→Q3026 →Q3026 →Q3026 →Q3026 →Q3026 →Q3026 →Q3026 →Q3026 →Q3026
Q3025.	From which health facility did you obtain the ORS?	[_____]		
3025A	How much did you spend on transport to get to the health centre? If they spent nothing to get there, put "0"	[_____]Kwacha Don't know	888	
3025B	How much did you spend on food and drinks during your trip to the health centre? If they spent nothing to get there, put "0"	[_____]Kwacha Don't know	888	
3025C	What other expenses if any, did you have during your trip to the health centre?	Medicines User fee at clinic None Other, Specify_____	1 2 3 888	→3026
3025D	How much did you spend on this?	[_____] don't know	888	
Q3026.	Did you pay for the ORS?	Yes No Don't know	1 2 888	→3028 →3028
Q3027.	How much did you pay? Put currency (Kwacha)	(_____) Kwacha		
Q3028.	What do you think of the price of ORS? Interviewer: Read options and ask respondent to select one response.	Not expensive Affordable Expensive Too expensive No opinion Don't know	1 2 3 4 5 888	
Q3029.	How far from your household was the location the ORS was obtained from? (Interviewer: Ask for response in Km)	[_____] km Don't know	888	

Q3030.	How long did it take to walk there from your home? Interviewer: If they say they did not walk, ask them how long it would take to walk there.	Minutes [_____] Don't know 1 hour = 60 mins 2 hours = 120 mins 3 hours = 180 mins 4 hours = 240 minutes	888	
Q3031.	Was (NAME) given a home-prepared sugar-salt solution (SSS) during his/her recent episode of diarrhea? Interviewer: Use the local term(s) for the sugar-salt solution (as distinguished from purchased ORS). Explain 1 teaspoon of salt to 6 teaspoons of sugar in a Litre of water.	Yes No Don't know	1 2 888	→3033 →3034
Q3032.	How often did you give the home-prepared sugar-salt solution to (NAME)? Interviewer: Read the list and ask the respondent to select one response.	Frequently After each liquid stool Morning, mid-day, and night Whenever the child wanted it Don't know Other (specify) _____	1 2 3 4 888 999	
If Q3016=2 (NO) AND Q3031=2 (NO) then go to Q3033. Otherwise, go to Q3034.				
Q3033.	Interviewer: If the caregiver did not provide either ORS or SSS to the child, ask "why did you not give (NAME) either ORS or home-prepared sugar-salt solution?" [Interviewer: Do not read list. Multiple responses allowed.]	Child not seriously ill Could not find ORS/SSS to buy Products too costly Child/Mother does not like Didn't know about ORS/SSS Health centre did not have any No nurse/doctor/health staff available at clinic Gave other medicine Didn't know how to make SSS Forgot about ORS/SSS Other (specify) _____	1 2 3 4 5 6 7 8 9 10 999	

	Now I'd like to ask a few questions about diarrhea <u>treatments</u>.			
Q3034.	Did you seek advice for the diarrhea?	Yes No	1 2	→Q3036
Q3035.	Where did you receive the main advice?	Health center/clinic/hospital Community health worker Private pharmacy Neighbor/friend/family member Traditional Healer NGO/ Faith-based organization/CBO Private shop/Community Retailer/Intemba Kit Yamoyo Promoter Don't know Other (specify)_____	1 2 3 4 5 6 7 8 888 999	
Q3036.	Did you seek treatment from someone outside the home for the diarrhea?	Yes No	1 2	→Q3039
Q3037.	How many days after the diarrhea began did you first seek treatment ? Interviewer: If the same day, record '00.'	[][]		
Q3038.	Where did you receive the treatment for (NAME)? (Interviewer: Do not read list. Multiple responses allowed)	Health center/clinic/hospital Community health worker Private pharmacy Neighbor/friend/family member Traditional Healer NGO/ Faith-based organization/CBO Private shop/Community Retailer/Intemba Don't know Other (specify)_____	1 2 3 4 5 6 7 888 999	
Q3039.	How many days after the diarrhea began did (NAME) first get treatment ?	[][] Other, Specify _____		
Q3040.	Was (NAME) given anything other than ORS or a home-prepared treatment to treat the diarrhea? Interviewer: Probe, We want to know any other treatments which were given to treat the child, aside from ORS and SSS.	Yes No Don't know	1 2 888	→Q3042 →Q3042

Q3041.	Can you tell me or show me what treatments were given to (NAME)? Interviewer: If the respondent is not sure which products were given, show image with local options. Multiple options allowed. Click all that apply. Probe: Anything else?	Kit Yamoyo Zinc Antibiotic (e.g. flagyl) Anti-diarrheal Anti-malarial Other pill/syrup Intravenous fluid/drip Vitamins Herbal/traditional remedy, specify____ Don't know Other (specify)_____	1 2 3 4 5 6 7 8 9 888 999	
Q3042.	Have you ever heard about zinc as a treatment for childhood diarrhea? Interviewer: Show images of zinc examples to respondent (PedZinc, blister pack, Health Centre zinc)	Yes No Don't know	1 2 888	 →3073 →3073
Q3043.	Can you tell me what you know about zinc? Interviewer: Multiple responses allowed. Do not read list. Probe: anything else?	Treatment for diarrhea Needs to be taken with ORS/ORT Makes child stronger Helps prevent future episodes of diarrhea Reduces duration and severity of diarrhea Nothing Other (Specify)_____	1 2 3 4 5 7 999	
Q3044.	Thinking back over the last 3 months, have you heard any messages or received information about zinc?	Yes No Don't know	1 2 888	 →3048 →3048
3044a	Where did you hear/see the message(s) about zinc? Interviewer: Multiple responses allowed. Note all that apply. Do not read list.	Radio Television Community education session/health talk Community health worker Health clinic nurse/doctor/clinical officer Neighbor/friend Newspaper School Church Banner/poster/etc Private shop/Community Retailer/Intemba Kit Yamoyo Promoters Other specify)_____	1 2 3 4 5 6 7 8 9 10 11 12 999	→3047 →3047 →3045 →3045 →3045 →3045 →3047 →3045 →3045 →3046 →3045 →3045 →3047
Q3045.	Was the person delivering the message wearing a t-shirt that looked like this? SHOW PICTURE OF ORANGE PROMOTERS T-Shirt and RED SHOPKEEPER T-SHIRT(Include on tablet if possible)	YES NO Don't remember	1 2 3	→3047 →3047 →3047

Q3046.	Was it one of these posters? Show Picture of Kit Yamoyo promotional posters (include on tablet if possible)	YES NO Don't remember	1 2 3	
Q3047.	What information did you get from the message(s) that you heard? Interviewer: Multiple responses allowed. Probe: anything else?	Zinc reduces the duration of the diarrheal episode Zinc reduces the severity of diarrhea The risk of new episode in the future is reduced Zinc is available in health centers Zinc should be taken with ORS/ORT A complete 10-day dose should be administered Zinc is an appropriate treatment for diarrhea Zinc is a micronutrient Zinc is used for malnutrition Don't know Other (specify)_____	1 2 3 4 5 6 7 8 9 888 999	
Q3048.	Did anyone recommend you use zinc to treat the diarrhea?	Yes No Don't know	1 2 888	→Q3050 →Q3050
Q3049.	If yes, who recommended zinc? <i>(Interviewer: Do not read list. Mark only one answer).</i>	Health center/clinic/hospital Community health worker Private pharmacy Neighbor/friend/family member Traditional Healer NGO/ Faith-based organization/CBO Private shop/Community Retailer/Intemba Kit Yamoyo Promoter Don't know Other , (specify)_____	1 2 3 4 5 6 7 8 888 999	
Q3050.	Did anyone give (NAME) a zinc product?	Yes No Don't know	1 2 888	→3052 →Mod6
Q3051.	If NO, can you tell me why you did not give your child zinc to treat the diarrhea?	Never heard of zinc Did not know where to buy Zinc is too expensive Used another product I had confidence in Don't think it works I had it, but didn't know I was supposed to use it Other (specify)_____	1 2 3 4 5 6 999	From here skip Q3073
Q3052.	Which type of zinc product was (NAME) given? Interviewer: Show examples of any local zinc products	Tablets from health centre Tablets from Kit Yamoyo (PedZinc) Syrup Don't know Other, Specify_____	1 2 3 888 999	→3056 →3056 →3056
Q3053.	How many zinc tablets did you receive?	() Don't know	888	
3053B	How many zinc tablets did you give [NAME] per day?	() Don't know	888	

Q3054.	How many days did you give zinc to (NAME)?	() Don't Know	888	If greater than 9 go to 3056
Q3055.	Interviewer: If less than 10 tablets ask: Was there a reason (NAME) took less than 10 tablets? Interviewer: Do not read list. Multiple responses allowed.	Child was cured Child would not take zinc treatment Child vomited treatment Needed treatment for another person Wanted to save remaining treatment for future illness Did not know child needed to take entire treatment Thought I needed to give zinc only along with ORS Child still taking the treatment Other (specify)_____	1 2 3 4 5 7 8 9 999	
Q3056.	Where did you obtain the zinc product? Interviewer: Mark only one answer.	Health center/clinic/hospital Community health worker Private pharmacy Neighbor/friend/family member Traditional Healer NGO/ Faith-based organization/CBO Private shop/Community Retailer/Intemba Don't know Other (specify)_____	1 2 3 4 5 6 7 888 999	
Q3057.	How far from your household was the location the zinc was obtained from? (Interviewer: Ask for response in Km)	[] km Don't know	 888	
Q3058.	How long did it take to walk there from your home? Interviewer: If they say they did not walk, ask them how long it would take to walk there.	Minutes [] Don't know 1 hour = 60 mins 2 hours = 120 mins 3 hours = 180 mins 4 hours = 240 minutes	 888	
Q3059.	What was your main reason for choosing this source of supply? Interviewer; Mark only one answer. Do not read list.	Price Easily accessible Quality of care Most knowledgeable source Only place I know to get it Other (Specify)	1 2 3 4 5 999	
Q3060.	Did you give (NAME) ORS or SSS along with the Zinc?	Yes No	1 2	→Q3062

Q3061.	What was the primary reason you did not give ORS or SSS along with zinc? Interviewer: Do not read list. Mark only one response.	Did not know it should be given together Did not have ORS Don't think ORS is effective Didn't have ingredients for SSS/ORT Other (specify)_____	1 2 3 4 999	
Q3062.	What dose of zinc per day was given to (NAME)?	Half tablet 1 whole tablet 2 whole tablets 3 whole tablets Don't know Other (specify)_____	1 2 3 4 888 999	
Q3063.	Is (NAME) still taking zinc?	Yes No Don't know	1 2 888	
Q3064.	Does (NAME) still have diarrhea?	Yes No Don't know	1 2 888	
Q3065.	Did you think this zinc treatment was effective in treating (NAME)?	Yes No Don't know	1 2 888	→3067 →3068
Q3066.	Why do you think it was effective?	Diarrhea stopped quickly Child recovered quickly Child regained appetite Child has not had diarrhea again Don't know Other (specify)_____	1 2 3 4 888 999	All should skip to 3068
Q3067.	Why don't you think it was effective?	Diarrhea did not stop soon Child didn't like the taste Too hard to administer Diarrhea started again Don't know Other (specify)_____	1 2 3 4 888 999	
Q3068.	Do you plan on using zinc the next time (NAME) has diarrhea?	Yes No Don't know	1 2 888	
Q3069.	Did you purchase the zinc or obtain it free from the health centre?	Purchased Obtained it for free	1 2	→3070
3069A	For those that obtained it free: How did you obtain the free zinc?	Redeemed voucher for Kit Yamoyo Free from health center Other (specify)_____	1 2 999	→Mod6 →Mod6 →Mod6
Q3070.	What price did you pay?	Price_____ Don't know	888	→Mod6
Q3071.	What do you think of the price of zinc? Interviewer: Read options and ask respondent to select one response.	Not expensive Affordable Expensive Too expensive No opinion Don't know	1 2 3 4 5 888	

Q3072.	If the price of zinc exceeded what you would be willing or able to pay, what would you do?	Find cheaper brand Stop using them Other (specify)_____	1 2 999	
3073.	<p>Interviewer: If negative responses given in Q3016 AND Q3031 AND Q3042 AND Q3050 indicating that they gave no treatments (including no ORS/ SSS or home remedies), ask the following. Multiple responses allowed. Do not read list.</p> <p>Can you tell me why you did not provide any treatment to (NAME) during this recent episode of diarrhea?</p>	<p>Child not very sick Could not afford Did not know where to get treatment Child too young for drugs Health center had no treatment Child has never had diarrhea Don't know Other (specify)_____</p>	<p>1 2 3 4 5 6 888 999</p>	All Skip to Mod 6

Module 4: For caregivers of children under age 5 years who did not have a child with diarrhea within last two weeks.

Q4001.	When one of your children under the age of five has diarrhea, where would you most frequently seek advice ?	Health center/clinic/hospital Community health worker Private pharmacy Neighbor/friend/family member Traditional Healer NGO/ Faith-based organization/CBO Private shop/Community Retailer/Intemba Kit Yamoyo Promoter Do not seek advice Don't know Other ,(specify)_____	1 2 3 4 5 6 7 8 9 888 999	
Q4002.	When one of your children under the age of five has diarrhea, where would you most frequently seek treatment ?	Health center/clinic/hospital Community health worker Private pharmacy Neighbor/friend/family member Traditional Healer NGO/ Faith-based organization/CBO Private shop/Community Retailer/Intemba Kit Yamoyo Promoter Do not seek treatment Don't know Other, (specify)_____	1 2 3 4 5 6 7 8 9 888 999	
Q4003.	When one of your children under the age of five has diarrhea, what do you most often do to treat him or her? Interviewer: do not read list. Ask respondent to state only ONE answer – the most frequently used treatment.	Give more than usual amount of fluids Give ORS Give homemade sugar salt solution (SSS) Give home-based fluids (not ORS or SSS) Give antibiotic (e.g. flagyl) Give ant diarrheal Give more than usual to eat Continue breastfeeding Take to clinic or hospital Use Kit Yamoyo - diarrhea treatment kit Don't typically do anything Don't know Other (specify)_____	1 2 3 5 6 7 8 9 10 11 12 888 999	

Q4004.	<p>Probe: In addition to the answer just provided, what else (if anything) do you do most often to treat him or her?</p> <p>Interviewer: do not read list.</p> <p>Ask respondent to choose only ONE answer – the second most frequently used treatment.</p>	<p>Give more than usual amount of fluids 1</p> <p>Give ORS 2</p> <p>Give SSS 3</p> <p>Give home-based fluids(not ORS or SSS) 4</p> <p>Give antibiotic 5</p> <p>Give ant diarrheal 6</p> <p>Give more than usual to eat 7</p> <p>Continue breastfeeding 8</p> <p>Take to clinic or hospital 9</p> <p>Use Kit Yamoyo - diarrhea treatment kit 10</p> <p>Don't typically do anything 11</p> <p>Don't know 888</p> <p>Other (specify)_____ 999</p>		
Q4005.	<p>When one of your children under 5 has diarrhea, do you give less than usual to drink, about the same amount, more than usual to drink, or nothing to drink?</p> <p>(Interviewer: If “less,” probe: would you give much less than usual to drink or somewhat less?)</p>	<p>Much less 1</p> <p>Somewhat less 2</p> <p>About the same 3</p> <p>More 4</p> <p>Nothing to drink 5</p> <p>Don't know 888</p>		
Q4006.	<p>When one of your children under 5 has diarrhea, do you normally continue to breastfeed during the episode?</p> <p>(Interviewer: Probe: More or Less?)</p>	<p>YESBreastfed more</p> <p>Breastfed less 1</p> <p>Breastfed about the same 2</p> <p>No</p> <p>Never breastfed 3</p> <p>Stopped breastfeeding due to diarrhea 4</p> <p>Does not breastfeed anymore/weaned/too old 5</p> <p>Other (Specify) 999</p> <p>Don't know 888</p>		
Q4007.	<p>When one of your children under 5 has diarrhea, do you normally give less than usual to eat, about the same amount, more than usual, or nothing?</p> <p>Interviewer: If “less,” probe: much less than usual to eat or somewhat less?</p>	<p>Much less 1</p> <p>Somewhat less 2</p> <p>About the same 3</p> <p>More 4</p> <p>Nothing to eat 5</p> <p>Don't know 888</p>		
Q4008.	<p>Thinking back over the past 3 months, have you seen or heard any messages about treatment for diarrhea?</p>	<p>Yes 1</p> <p>No 2</p>		→4012

Q4009.	Where did you hear/see the message(s) about treatment for diarrhea? Interviewer: Multiple responses allowed. Note all that apply. Do not read list.	Radio	1	→4012
		Television	2	→4012
		Community education session/health talk	3	→4010
		Community health worker	4	→4010
		Health clinic nurse/doctor/clinical officer	5	→4010
		Neighbor/friend	6	→4010
		Newspaper	7	→4012
		School	8	→4010
		Church	9	→4010
		Banner/poster/etc	10	→4011
		Private shop/Community Retailer/Intemba	11	→4010
		Kit Yamoyo Promoters	12	→4010
		Other (specify)_____	999	→4012
Q4010.	Was the person delivering the message wearing a t-shirt that looked like this? SHOW PICTURE OF ORANGE PROMOTERS T-Shirt and RED Shop Keeper Shirt (Include on tablet if possible)	YES	1	→4012
		NO	2	→4012
		Don't remember	3	→4012
Q4011.	Was it one of these posters? Show Picture of Kit Yamoyo promotional posters (include on tablet if possible)	YES	1	
		NO	2	
		Don't remember	3	
Q4012.	Do you know what ORS is? (Interviewer: refer to it in different ways – local name (Manzi yamoyo), Oral Rehydration Salts, and show image of local ORS packets on screen noting that they sometimes look like this.	Yes	1	
		No	2	→4029
Q4013.	In the past 3 months have you heard any messages about ORS?	Yes	1	→4014
		No	2	→4015
Q4014.	Where did you hear/see the message(s) about ORS? Interviewer: Multiple responses allowed. Note all that apply. Do not read list.	Radio	1	→4015
		Television	2	→4015
		Community education session/health talk	3	→4014a
		Community health worker	4	→4014a
		Health clinic nurse/doctor/clinical officer	5	→4014a
		Neighbor/friend	6	→4014a
		Newspaper	7	→4015
		School	8	→4014a
		Church	9	→4014a
		Banner/poster/etc	10	→4014b
		Private shop/Community Retailer/Intemba	11	→4014a
		Kit Yamoyo Promoters	12	→4014a
		Other (specify)_____	999	→4015

Q4014A	Was the person delivering the message wearing a t-shirt that looked like this? SHOW PICTURE OF ORANGE PROMOTERS T-Shirt and Red Retailer Shirt (Include on tablet if possible)	YES NO Don't remember	1 2 3	→4015 →4015 →4015
Q4014B	Was it one of these posters? Show Picture of Kit Yamoyo promotional posters (include on tablet if possible)	YES NO Don't remember	1 2 3	
Q4015.	Please tell me if you agree or disagree with each of these statements. Interviewer: Read this list.	Ag Dis DK ORS is medicine that gives good health 1 2 888 ORS is a treatment for diarrhea 1 2 888 ORS stops Diarrhea 1 2 888 My child does not like the taste of ORS 1 2 888 ORS prevents Dehydration 1 2 888		
Q4016.	Can you describe the process of how to make ORS Solution in as detailed a way as possible? (multiple answers allowed. check all that are mentioned by caregiver. Do not read responses. Only check boxes that are mentioned by respondent)	Mix contents of ORS package with water Ensure water is clean/Purify water Ensure proper measurement of water Wash hands prior to preparing Respondent explains how to use Kit Yamoyo Sprinkle over food Swallow Powder Don't know Other (specify)_____	1 2 3 4 5 6 7 888 999	
Q4017.	Do you think ORS treatment is effective in treating diarrhea?	Yes No Don't know	1 2 888	→4019 →4020
Q4018.	Why do you think ORS is effective? (Do not read responses. Multiple responses allowed. Only check boxes that are mentioned by respondent)	Diarrhea stops quickly Child recovers quickly Child regains appetite Prevents dehydration Don't know Other (specify)_____	1 2 3 4 888 999	→4020 →4020 →4020 →4020 →4020 →4020

Q4019.	Why don't you think ORS is effective in treating diarrhea? <i>(Do not read responses. Multiple responses allowed. Only check boxes that are mentioned by respondent)</i>	It only prevents dehydration It is only for giving strength Diarrhea does not stop soon/diarrhea continues Child doesn't like the taste Too hard to administer Don't know Other (specify)_____	1 2 3 4 6 888 999	
Q4020.	Do you plan on using ORS the next time your under 5 child has diarrhea?	Yes No Don't know	1 2 888	
Q4020A	Thinking back over the past 6 months, have you heard a message/received information about an anti-diarrheal kit called Kit Yamoyo? Interviewer: Show Image of Kit Yamoyo and an actual Kit Yamoyo	YES NO Don't Know	1 2 888	
Q4020B	Have you ever used the Kit Yamoyo to treat any of your children under 5 with diarrhoea?	YES NO Don't know	1 2 888	→Mod 7 →4021
Q4020C	If no, why did you not use the Kit Yamoyo to treat your child's diarrhoea? Multiple responses allowed. Do not read list.	Child has not had diarrhea Kit is too expensive Kit was not available at my local shop I prefer to go to the health centre I have not heard about it/Do not know what it is Don't Know Other, Specify_____	<u>1</u> <u>2</u> <u>3</u> <u>4</u> <u>5</u> 888 999	
Q4021.	Have you ever prepared ORS solution for your under 5 child?	Yes No	1 2	→Q4025
Q4021a	Which ORS product(s) was given to your under 5 child? <i>(Interviewer: Multiple responses allowed. If they don't know you can show them the poster with samples of local products (ORS packets), and the actual Kit Yamoyo, and ask respondent to select any/all used during the recent episode of diarrhea.)</i> <i>If more than one answer is selected, confirm that they used two different types of ORS during the most recent episode of diarrhoea</i>	GRZ (Health Centre) From Kit Yamoyo Other from Private shop (e.g. Novalyte)? Don't know	1 2 3 888	→Mod7

Q4027.	How far is the location you would typically obtain ORS from? (Interviewer: Ask for answer in Km)	[] km Don't know	888	
Q4028.	How long would it take to walk there? Interviewer: If they say they do not walk, ask them how long it would take to walk there	Minutes () 1 hour = 60 mins 2 hours = 120 mins 3 hours = 180 mins 4 hours = 240 minutes		
Q4029.	When your under 5 child has had diarrhoea in the past, have you ever given them home-prepared sugar-salt solution (SSS)? Insert above the local term(s) for the sugar-salt solution (as distinguished from purchased ORS – explain 1 teaspoon of salt to 6 teaspoons of sugar in a litre of water)	Yes No Don't know	1 2 888	→Q4032 →Q4032
Q4030.	Interviewer: check responses to Q4021 and Q4029 If Q4021=2 (NO) AND Q4029=2 (NO) then go to Q4031. Otherwise, go to Q4032.			
Q4031.	Interviewer: If the caregiver does not provide either ORS or SSS to the child, ask “why have you never given your under 5 child either ORS or home-prepared sugar-salt solution to treat diarrhea?” [Interviewer: Do not read list. Multiple responses allowed.]	Child not seriously ill Normally cannot find ORS/SSS to buy Products too costly Child/Mother does not like Didn't know about ORS/SSS Health centre usually does not have any No nurse/doctor/health staff available at clinic Give other medicine Don't know how to make SSS Forgot about ORS/SSS Other (specify)_____	1 2 3 4 5 6 7 8 9 10 999	
Q4032.	When one of your children under 5 child has diarrhoea do you ever give anything other than ORS or home-prepared treatment to treat the diarrhea?	Yes No Don't know	1 2 888	→4034 →4034

Q4033.	Can you tell me or show me what treatments you would give to your under 5 child if he/she had diarrhea? Multiple responses allowed	Kit Yamoyo 1 Zinc other than from Kit Yamoyo 2 ORS other than from Kit Yamoyo 3 Antibiotic (e.g. flagyl) 4 Anti-diarrheal 5 Anti-malarial 6 Other pill/syrup 7 Intravenous fluid 8 Vitamins 9 Herbal/traditional remedy 10 Don't know 888 Other (specify)_____ 999		
Q4034.	Have you ever heard about zinc as a treatment for childhood diarrhea? Show respondent pictures of Zinc examples to verify	Yes 1 No 2 Don't know 888		→Q4058 →Q4058
Q4035.	Can you tell me what you know about zinc? Interviewer: Multiple responses allowed. Do not read list. Probe: anything else?	Zinc is appropriate medicines for diarrhea 1 Makes child stronger 2 Zinc reduces the duration of the diarrheal episode 3 Zinc reduces the severity of diarrhea 4 The risk of new episode in the future is reduced 5 Zinc is available in health centers 6 Zinc should be taken with ORS/ORT 7 A complete 10-day course should be administered 8 Zinc is a micronutrient 9 Zinc is used for malnutrition 10 Don't know 888 Other (specify)_____ 999		
Q4036.	Thinking back over the last 3 months , have you heard any messages or received information about zinc?	Yes 1 No 2 Don't know 888		→4041 →4041
Q4037.	Where did you hear/see the message(s) about zinc? Interviewer: Multiple responses allowed. Note all that apply. Do not read list.	Radio 1 Television 2 Community education session/health talk 3 Community health worker 4 Health clinic nurse/doctor/clinical officer 5 Neighbor/friend 6 Newspaper 7 School 8 Church 9 Banner/poster/etc 10 Private shop/Community Retailer/Intemba 11 Kit Yamoyo Promoters 12 Other specify)_____ 999		→4040 →4040 →4038 →4038 →4038 →4038 →4040 →4038 →4038 →4038 →4040 →4040

Q4038.	Was the person delivering the message wearing a t-shirt that looked like this? SHOW PICTURE OF ORANGE PROMOTERS T-Shirt and Red Retailer Shirt (Include on tablet if possible)	YES	1	→4040
		NO	2	→4040
		Don't remember	3	→4040
Q4039.	Was it one of these posters? Show Picture of Kit Yamoyo promotional posters (include on tablet if possible)	YES	1	
		NO	2	
		Don't remember	3	
Q4040.	What information did you get from the message(s) that you heard? Interviewer: Multiple responses allowed. Probe: anything else?	Zinc reduces the duration of the diarrheal episode	1	
		Zinc reduces the severity of diarrhea	2	
		The risk of new episode in the future is reduced	3	
		Zinc is available in health centers	4	
		Zinc should be taken with ORS/ORT	5	
		A complete 10-14 day dose should be administered	6	
		Zinc is an appropriate treatment for diarrhea	7	
		Zinc is a micronutrient	8	
		Zinc is used for malnutrition	9	
		Don't know	888	
		Other (specify)_____	999	
Q4041.	Has anyone ever recommended use of zinc to treat diarrhea?	Yes	1	
		No	2	→Q4043
		Don't know	888	→Q4043
Q4042.	If yes, who recommended zinc? <i>(Interviewer: Do not read list. Multiple responses allowed.)</i>	Health center/clinic/hospital	1	
		Community health worker	2	
		Private pharmacy	3	
		Neighbor/friend/family member	4	
		Traditional Healer	5	
		NGO/ Faith-based organization/CBO	6	
		Private shop/Community Retailer/Intemba	7	
		Kit Yamoyo Promoter	8	
		Don't know	888	
Q4043.	Have you ever used zinc to treat [NAME] with diarrhea?	Yes	1	→4045
		No	2	
		Don't know	888	→Mod6
Q4044.	If NO, can you tell me why you have not given your child zinc to treat the diarrhea?	Never heard of zinc	1	From here skip to Q4058
		Did not know where to buy	2	
		Zinc is too expensive	3	
		Used another product I had confidence in	4	
		Don't think it works	5	
		I had it, but didn't know I was supposed to use it	6	
		Other (specify)_____	999	

Q4045.	Which type of zinc product did you use?	Tablets from health centre Tablets from Kit Yamoyo Syrup Don't know Other, specify_____	1 2 3 888 999	→4046 →4046 →4046
Q4045a	How many zinc tablets did you receive?	(_____) Don't know	888	
Q4045b	How many zinc tablets did you give [NAME] per day?	_____ Don't Know	888	
Q4045c	How many days did you give zinc to (NAME)?	_____ Don't Know	888	If greater than 9, go to 4046
Q4045d	Interviewer: If less than 10 tablets ask: Was there a reason (NAME) took less than 10 tablets? Interviewer: Do not read list. Multiple responses allowed.	Child was cured Child would not take zinc treatment Child vomited treatment Needed treatment for another person Wanted to save remaining treatment for future illness Did not know child needed to take entire treatment Thought I needed to give zinc only along with ORS Child still taking the treatment Other (specify)_____	1 2 3 4 5 7 8 9 999	
Q4046.	If your child had diarrhea, can you tell me all the places you could get zinc? Interviewer: Multiple responses allowed. Do not read responses. Probe: anywhere else?	Health center/clinic/hospital Community health worker Private pharmacy Neighbor/friend, family member Traditional Healer Private shop/Intemba Don't know Other (specify)_____	1 2 3 4 5 6 888 999	
Q4047.	What is the main reason you would choose these sources of supply? Interviewer; Mark only one answer. Do not read list.	Price Easily accessible Quality of care Most knowledgeable source Other (Specify)_____	1 2 3 4 999	
Q4048.	When your child under 5 has diarrhea, would you give ORS or SSS along with zinc?	Yes No	1 2	→Q4050
Q4049.	What is the primary reason you would not give ORS or SSS along with zinc? Interviewer: Do not read list. Mark only one response.	Did not know it should be given together Did not have ORS Don't think ORS is effective Didn't have ingredients for ORT too expensive Other (specify)_____	1 2 3 4 5 999	

Q4050.	Do you think zinc treatment is effective in treating diarrhea?	Yes No Don't know	1 2 888	→4051 →4052 →4053
Q4051.	Why do you think zinc is effective for treating diarrhea? <i>(Do not read responses. Multiple responses allowed. Only check boxes that are mentioned by respondent)</i>	Diarrhea stopped quickly Child recovered quickly Child regained appetite Child has not had diarrhea again Don't know Other (specify)_____	1 2 3 4 888 999	
Q4052.	Why don't you think zinc is effective in treating diarrhea? <i>(Do not read responses. Multiple responses allowed. Only check boxes that are mentioned by respondent)</i>	Diarrhea did not stop soon Child didn't like the taste Too hard to administer Diarrhea started again Don't know Other (specify)_____	1 2 3 4 888 999	
Q4053.	Do you plan on using zinc the next time your under 5 child has diarrhea?	Yes No Don't know	1 2 888	
Q4054.	When you used zinc, did you purchase the zinc or obtain it free from the health center?	Purchased Free	1 2	→Mod6
Q4055.	What price did you pay?	Price_____ Don't know	888	
Q4056.	What do you think of the price of zinc? Interviewer: Read options and ask respondent to select one response.	Not expensive Affordable Expensive Too expensive No opinion Don't know	1 2 3 4 5 888	
Q4057.	If the price of zinc exceeded what you were willing or able to pay, what would you do?	Find cheaper brand Stop using them Other (specify)_____	1 2 999	
Q4058.	Interviewer: If negative responses given in Q4021 AND Q4029 AND Q4034 AND Q4044 indicating that they have never given any treatments (including no ORS/SSS or home remedies), ask the following. Multiple responses allowed. Do not read list. Can you tell me why you have never provided any treatment to (NAME) during an episode of diarrhea?	Child not very sick Could not afford Did not know where to get treatment Child too young for drugs Health center had no treatment Child has never had diarrhea Don't know Other,(specify)_____	1 2 3 4 5 6 888 999	All Skip to Mod 6

I would now like to ask you some questions about hand washing
Module 6: Hand washing (Everyone)


Q6001.	Do members of your household typically wash their hands with soap before eating a meal?	Yes, sometimes Yes, always Not at all	1 2 3	
Q6002.	Please show me where members of your household most often wash their hands	Observed Not Observed Not in dwelling/plot/yard No permission to see Other Reason	1 2 3 4 999	 →6005 →6005 →6005 →6005
Q6003.	Observe Presence of Water at the specific place for hand washing. Verify by checking the tap/pump, or basin. Bucket, water container or similar objects for presence of water.	Water is available Water is not available	1 2	
Q6004.	Record if soap or detergent is present at the specific place for hand-washing. Circle all that apply Include image of Kit Yamoyo bar of soap so interviewer can identify	Other Bar Soap Detergent (Powder/Liquid/Paste) Liquid Soap Ash/Mud/Sand Kit Yamoyo bar of soap None Other, Specify_____	1 2 3 4 5 6 999	→Mod5 →Mod5 →Mod5 →Mod5 →Mod5 →6005
Q6005.	Do you have any soap or detergent (or other locally used cleansing agent) in your household for washing hands?	Yes No	1 2	→Mod5
Q6006.	Can you please show it to me? Record observation. Circle all that apply.	Bar Soap Detergent (Powder/Liquid/Paste) Liquid Soap Ash/Mud/Sand Kit Yamoyo Bar of Soap None No permission to see Other Reason	1 2 3 4 5 6 7 999	

Module 7: We would now like to ask you some questions about the Kit Yamoyo and your experience with it.

Q7000X	Did (Name) use the Kit Yamoyo anti-diarrhoea Kit when he or she had diarrhea last?	Yes No Don't Know	1 2 888	→3017 →3017
This question is to confirm use of Kit Yamoyo				
Q7000X1	When you used the Kit Yamoyo, was it: Newly acquired and unopened Newly acquired but open Previously acquired but unopened; OR Previously acquired and previously used some of the contents	Newly acquired and unopened Newly acquired but open Previously acquired but unopened Previously acquired and previously used some of the contents Other, Specify_____	1 2 3 4 999	
Q7000	Have you yourself, or any other people in your household over the age of 5 ever used the Kit Yamoyo?	Yes No Don't know	1 2 888	
Q7001.	Have you ever attended an education/promotion event for the Kit Yamoyo?	Yes No Don't know	1 2 888	→7002a →7002a
Q7002.	If no, where did you see/hear about the Kit Yamoyo? Multiple responses allowed. Do not read list.	Radio Television Community education session/health talk Community health worker Health clinic nurse/doctor/clinical officer Neighbor/friend Newspaper School Church Banner/poster/etc Private shop/Community Retailer/Intemba Kit Yamoyo Promoters Other specify)_____	1 2 3 4 5 6 7 8 9 10 11 12 999	For all responses skip to Q7003
Q7002a	Did the promotion event have an influence on your decision to obtain a Kit Yamoyo?	Yes No Don't Know	1 2 888	

Q7003.	What are the key messages you have received with regard to Kit Yamoyo? Interviewer: Mark all that are mentioned. Do not read list. Probe: Any messages at all?	Use ORS & Zinc together to treat diarrhoea Can buy Kit Yamoyo at the local shop Mix 1 sachet with Kit Yamoyo container full of water Give 1 tablet of zinc per day Finish all ten pills of zinc Give ORS after each liquid stool/loose motion Wash hands with soap Give antibiotic (e.g. Flagyl) Give more than usual amount of fluid Continue breastfeeding Take to clinic/health centre/hospital when danger signs (i.e. blood in stool, severely dehydrated, vomiting) Other, Specify_____	1 2 3 4 5 6 7 8 9 10 11 999	
Q7004.	How many Kit Yamoyo's have you ever obtained?	_____ Don't Know	888	
Q7005.	From where did you obtain your most recent Kit Yamoyo?	Private shop/Community Retailer/Intemba Health center/clinic/hospital Community health worker Neighbor/friend/family member Traditional Healer NGO/ Faith-based organization/CBO Don't know Other (specify)_____	1 2 3 4 5 6 888 999	→7007 →7006 →7010 →7010 →7010 →7010 →7010 →7010
Q7006.	From which health facility did you obtain the Kit Yamoyo?	[_____]		→7010
Q7007.	From which retailer did you obtain the Kit Yamoyo? Interviewer: Name of shop or shop owner is what should be recorded	[_____]		
Q7007a	Did you find the retailer to be helpful with regard to the Kit Yamoyo?	Yes No Don't know	1 2 888	
Q7008.	Did the retailer/shop owner give any advice, instructions, or guidance when you got the Kit Yamoyo?	Yes No Don't know	1 2 888	→7010 →7010

Q7009.	What advice, instructions, or guidance did the retailer provide? Interviewer: Mark all that are mentioned. Do not read list. Probe: Any guidance at all?	Use ORS & Zinc together to treat diarrhoea Can buy Kit Yamoyo at the local shop Mix 1 sachet with Kit Yamoyo container full of water Give 1 tablet of zinc per day Finish all ten pills of zinc Give ORS after each liquid stool/loose motion Wash hands with soap Give antibiotic (e.g. Flagyl) Give more than usual amount of fluid Continue breastfeeding Take to clinic/health centre/hospital when danger signs (i.e. blood in stool, severely dehydrated, vomiting) Other, Specify _____	1 2 3 4 5 6 7 8 9 10 11 999	
Q7010.	Did you pay for the Kit Yamoyo or use a voucher the last time you obtained one?	Paid Voucher Don't know	1 2 888	→7012 →7013
Q7011.	How much did you pay?	(_____)		→7013
Q7012.	From where did you acquire the voucher?	Kit Yamoyo Promoter Health center/clinic/hospital Community health worker Neighbor/friend/family member Private shop/Community Retailer/Intemba Don't know Other (specify)_____	1 2 3 4 5 888 999	
Q7012a	Would you have tried the Kit Yamoyo if you did not receive a voucher?	Yes No Don't Know	1 2 888	
Q7013.	What do you think of the retail price of the Kit Yamoyo (5000 Kwacha or 5KR)? Interviewer: Read options and ask respondent to select one response.	Not expensive Affordable Expensive Too expensive No opinion Don't know	1 2 3 4 5 888	
Q7014.	How far from your household was the location the Kit Yamoyo was obtained from? (Interviewer: Ask for response in Km)	[_____] km Don't know	888	
Q7015.	How long did it take to walk there from your home? Interviewer: If they say they did not walk, ask them how long it would take to walk there.	Minutes [_____] Don't Know 1 hour = 60 mins 2 hours = 120 mins 3 hours = 180 mins 4 hours = 240 minutes	888	

Q7015a	Is this the closest retail shop to your home?	Yes No Don't Know	1 2 888	
Q7015b	What was your main reason for choosing this source of supply? Interviewer: Mark only one answer. Do not read list.	Price Easily accessible Quality of care Most knowledgeable source Only place I know to get it Other (Specify)	1 2 3 4 5 999	
Q7016.	Does a local shop always have Kit Yamoyo in stock and available? Interviewer: you may read the response list.	Yes, always No, never Usually Don't Know	1 2 3 888	
Q7017.	How many days after the diarrhea began did you first seek out the Kit Yamoyo? Interviewer: If the same day, record '00'; If Child did not have diarrhoea when Kit Yamoyo was acquired record 222.	 Child did not have diarrhoea when I acquired Kit Yamoyo Don't know	222 888	
Q7018.	How many days after the diarrhea began did your child first use the Kit Yamoyo? Interviewer: if same day mark '00' If the Kit Yamoyo has not been used yet record 222.	(____) Have not used it yet Don't Know	222 888	
Q7019.	Can you name all of the items found in the Kit Yamoyo? Interviewer: Multiple answers allowed. Click all that are mentioned. Do not read list.	ORS Zinc Soap Instructions	1 2 3 4	
Q7020.	Did you use the instructions found in the Kit Yamoyo?	Yes No Don't Know	1 2 888	→7024 →7024
Q7021.	Did you find the instructions useful?	Yes No Don't Know	1 2 888	
Q7022.	What did you like most about the instructions? Multiple responses allowed. Mark all that are mentioned. Do not read list. Probe: Anything else?	Instructions were clear Diagrams/pictures Instruction are in my language Instruction are in colour Don't Know Other, specify_____	1 2 3 4 888 999	

Q7023.	What, if anything, did you find unclear in the instructions? Multiple responses allowed. Do not read list. If necessary, probe: Can you be more specific?	Container to be used as measure for water One packet of ORS to be mixed with 1 container full of water How many packets of ORS to use How often to give ORS How many zinc tablets to give How long to give zinc for What is the soap for Nothing was unclear Other, Specify_____	1 2 3 4 5 6 7 8 999	
Q7023a	Can you describe the process of how to use the Kit Yamoyo? <i>(multiple answers allowed. check all that are mentioned by caregiver. Do not read responses. Only check boxes that are mentioned by respondent)</i>	Wash hands prior to preparing Remove seal Mix contents of 1 sachet of ORS with Kit Yamoyo container full of water Ensure water is clean/Purify water/Boil water Let boiled water cool before pouring into Kit Yamoyo container Shake Kit Yamoyo container with lid on to mix the ORS and water together Give ORS after each watery stool Take 1 tablet of zinc per day Take full course of zinc tablets until finished (10 days) Don't know Other (specify)_____	1 2 3 4 5 6 7 8 9 888 999	
Q7024.	How many packets of ORS from the Kit Yamoyo did you prepare for your child during the episode of diarrhea?	_____ Don't Know	888	
Q7025.	Did you use ordinary water or did you use treated water when you prepared the Kit Yamoyo ORS?	Ordinary (Non-purified) Water Treated Water (chlorine) Treated Water (Boiled) Other (specify)_____	1 2 3 999	
Q7026.	How much of the ORS packet/sachet did you use each time you prepared the ORS? <i>(Interviewer: If they don't know how to respond, you may give examples from the list)</i>	Entire contents of packet Half of the packet Less than half Other Specify_____	1 2 3 999	
Q7027.	What quantity of water did you mix the ORS with each time you prepared the solution?	Used 1 standard household drinking cup/mug/glass Used Kit Yamoyo Container Used a large bottle of cola/soda (full) 200 Millilitres 750 Millilitre 1 Litre 2 Litres 2.5 litre container (full) Don't Know Other Specify_____	1 2 3 4 5 6 7 8 888 999	→7029 →7029 →7029 →7029 →7029 →7029 →7029 →7029 →7029 →7029

Q7028.	Till what level did you fill the Kit Yamoyo container with water to mix the solution?	<p>Filled to top</p> <p>Filled to line marked on container</p> <p>Filled it up half way</p> <p>Don't know</p> <p>Other, specify_____</p>	<p>1</p> <p>2</p> <p>3</p> <p>888</p> <p>999</p>	
Q7029.	For how many days did you give the child the ORS from Kit Yamoyo?	<input type="text"/>		
Q7030.	How often did you give the ORS solution from Kit Yamoyo your child? <i>(Interviewer: Read the list and ask respondent to select one response.)</i>	<p>Frequently</p> <p>After each liquid stool</p> <p>Morning, mid-day, and night</p> <p>Whenever the child wanted it</p> <p>Don't know</p> <p>Other (specify)_____</p>	<p>1</p> <p>2</p> <p>3</p> <p>4</p> <p>888</p> <p>999</p>	
Q7031.	Did you use each of the items in the Kit Yamoyo when your child had diarrhoea – the ORS, zinc, and soap?	<p>Yes</p> <p>No</p> <p>Don't know</p>	<p>1</p> <p>2</p> <p>888</p>	
Q7031A	Did you use the ORS?	<p>Yes</p> <p>No</p> <p>Don't know</p>	<p>1</p> <p>2</p> <p>888</p>	→7032A
Q7031B	Did you use the Zinc tablets?	<p>Yes</p> <p>No</p> <p>Don't know</p>	<p>1</p> <p>2</p> <p>888</p>	→7032A
Q7031C	Did you use the bar of soap?	<p>Yes</p> <p>No</p> <p>Don't know</p>	<p>1</p> <p>2</p> <p>888</p>	→7032B →7032A
Q7032a	Why did you not use the item(s)?	<p>Child did not have diarrhea</p> <p>Don't think it works</p> <p>Child did not like it</p> <p>Did not know how to use it</p> <p>Forgot to use</p> <p>Other, specify</p>	<p>1</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p> <p>999</p>	All to Q7033
Q7032b	What did you use the soap for? Multiple Responses Allowed	<p>Hand washing</p> <p>Clothes Washing</p> <p>Bathing</p> <p>Other, Specify_____</p>	<p>1</p> <p>2</p> <p>3</p> <p>999</p>	
Q7032.	Had you ever heard about zinc as a medicine for diarrhea prior to learning about the Kit Yamoyo?	<p>Yes</p> <p>No</p> <p>Don't know</p>	<p>1</p> <p>2</p> <p>888</p>	
Q7033.	Was the zinc from the Kit Yamoyo the first time your child has ever had zinc as a treatment for diarrhoea?	<p>Yes</p> <p>No</p> <p>Don't Know</p>	<p>1</p> <p>2</p> <p>888</p>	If NO to 7031B Skip this question

Q7034.	Can you tell me what you know about zinc? Interviewer: Multiple responses allowed. Do not read list. Mark all responses. Probe: anything else?	Zinc is appropriate medicines for diarrhoea Makes child stronger Zinc reduces the duration of the diarrheal episode Zinc reduces the severity of diarrhoea The risk of new episode in the future is reduced Zinc is available in health centers Zinc should be taken with ORS/ORT A complete 10-day course should be administered Zinc is a micronutrient Zinc is used for malnutrition Don't know Other (specify)_____	1 2 3 4 5 6 7 8 9 10 888 999	
Q7035.	What dose of zinc per day was given to your child? Probe: How many tablets?	Half tablet 1 whole tablet 2 whole tablets 3 whole tablets Don't know Other (specify)_____	1 2 3 4 888 999	If NO to 7031B Skip this question
Q7036.	How many days did you give zinc to your child?	_____ Don't Know	888	If greater than 9, go to 7039
Q7037.	Interviewer: If less than 10 tablets ask: Was there a reason your child took less than 10 tablets? Interviewer: Do not read list. Multiple responses allowed.	Child was cured Child would not take zinc treatment Child vomited treatment Needed treatment for another person Wanted to save remaining treatment for future illness Did not know child needed to take entire treatment No one told me to give all the treatment Thought I needed to give zinc only along with ORS Child still taking the treatment Other (specify)_____	1 2 3 4 5 6 7 8 999	
Q7038.	Is your child still taking zinc?	Yes No Don't know	1 2 888	If NO to 7031B Skip this question
Q7039.	Does your child still have diarrhea?	Yes No	1 2	
Q7040.	Did you think the Kit Yamoyo was effective in treating your child's diarrhea?	Yes No Don't know	1 2 888	→7043 →7044

Q7041.	Why do you think the Kit Yamoyo was effective? (Do not read responses. Multiple responses allowed. Only check boxes that are mentioned by respondent)	Diarrhea stopped quickly Child recovered quickly Child regained appetite Child has not had diarrhea again Because of the zinc Don't know Other (specify)_____	1 2 3 4 5 888 999	→ALL RESPONSES TO 7044
Q7042.	Why don't you think the Kit Yamoyo was effective? (Do not read responses. Multiple responses allowed. Only check boxes that are mentioned by respondent)	Diarrhea did not stop soon Child didn't like the taste Too hard to administer Diarrhea started again Don't know Other (specify)_____	1 2 3 4 888 999	
Q7043.	Was it easy to find Kit Yamoyo in a place near you?	Yes No Don't Know	1 2 999	
Q7044.	Did you keep the Kit Yamoyo container after you were finished with the contents?	Yes No Contents are not finished Don't know	1 2 3 888	→7047
Q7045.	Have you used the Kit Yamoyo container for any other purpose?	Storage of salt Storage of sugar Storage for buttons Still has contents in it Other, Specify_____	1 2 3 4 999	
Q7046.	Do you plan on using the Kit Yamoyo the next time your child has diarrhea?	Yes No Don't know	1 2 888	
Q7047.	What was the one thing you liked best about the Kit Yamoyo? Only one response allowed. Do not read list. Looking for the top thing they liked best.	ORS Zinc Soap Container Clear instructions Easy to access Good value/Affordable It worked/Stopped child's diarrhoea ORS, Zinc and Soap together in one kit Other, specify_____	1 2 3 4 4 5 6 7 8 999	
Q7048.	What did you like least about Kit Yamoyo? Multiple responses allowed. Do not read list.	Had to pay for it Too expensive Not easy to find Not in stock when I needed it No antibiotic included I liked everything about it Other, Specify_____	1 2 3 4 5 6 999	
Q7049.	Do you currently have a Kit Yamoyo in your household?	Yes No	1 2	
Q7050.	Can you show it to me?	Yes, Observed No, Not Observed	1 2	

Q7051.	Is it:	Newly acquired and unopened	1	
	Newly acquired and unopened	Newly acquired but open	2	
	Newly acquired but open	Previously acquired but unopened	3	
	Previously acquired but unopened	Previously acquired and previously used some of the contents	4	
	Previously acquired and previously used some of the contents	Other, Specify _____	999	

Module 5: Awareness/likert scales. Should be answered by all respondents.
(Everyone) This section asks your opinion on certain issues.

Q5001	Children die of diarrhea mainly because of dehydration. Can you tell me some common signs of dehydration? Interviewer: Multiple responses allowed. Do not read responses.	Restless/irritable	1	
		Sunken eyes/fontanelle	2	
		Very thirsty/drinks eagerly	3	
		Dark coloured urine	4	
		Skin is less elastic (goes back slowly when pinched)	5	
		Limp/unconscious	6	
		Don't know	888	
		Other specify _____	999	

Please tell me if you believe that the following statements are true or false.
(Everyone)

Ability: Knowledge				
		True	False	Don't Know
Q5002.	Diarrhea can be associated with lack of cleanliness	1	0	888
Q5003.	Diarrhea can be caused by drinking unsafe water	1	0	888
Q5004.	Diarrhea can be caused by eating unhygienic foods	1	0	888
Q5005.	Only those diarrheal episodes that have blood in the stool require antibiotics	1	0	888
Q5006.	Most diarrhea can be managed at home without drugs	1	0	888

Please tell me if you agree or disagree with these statements. Probe: Read out responses (Strongly agree, agree somewhat, disagree somewhat, strongly disagree) (everyone)

MOTIVATION: THREAT SUSCEPTIBILITY (CHILDREN UNDER 5)						
		Strongly Agree	Agree Somewhat	Disagree Somewhat	Strongly Disagree	Don't Know
Q5007.	If my child gets diarrhea it is best to do nothing and it will pass in time	4	3	2	1	888
Q5008.	The children (child) under 5 in my household are (is) healthy so their (his/her) bodies could fight off diarrhea without doing anything	4	3	2	1	888
Q5009.	Children under 5 are too young to experience serious medical problems from getting diarrhea	4	3	2	1	888
Q5010.	I am not worried about the children (child) under 5 in my household getting diarrhea	4	3	2	1	888
Q5011.	Children are more likely to get diarrhea than adults	4	3	2	1	888

Everyone accept those that said NO to 3008/4012 (i.e. don't know ORS) or 3042/4034 (i.e. don't know zinc). All who answered Mod 7 should answer these as well.

Opportunity: Availability						
Skip if have not heard about ORS or ZINC or DTK in Mod 3 and Mod 4						
		Strongly Agree	Agree Somewhat	Disagree Somewhat	Strongly Disagree	Don't know
Q5012.	Shops near here always have ORS for sale	4	3	2	1	888
5012A	Shops near here always have Zinc for sale	4	3	2	1	888
Q5013.	ORS treatments are difficult to get around here	4	3	2	1	888
5012B	Zinc treatments are difficult to get around here	4	3	2	1	888
Q5014.	There is a place nearby where I can get zinc and ORS when my child needs it	4	3	2	1	888
Q5015.	I don't know where to get zinc	4	3	2	1	888
Q5016.	Zinc and ORS treatment products are available within walking distance from my home	4	3	2	1	888

GENERAL AWARENESS OF ORS: Skip only if NO to 3008 or 4012 (i.e. don't know ORS)

Motivation: Outcome Expectations						
		Strongly Agree	Agree Somewhat	Disagree Somewhat	Strongly Disagree	Don't know
Q5017.	ORS is effective for treatment of diarrhea	4	3	2	1	888
Q5018.	ORS does not help prevent dehydration	4	3	2	1	888
Q5019.	There is no need to take a child to the health facility if there is blood in the stool	4	3	2	1	888
Q5020.	The amount of water mixed with the ORS does not matter	4	3	2	1	888
Q5021.	Children should continue eating and drinking if they have diarrhea	4	3	2	1	888

GENERAL AWARENESS OF ZINC: Skip only if NO to 3042 or 4034 (i.e. don't know ZINC)

Motivation: Outcome Expectations						
		Strongly Agree	Agree Somewhat	Disagree Somewhat	Strongly Disagree	Don't know
Q5022.	Zinc is effective for treatment of diarrhea	4	3	2	1	888
Q5023.	Zinc reduces the duration of a diarrheal episode	4	3	2	1	888
Q5024.	Zinc should always be given with ORS for optimal diarrhea treatment	4	3	2	1	888
Q5025.	Use of zinc reduces the risk of dehydration in children	4	3	2	1	888
Q5026.	Zinc reduces the risk of a new diarrheal episode in the following 2 to 3 months	4	3	2	1	888
Q5027.	Zinc does not help in reducing the severity of a diarrheal episode	4	3	2	1	888
Q5028.	What is the minimum number of days that ZINC tablets should be taken? (Record figure in the space provided)	[] days Don't Know 888				

General awareness of soap (Everyone)

Q5029.	What are the best ways to prevent germs that cause diarrhoea?	Purify/boil water 1 Wash hands (with soap) 2 Wash utensils 3 Peel raw fruit 4 Exclusive breastfeeding 5 Don't Know 888 Other, Specify _____ 999				
		Multiple Responses Allowed. Do not read list				
		Strongly Agree	Agree Somewhat	Disagree Somewhat	Strongly Disagree	Don't know
Q5030.	Germs that cause diarrhoea can be passed by people's hands (e.g. handshake)	4	3	2	1	888
Q5031.	Washing our hands with soap protects us better than with just plain water	4	3	2	1	888
Q5032.	Soap is too expensive so we don't use it	4	3	2	1	888
Q5033.	When should one wash their hands?	After using the latrine/toilet 1 Before preparing food and drink 2 Before eating 3 Before feeding children 4 After Working 5 Don't know 888 Other specify _____ 999				
		INTERVIEWER: Multiple response possible. Probe for additional responses and mark all that apply)				

Capacity/Ability: Use of Products						
Skip if NO to 3042 or 4034 or 3017A or 4020A. Everyone from Mod 7 should answer these questions.						
		Strongly Agree	Agree Somewhat	Disagree Somewhat	Strongly Disagree	Don't know
Q5034.	Zinc is an appropriate treatment for diarrhea in children	4	3	2	1	888
Q5035.	Zinc with ORS should be used for every type of diarrhea in children	4	3	2	1	888
Q5036.	Diarrhea in children should be treated with an antibiotic	4	3	2	1	888
Q5037.	Zinc has too many side effects, so I don't feel safe giving zinc to my small child	4	3	2	1	888
Q5038.	Zinc tastes bad so my child won't take it	4	3	2	1	888
Q5039.	Zinc is only a nutritional supplement, not an effective treatment for diarrhea in children	4	3	2	1	888
Q5040.	Zinc should be given along with ORS to be most effective	4	3	2	1	888

Q5041.	It is difficult to remember to give a child zinc when the diarrhea has stopped	4	3	2	1	888
Q5042.	I would purchase and use zinc or the Kit Yamoyo the next time my child has diarrhea	4	3	2	1	888

Interviewer:

Is there anything I did not ask that you think I should know? Is there anything you want to go back to? Is there anything you would like to ask me about the topics we have discussed today?

ENUMERATORS, PLEASE ENTER ANY ADDITIONAL NOTES, ADDITIONAL OBSERVATIONS, PROBLEMS, ETC. IN THIS SECTION AS WELL.

General Responses:

Q 5044. Acquire GPS Location _____

Appendix 2:

Baseline Retailer Survey

Interviewer: Ask to speak with the owner of the shop. If the owner of the shop is not available, ask to speak with the person managing the shop who can assist.

Introduction: “Good day, My name is _____. I am representing UNICEF, Keepers Zambia Foundation, and RuralNet Associates as part of a research consortium here in Zambia, for a study approved by the Ministry of Health. I am part of a team interviewing retailers about their perspectives on health products, diarrhoea, and services available at the community level. The information will be used to improve and potentially increase business for you and other retailers.

As a community retailer, you have been selected to participate. The information gathered here and your details will be kept confidential, and you do not have to answer any questions that you do not want to. We will keep your information safe by locking it up.

Your participation in the study is voluntary and you will not be affected in any way if you decide not to participate. It is your choice. If you agree to help, I will ask you a series of questions related to your practices as a retailer. We will use this electronic tablet to enter your responses to our questions. The interview will take about 1 hour.

The answers you give will help us to learn more about opinions and experiences of retailers in the community and will be used to improve health products and services for you and the communities you serve.

Do you have any questions?

You may contact Stephen Tembo of RuralNet Associates [give business card] if you have any further questions or concerns related to this work. You may contact the Ethics Committee which approved this study about any problems or concerns as well [give contact card].

Do you agree to participate in the study?

No ☐ STOP.

Interviewer: Can I ask why you would not like to participate in this survey?

Not interested.....1 Other _____ 999

Busy.....2

(Interviewer: If the respondent says NO, thank them and discontinue the interview. If s/he says YES, get signature and proceed with the interview).

Signature _____ Date: ____/____/____

Okay, let's begin. MOVE TO SURVEY.

SECTION 1: QUESTIONNAIRE IDENTIFICATION/SCREENING DATA

Selection Criteria		
1. Is your shop registered with the local council?	Yes No	1 2
3. Is your shop open for at least 8 months of the year, including during the rainy season	Yes No	1 2
4. Does the retailer make at least one trip per month to the wholesaler (Minimum, once a month)	Yes No	1 2
Q1. Do you agree to participate in this survey?	Yes No	1 2
Q2A. Time Started		
Q3. Date Questionnaire administered (DD/MM/YYYY)		
Q4. Questionnaire Identification Number		
Q5. Province Code		
Q6. District Code		
Q7. Site Number		
Q8. Name of community		
Q9. Enumerator name		
Q10. Name of the Respondent (First and last name)		
Q11. Name of the Shop/Nickname		
Q12. Name of Owner (First and Last name)		
Q13. Phone number of Owner		
Q14. Name of Supervisor		

SECTION 1: GENERAL BACKGROUND INFORMATION

No.	Questions and filters	Coding categories	Skip to
	What is your position/role in this business?	Owner Worker/Employee Family member Other Specify_____	1 2 3 999
Q1	Record sex of the respondent	Male Female	1 2
Q2	Age of respondent in years (Interviewer: Record age in completed years)	[][]	
Q3.	What is the highest level of school you have successfully completed? Interviewer, please note the following equivalent standards and grades for: Sub A to standard 3 = Grades 1 - 5 Standards 4 to 6 = Grades 6 - 8 From 1 to 3 = Grades 8-10 From 4 to 5 = Grades 11- 12	Grade 1 to 4 Grade 5 to 7 Grade 8 to 9 Grade 10 to 12 Higher learning None Don't know Other, Specify_____	1 2 3 4 5 6 888 999
Q4	What is the sex of the owner of the shop?	Male Female	1 2 If response to Q1001 is 1-Owner. Skip this question
Q5	What is the age of the shop owner in years? (Interviewer: Record age in completed years)	[][] Don't know	888 If response to Q1001 is 1-Owner. Skip this question
Q6	What is your relationship to the owner of the shop?	Owner Wife Husband Son Daughter Cousin Sibling Friend Un-related Employee Other, Specify_____	1 2 3 4 5 6 7 8 9 999 If response to Q1001 is 1-Owner. Skip this question

Q7	<p>What is the highest level of school successfully completed by the shop owner?</p> <p>Interviewer, please note the following equivalent standards and grades for:</p> <p>Sub A to standard 3 = Grades 1- 5</p> <p>Standards 4 to 6 = Grades 6 - 8</p> <p>From 1 to 3 = Grades 8-10</p> <p>From 4 to 5 = Grades 11- 12</p>	<p>Grade 1 to 4</p> <p>Grade 5 to 7</p> <p>Grade 8 to 9</p> <p>Grade 10 to 12</p> <p>Higher learning</p> <p>None</p> <p>Don't know</p> <p>Other, Specify_____</p>	<p>1</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p> <p>6</p> <p>888</p> <p>999</p>	<p>If response to Q1001 is 1-Owner. Skip this question</p>
Q8	Is the owner of the shop involved in the day to day running of the shop?	<p>Yes</p> <p>No</p> <p>Don't Know</p>	<p>1</p> <p>2</p> <p>888</p>	
Q8	Is running this shop the owner's only occupation or form of employment?	<p>Yes</p> <p>No</p> <p>Don't know</p>	<p>1</p> <p>2</p> <p>888</p>	<p>→1012</p> <p>→1012</p>
Q9	What is the owner's other occupation or form of employment?	<p>Housewife</p> <p>Student</p> <p>Retired/Pensioner</p> <p>Farmer/Gardener/Fisher</p> <p>Civil servant (government worker)</p> <p>Formal private company employee</p> <p>Informal small business owner, Specify_____</p> <p>Informal Small business employee, Specify_____</p> <p>Piece worker</p> <p>Brick layer/builder</p> <p>Teacher</p> <p>Don't Know</p> <p>Other, Specify _____</p>	<p>1</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p> <p>6</p> <p>7</p> <p>8</p> <p>9</p> <p>10</p> <p>11</p> <p>888</p> <p>999</p>	
Q10	Prior to owning the shop, what was the owner's occupation or form of employment?	<p>Housewife</p> <p>Student</p> <p>Retired/Pensioner</p> <p>Farmer/Gardener/Fisher</p> <p>Civil servant (government worker)</p> <p>Formal private company employee</p> <p>Informal small business owner, Specify_____</p> <p>Informal Small business employee, Specify_____</p> <p>Piece worker</p> <p>Brick layer/builder</p> <p>Teacher</p> <p>Don't Know</p> <p>Other, Specify _____</p>	<p>1</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p> <p>6</p> <p>7</p> <p>8</p> <p>9</p> <p>10</p> <p>11</p> <p>888</p> <p>999</p>	

Q11	How many years has this shop been open/running? Interviewer: If less than a year, put 0.5. Can use intervals of 0.5 years.	[] Don't know	888	
Q12	What type of shop is this – from the point of view of what you sell? Multiple responses allowed. Select all that apply. Can read list if necessary.	Grocery shop Hardware shop Drug store/chemist Clothing shop General store Tavern/Pub/Bar Other (specify) _____ Don't Know	1 2 3 4 5 6 999 888	
Q12	What time do you usually open the shop? Interviewer enter as 24hr clock/ military time 7am = 7:00 12pm = 12:00 1pm = 13:00 4pm = 16:00 5pm = 17:00 8pm = 20:00 12am = 24:00	[]		
Q13	What time do you usually close the shop? Interviewer enter as 24hr clock/ military time 7am = 7:00 12pm = 12:00 1pm = 13:00 4pm = 16:00 5pm = 17:00 8pm = 20:00 12am = 24:00	[]		
Q14	Are there any months of the year when the shop is closed?	Yes No	1 2	→1019
Q15	Which Months?	[]		
Q15	How many people work in this shop?	[]		
Q16	What kind of work do they do in this shop? (Multiple responses allowed. Check all that apply. Do not read list.)	Selling Buying merchandise Stocking/arranging goods on shelves Cleaning the shop Keeping records Finances Other (specify) _____ Don't know	1 2 3 4 5 6 999 888	

Q17	Do you own or rent the shop building?	Own Rent Other (specify)_____	1 2 3	
Q18	How many rooms are in your shop?	Number of Rooms [] [] Don't Know	888	
Q19	Is there a separate store room?	Yes No	1 2	
Q19	What is the main material of the floor in the shop? INTERVIEWER: OBSERVE AND REPORT. IF UNCLEAR, ASK QUESTION AND READ LIST IF NECESSARY	Earth/Sand/ Mud/Dung Parquet or Polished Wood Ceramic Tiles Cement Other (Specify)_____	1 2 3 4 999	
Q20	What is the main material of the roof in the shop? INTERVIEWER: OBSERVE AND REPORT. IF UNCLEAR, ASK QUESTION AND READ LIST IF NECESSARY	Concrete Metal Sheet Clay Straw/Grass Wood Other (specify)_____	1 2 3 4 5 999	
Q21	Do you own a cell phone?	Yes No	1 2	→1032
Q22	Do you have a cell phone signal at the shop?	Yes No	1 2	→1030
Q23	Approximately how many minutes do you have to walk to get a signal?	[] minutes		
Q24	How often do you go to a location where you have a signal to use your cell phone?	Once a week Twice a week Once every 2 days Once a day Twice a day Three times a day Four times a day More than four times daily Other (specify)_____	1 2 3 4 5 6 7 9 999	
Q25	Is your cell phone currently charged?	Yes No	1 2	
Q26	Do you have a place to charge your cell phone here at the store?	Yes No	1 2	

PURCHASING

Q27	Which district(s) do you buy your goods from? Multiple responses allowed	<div> <div>Kalomo</div> <div>Choma</div> <div>Monze</div> <div>Katete</div> <div>Petauke</div> <div>Lusaka</div> <div>Chipata</div> <div>Other Specify_____</div> </div>	<div> <div>1</div> <div>2</div> <div>3</div> <div>4</div> <div>5</div> <div>7</div> <div>8</div> <div>999</div> </div>	
Q28	How many different wholesale shops do you buy your goods from?	<div> <div>1</div> <div>2</div> <div>3</div> <div>4</div> <div>5</div> <div>6</div> <div>>6</div> <div>Don't know</div> </div>	<div> <div>1</div> <div>2</div> <div>3</div> <div>4</div> <div>5</div> <div>6</div> <div>7</div> <div>888</div> </div>	
Q29	What is the name of the primary/ main wholesale shop you go to?	<div> <div>[_____]</div> <div>Don't know</div> </div>	<div> <div>888</div> </div>	
Q30	Approximately how many kilometers away is it from your shop?	<div> <div>[_____]</div> <div>km</div> </div>		
Q31	What town is it located in?	<div> <div>(_____)</div> <div>Don't know</div> </div>	<div> <div>888</div> </div>	
Q32	What mode of transportation do you use to get there?	<div> <div>Walking/carry on the head</div> <div>Bicycle</div> <div>Motor cycle</div> <div>Car – public</div> <div>Van – public</div> <div>Truck – public</div> <div>Bus – public</div> <div>Car – private</div> <div>Van – private</div> <div>Truck – private</div> <div>Animal-drawn cart</div> <div>Other (specify)_____</div> </div>	<div> <div>1</div> <div>2</div> <div>3</div> <div>4</div> <div>5</div> <div>6</div> <div>7</div> <div>8</div> <div>9</div> <div>10</div> <div>11</div> <div>999</div> </div>	
Q33	Approximately how long does it take you to get there? Interviewer: Answer in minutes 1 hour = 60 minutes 2 hours = 120 minutes 3 hours = 180 minutes 4 hours = 240 minutes	<div> <div>_____ Minutes</div> <div>Don't Know</div> </div>	<div> <div>888</div> </div>	

Q34	<p>What do you like about this wholesale shop?</p> <p>Multiple responses allowed. Do not read list.</p> <p>Probe: anything else?</p>	<p>Prices are low 1</p> <p>They have all the goods I need 2</p> <p>The staff are friendly 3</p> <p>The goods are of good quality 4</p> <p>It is located in a convenient 5</p> <p>Place 6</p> <p>They keep convenient hours 7</p> <p>They have a credit facility 8</p> <p>Only place that has a particular product, Specify_____ 999</p> <p>Other (specify)_____ 888</p> <p>Don't know</p>	
Q35	How often do you go to buy goods in a month?	<p>1 time 1</p> <p>2 times 2</p> <p>3 times 3</p> <p>4 times 4</p> <p>5 times 5</p> <p>6 times 6</p> <p>>6 times 7</p> <p>Don't know 888</p>	
Q36	Who usually goes to buy goods from the wholesale shop?	<p>Owner 1</p> <p>Wife 2</p> <p>Husband 3</p> <p>Son 4</p> <p>Daughter 5</p> <p>Cousin 6</p> <p>Sibling 7</p> <p>Friend 8</p> <p>Un-related Employee 9</p> <p>Other, Specify_____ 999</p>	
Q37	<p>What was the total value of goods you bought the last time you made a purchase trip?</p> <p>Interviewer: As a check, request to see invoice/receipt ("May I see the receipt from your last visit to the wholesaler")</p>	<p>[_____]kwacha</p> <p>Don't know 888</p>	
Q38	INTERVIEWER: WAS INVOICE/ RECEIPT MADE AVAILABLE TO YOU?	<p>Yes 1</p> <p>Refused 2</p> <p>Did not have 3</p>	
Q39	<p>How much did you spend on transporting the items you bought?</p> <p>(Interviewer: Clarify to respondent, "do not include your individual fare – just the charge for the luggage")</p>	<p>[_____]kwacha</p> <p>Don't know 888</p>	If '0' skip to Q1051

40	How did the transporter decide on the transport charge for the items you bought?	By estimating the weight By looking and estimating the volume Charged by person, not items Don't know Other (specify)_____	1 2 3 888 999	
Q41	How much did you pay for your total individual fare for both going and coming? (Interviewer: Clarify to respondent, "do not include luggage charge – just your individual fare")	[_____]kwacha Don't know	888	
Q42	Did you purchase any medicines in your last purchase trip?	Yes No Don't know	1 2 888	if "no" skip to Q1060
Q43	What type of medicines did you buy in your last purchase trip? (Interviewer: List up to five. Note brand name and type of medicine where possible)	Cafemol (Pain Killer) Chestcof (Cough Medicine) Flagyl (Antibiotic) Indocide (Pain Killer) Kit Yamoyo (Diarrhoea) Mr. Power (Pain Killer) Panadol (Pain Killer) Parapain (Pain Killer) (Trisilicate) Other, Specify_____	1 2 3 4 5 6 7 8 9 999	
Q44	What are the key challenges you have faced with regard to re-stocking supplies? (Be as specific as possible)	Item not available at wholesaler No transport available Too far away Not enough money for goods Not enough money for transport/too expensive Breakdown of transport Hard to access due to bad roads Prices keep changing No challenges Other (specify)_____	1 2 3 4 5 6 7 8 9 999	
Q45	Do you keep any kinds of records for your store?	Yes No Don't know	1 2 888	
Q46	What do the records cover? (Multiple answers allowed. Do not read list. Probe: Anything else?)	Inventory/stock levels Purchase quantity Quantity of sales Purchase price (from wholesaler) Retail/sales price Rent Staff/salaries Transport/travel costs Profits Other (specify)_____	1 2 3 4 5 6 7 8 9 999	
	STORAGE			

Q47	Have you had any goods stolen in the last 12 months?	Yes No Don't know	1 2 888	→1073 →1073
Q1072A	What goods were stolen?	Kit Yamoyo Food item Drink item Medicine Cleaning chemical Personal hygiene product Batteries other (specify)_____	1 2 3 4 5 6 7 999	
Q49	Have any goods been damaged while in storage in the last 12 months?	Yes No Don't know	1 2 888	→1076 →1076
Q50	What goods were damaged? (Interviewer: ask for brand names – multiple responses allowed)	Kit Yamoyo Food item Drink item Medicine Cleaning chemical Personal hygiene product Batteries other (specify)_____	1 2 3 4 5 6 7 999	
Q51	What was the cause of damage?	Rain Direct sunlight/heat Insects/rodents Human error (e.g., dropped/broke) Expired/got rotten Rain Other (specify) _____	1 2 3 4 5 6 999	
Q52	Do you have a system in place for ensuring that the earliest items to expire will be sold first?	Yes No	1 2	
	CUSTOMERS I am now going to ask you some questions about your customers.			
Q53	Where do most of your customers come from? Interviewer: You may read the list	From the community where this shop is From this & another community nearby From this & 2 others communities nearby From this & more than 2 other communities nearby Don't Know Other (specify)_____	1 2 3 4 888 999	

Q54	How far away is the furthest community where your customers come from? (Interviewer: give answer in minutes) 60 min = 1 hr 120 min = 2 hrs 180min = 3 hrs 240min = 4 hrs 300min = 5 hrs)	[] minutes		
Q55	Between men and women, who buys more from your shop?	Men Women No difference	1 2 3	
Q56	Approximately how many customers visited your store yesterday?	()		
Q56	What are the most important factors you consider when deciding what products to sell? Multiple responses allowed. Do not read list.	Profit margins Customer demand Whatever I think will sell Other, specify_____	1 2 3 999	
Q57	Do you ever provide items to any of your customers on credit?	Yes No Other, Specify_____	1 2 999	
Q58	Are you, or have you ever been, a registered seller of KIT YAMOYO?	Yes No Other, Specify_____	1 2 999	

General Awareness of Diarrhoea Treatments

Module 2 - Kit Yamoyo

Q59	Are you, or have you ever been, a registered seller of KIT YAMOYO?	Yes No Other specify_____	1 2	If no, pop up should come up that says: "Previous response does not correspond with this answer, please go back and verify"
Q59	Are you currently selling KIT YAMOYO?	Yes No	1 2	→2003A
Q60	If no, why not? Multiple responses allowed	No money available to buy from wholesaler Out of stock and yet to go purchase more from wholesaler Technical difficulties with the project, Specify_____ Other, Specify_____	1 2 3 999	
K2003A	Can you please tell me what your retailer ID is/was for the Kit Yamoyo project? Interviewer: retailer IDs are of the form KAT010 in Katete and KAL056 in Kalomo. Every retailer has their own unique ID. If they don't know it, it may be found on their red registered retailer card, or on the first page of their grey stock-keeping folder. Enter 888 if unknown.	_____ (Retailer ID)		
Q61	Do you know what ORS is? (Interviewer: refer to it in different ways – local name (Manzi yamoyo), Oral Rehydration Salts, and show image of local ORS packet examples on screen noting that they look like this.	Yes No	1 2	→2009
Q62	Do you think ORS is effective for the treatment of diarrhea in children under 5?	Yes No Don't know	1 2 888	→2006 →2007 →2008

Q63	Why do you think ORS is effective in treating diarrhea? (Do not read responses. Multiple responses allowed. Only check boxes that are mentioned by respondent)	Diarrhea stops quickly Child recovers quickly Child regains appetite Prevents dehydration Customers are satisfied Don't know Other (specify)_____	1 2 3 4 5 888 999	All to 2008
Q64	Why don't you think ORS is effective in treating diarrhea? (Do not read responses. Multiple responses allowed. Only check boxes that are mentioned by respondent)	It only prevents dehydration It is only for giving strength Diarrhea does not stop soon/diarrhea continues Child doesn't like the taste Too hard to administer Customers are dissatisfied Don't know Other (specify)_____	1 2 3 4 6 7 888 999	
Q65	Please tell me if you agree or disagree with each of these statements. Interviewer: Read this list.	Ag Dis DK ORS is medicine that gives good health 1 2 888 ORS is a treatment for diarrhea 1 2 888 ORS stops Diarrhea 1 2 888 Children do not like the taste of ORS 1 2 888 ORS prevents Dehydration 1 2 888		
Q66	Have you ever heard about zinc as a treatment for childhood diarrhea?	Yes No Don't know	1 2 888	→2012
Q67	Can you tell me what you know about zinc? Interviewer: Multiple responses allowed. Do not read list. Probe: anything else?	Zinc is appropriate medicines for diarrhea Makes child stronger Zinc reduces the duration of the diarrheal episode Zinc reduces the severity of diarrhea The risk of new episode in the future is reduced Zinc is available in health centers Zinc should be taken with ORS/ORT A complete 10-day course should be administered Zinc is a micronutrient Zinc is used for malnutrition Don't know Other (specify)_____	1 2 3 4 5 6 7 8 9 10 888 999	
Q68	Do you think zinc is effective for the treatment of diarrhea in children under 5?	Yes No Don't know	1 2 888	

Q69	What is the Kit Yamoyo? Do not read responses. Mark exactly what is said by respondent.	Diarrhoea Treatment Kit Anti-Diarrhoeal Treatment Kit Medicine for Diarrhoea Medicine ORS ORS and Zinc Kit for Mothers Other (Specify)_____	1 2 3 4 5 6 7 999	
Q69	Did you attend the retailer training conducted by the project & Keepers Zambia Foundation?	Yes No	1 2	→2015
Q70	If you did not attend the training, where did you receive your information on the Kit Yamoyo? Single response.	I have not received any information on KIT YAMOYO From the owner of the shop From a KIT YAMOYO Promoter From Keepers Zambia Foundation Staff Other, Specify_____	1 2 3 4 999	All responses to 2017
Q71	On a scale of one to five, where 1 is not useful, and 5 is very useful, how useful was the training?	Scaled Response 1 2 3 4 5 Not useful Very useful		
Q72	What were the main topics covered in the training? Multiple responses allowed. Do not read list.	Benefits of KIT YAMOYO How to store KIT YAMOYO How to sell KIT YAMOYO Where to get KIT YAMOYO How to keep stock of KIT YAMOYO How to run a business How to redeem vouchers Did not attend training Other, Specify_____	1 2 3 4 5 6 7 8 999	
Q73	What were the key messages you received relating to Kit Yamoyo, its use, and its contents? Multiple responses allowed. Do not read list.	Use ORS & Zinc together to treat diarrhoea Can buy Kit Yamoyo at the Coca-Cola wholesaler Mix 1 sachet with Kit Yamoyo container full of water Give 1 tablet of zinc per day Finish all ten pills of zinc Give ORS after each liquid stool/loose motion Wash hands with soap Give antibiotic (e.g. Flagyl) Give more than usual amount of fluid Continue breastfeeding Take to clinic/health centre/hospital when danger signs (i.e. blood in stool, severely dehydrated, vomiting) Other, Specify_____	1 2 3 4 5 6 7 8 9 10 11 999	

Q74	What part of the training would you want more emphasis on next time? Multiple responses allowed. Do not read list.	<div>More about ORS</div> <div>More about Zinc</div> <div>More about how to prepare ORS using KIT</div> <div>YAMOYO</div> <div>More about record keeping/stock card</div> <div>More about how to promote the Kit Yamoyo</div> <div>More general business training</div> <div>Nothing, training was fine</div> <div>Other, Specify_____</div>	<div>1</div> <div>2</div> <div>3</div> <div>4</div> <div>5</div> <div>6</div> <div>7</div> <div>999</div>	
Q75	Can you name all of the items found in the Kit Yamoyo? Interviewer: Multiple answers allowed. Click all that are mentioned. Do not read list.	<div>ORS</div> <div>Zinc</div> <div>Soap</div> <div>Instructions</div>	<div>1</div> <div>2</div> <div>3</div> <div>4</div>	
Q76	Can you describe the process of how to use the Kit Yamoyo? (Multiple answers allowed. check all that are mentioned by caregiver. Do not read responses. Only check boxes that are mentioned by respondent) Probe: Ask them to give details on how they would go about using the Kit	<div>Wash hands prior to preparing</div> <div>Remove seal</div> <div>Mix contents of 1 sachet of ORS with Kit</div> <div>Yamoyo container full of water</div> <div>Ensure water is clean/Purify water/Boil water</div> <div>Let boiled water cool before pouring into Kit</div> <div>Yamoyo container</div> <div>Shake Kit Yamoyo container with lid on to mix</div> <div>the ORS and water together</div> <div>Give ORS after each watery stool</div> <div>Take 1 tablet of zinc per day</div> <div>Take full course of zinc tablets until finished</div> <div>(10 days)</div> <div>Don't know</div> <div>Other (specify)_____</div>	<div>1</div> <div>2</div> <div>3</div> <div>4</div> <div>5</div> <div>6</div> <div>7</div> <div>8</div> <div>9</div> <div>888</div> <div>999</div>	
Q77	Have customers ever asked for your advice on diarrhoea treatment?	<div>Yes</div> <div>No</div> <div>Don't Know</div> <div>Other, Specify_____</div>	<div>1</div> <div>2</div> <div>888</div> <div>999</div>	
Q78	What information, advice or instructions do you generally provide to Kit Yamoyo customers? (Multiple answers allowed; do not read list; Probe: are there any other messages you give?)	<div>Use ORS & Zinc together to treat diarrhoea</div> <div>Can buy Kit Yamoyo at the local shop</div> <div>Mix 1 sachet with Kit Yamoyo container full of</div> <div>water</div> <div>Give 1 tablet of zinc per day</div> <div>Finish all ten pills of zinc</div> <div>Give ORS after each liquid stool/loose motion</div> <div>Wash hands with soap</div> <div>Give antibiotic (e.g. Flagyl)</div> <div>Give more than usual amount of fluid</div> <div>Continue breastfeeding</div> <div>Take to clinic/health centre/hospital when</div> <div>danger signs (i.e. blood in stool, severely</div> <div>dehydrated, vomiting)</div> <div>Other, Specify_____</div>	<div>1</div> <div>2</div> <div>3</div> <div>4</div> <div>5</div> <div>6</div> <div>7</div> <div>8</div> <div>9</div> <div>10</div> <div>11</div> <div>999</div>	

	What do you do to promote the Kit Yamoyo?	Hang a poster outside my store Hang a poster inside my store Tell customers about it when they come in to the store Work with Kit Yamoyo Promoters to direct people to my store Other, Specify_____	1 2 3 4 999	
K2023A	Did you receive a plastic Kit Yamoyo sign to put outside your shop?	Yes No Don't know	1 2 888	
K2023B	Is it posted outside of your shop? Interviewer: observe and confirm if it is there	Yes, observed No, not observed Other, specify_____	1 2 999	
Q79	Where do most of your KIT YAMOYO customers come from?	From the community where this shop is only From this and another community From this and two other communities From this and more than 2 other communities Don't Know Other, Specify_____	1 2 3 4 888 999	
Q80	How far away is the furthest community where your customers come from? (Interviewer: ask for answer in minutes) 60 min = 1 hr 120 min = 2 hrs 180min = 3 hrs 240min = 4 hrs 300min = 5 hrs)	[_____] mins		
81	Have any men come in to get KIT YAMOYO from your shop?	Yes No	1 2	
Q82	Between men and women, who comes more often to get KIT YAMOYO from your shop?	Men Women No difference	1 2 3	
Q83	Have you noticed customers who have come to get more than one KIT YAMOYO?	Yes No	1 2	
Q84	What feedback have you received from your customers with regard to the Kit Yamoyo?	Stopped my child's diarrhoea Very good product Too expensive It is better than what the health centre has Other, Specify_____	1 2 3 4 999	
Purchasing				
Q85	On average, how many times in a MONTH do you go to purchase KIT YAMOYO?	[_____] times		

Q86	How many bags of Kit Yamoyo did you purchase during your last trip to the wholesaler? Interviewer, note: Kit Yamoyo is sold in bags of 5 individual Kits 1 bag = 5 units/kits 1 box = 7 bags	[] bags Other, Specify_____	999	
Q87	When was your last trip to the Kit Yamoyo wholesaler?	[Day][Month][Year]		
Q88	On a scale of 1-5, where 1 is totally unsatisfied, and 5 is totally satisfied, how would you rate your experience with the wholesaler?	Scaled Response 1 2 3 4 5 Totally Totally Unsatisfied Satisfied		
K2033A	Have you ever bought kits for other retailers?	Yes No Don't Know	1 2 888	→2034 →2034
K2033B	If so, for who? Put full name of other retailer	_____		
Q89	Have you ever purchased Coca-Cola during the same visit as purchasing Kit Yamoyo's from the wholesaler?	Yes No Don't Know	1 2 888	
90	Were you aware that Kit Yamoyo's fit into the empty spaces between crated bottles of Coca-Cola to try and make it easier to transport them? SHOW IMAGE OF KITS IN CRATE OF COKE	Yes No	1 2	
Q91	Have you ever used the empty spaces in between crated bottles of Coca-Cola to transport the Kit Yamoyo's that you have purchased?	Yes No	1 2	
Q92	What method of transport did you use the last time you went to purchase Kit Yamoyo?	Walking/carry on the head Bicycle Motor cycle Car – public Van – public Truck – public Bus – public Car – private Van – private Truck – private Animal-drawn cart Other (specify)_____	1 2 3 4 5 6 7 8 9 10 11 999	

Storage				
Q93	Where do you store KIT YAMOYO? Do not read list.	On shelves only In some other space within the shop On shelves & in some other space within the shop In a house Other (specify) _____	1 2 3 4 5	
Q94	Have you ever had any KIT YAMOYO stolen in the last 12 months?	Yes No Don't Know	1 2 888	
Q95	Have you ever had any KIT YAMOYO getting damaged while in storage in the last 12 months?	Yes No	1 2	→2042
Q96	What was the cause of damage for the KIT YAMOYO?	Rain Insects/rodents Expired/got rotten Other (specify) _____	1 2 3 888	
Stock				
Q97	Did you receive a booklet of Stock Sheets from the project to track stocks of Kit Yamoyo? INTERVIEWER SHOW IMAGE OF STOCK SHEET	Yes No	1 2	→2046
Q98	Have you regularly maintained these records?	Yes No	1 2	
Q99	As part of the study, we have been asked to collect the folders. They will be returned to you at the next training session held by Keepers Zambia Foundation. These will be used to monitor sales and to improve training for Kit Yamoyo retailers. May we collect the folder? Interviewer: Please leave them the September stock sheet from the folder, and bring the folder back to your supervisor.	Folder collected by enumerator Not granted permission to take Retailer did not have the folder	1 2 3	→2046 →2046

Q100	<p>Interviewer: If permission is not granted to take the folder, using the tablet, take clear pictures of the stock sheets. You should take 12 pictures in total, one for each stock sheet. There will be a sheet for each month of the project – Sept, Oct, Nov, Dec, Jan, Feb, March, April, May, June, July, and August so far</p> <p>Ensure you get the whole stock sheet in the picture. Hold the camera steady. Ensure there is no shadows and the text is clear.</p>	<p>[Photo 1] [Photo 2] [Photo 3] [Photo 4] [Photo 5] [Photo 6] [Photo 7] [photo 8] [photo 9] [photo 10] [photo 11] [photo 12]</p>		
Q101	<p>How many KIT YAMOYOS have you exchanged for vouchers since the beginning of the project?</p> <p>Interviewer: If records were kept, verify if records are accurate and use them to help determine if retailer does not know</p>	<p>[]</p> <p>don't know</p>	888	
Q102	<p>How many KIT YAMOYOS have you exchanged for cash since the beginning of the project?</p> <p>Interviewer: If records were kept, verify if records are accurate and use them to help determine if retailer does not know</p>	<p>[]</p> <p>don't know</p>	888	
Q103	<p>How many KIT YAMOYOS have you exchanged using the electronic voucher for 50 per cent of the KIT?</p>	<p>[]</p> <p>don't know</p>	888	
Q104	<p>Aside from the Kit Yamoyo project, have you ever been involved in a project that used vouchers?</p>	<p>Yes No</p>	<p>1 2</p>	→2051
Q105	<p>What project were you involved with that used vouchers?</p>	<p>Name of Project: _____</p>		
Q105	<p>Do you redeem vouchers as you receive them, or in bulk at a different time?</p>	<p>As I receive them In bulk at a different time Other, Specify_____</p>	<p>1 2 999</p>	
K2051A	<p>Have you ever redeemed vouchers on behalf of any other retailers?</p>	<p>Yes No Don't Know</p>	<p>1 2 888</p>	<p>→2052 →2052</p>
K2051B	<p>If so, who did you redeem them for? Record first and last name</p>	<p>_____</p>		
Q106	<p>Do you think the vouchers are useful, or would you prefer to only accept cash?</p>	<p>Vouchers are useful Would prefer only cash Other, Specify_____</p>	<p>1 2 999</p>	

Q107	How many days during the past month (30 days) did you not have any KIT YAMOYOS in stock? Interviewer: Write “0” if the shop had Kit Yamoyo every day for the past 30 days.	[]		
Q108	Has a customer ever complained about the Kit Yamoyo?	Yes No	1 2	→2056
Q109	If yes, what was the complaint	[]		
Attitude Towards Kit Yamoyo				
Q110	What were the most important motivating factors for your involvement in selling KIT YAMOYO? Do not read responses	Profit Margins/Money Helping Children/Community For Interest Other, Specify_____	1 2 3 999	
Q111	If you could determine how much you sell the Kit Yamoyo for, how much would you charge for it?	[]Kwacha		
Q112	What did you like about selling the Kit Yamoyo? Multiple response	Good Profit/Money Help My Community Mothers/customers want it It works/Stops Diarrhea Other, Specify_____	1 2 3 4 999	
Q113	What did you dislike about selling the Kit Yamoyo?	Not Enough Demand Not Enough Profit Nothing Other, Specify_____	1 2 3 999	
Q114	Do you plan to continue selling the kit yamoyo?	Yes No Don't know	1 2 888	→2063
Q114	If no or don't know, why not?	Not enough demand Not enough profit Other, Specify_____	1 2 999	
Q115	Do you have a health centre nearby, or do you know if one is planned?	Yes No Don't Know	1 2 888	

Q116	What are the main health issues for children under the age of 5 years in your community? (Interviewer: Do not read list)	Diarrhoea Malaria Pneumonia Malnutrition Measles Eye disease Coughing Epilepsy/Fits Don't know Other (Specify)_____	1 2 3 4 5 6 7 8 888 999	
Q117	Do you sell any products for the treatment of diarrhea?	Yes No	1 2	→1092
Q118	If yes, what product do you sell for diarrhea? (multiple answers allowed; do not read list)	Kit Yamoyo Panadol ORS, Specify Brand_____ Soap Zinc, Specify Brand_____ Flagyl Trisilicate Stomache Indocide Other (specify)_____	1 2 3 4 5 6 7 8 9 999	Mod2 →1093 →1094 →1093 →1093 →1093 →1093 →1093 →1093 →1093
Q119	If no, why not? Multiple responses allowed. Do not read list.	Products not easily available I don't know what product to sell for diarrhoea Not allowed to sell medicines Available products are too expensive Not enough people want it I don't have enough capital/money I don't feel comfortable selling medicines Don't want to compete with the clinic Other (specify)_____	1 2 3 4 5 6 7 8 999	
Q120	Do you sell, or have you ever sold, KIT YAMOYO? SHOW PICTURE OF KIT YAMOYO	Yes No	1 2	→1093b →1101
Q1093B	If you previously sold Kit Yamoyo, but no longer sell it, why did you stop selling it?	Too Expensive Not enough demand Technical difficulties with the project, Specify_____ Other, Specify_____	1 2 3 999	All responses to Mod2
Q121	How many units of ORS did you sell last month? (Record number in the space provided)	[]units Don't know	888	
Q122	What is your sales price per unit for the ORS you sell? (Record price per unit in Kwacha)	[]kwacha		

Q123	What was the source of the ORS brand you stock? (Could be multiple responses)	<div>Manufacturer</div> <div>Drug distributor</div> <div>General wholesaler</div> <div>Other (specify)_____</div>	<div>1</div> <div>2</div> <div>3</div> <div>999</div>	
Q124	How long does it take you to get to the place where you buy it from? (Record distance in minutes)	[] mins		
Q125	What is the wholesale price per unit of ORS when you buy?	()kwacha		
Q126	Do you have ORS right now?	<div>Yes</div> <div>No</div>	<div>1</div> <div>2</div>	
Q127	How many units of ORS do you have in stock?	[]		
Q128	What information/advice do you generally provide to caregivers of children with diarrhoea? (Multiple answers allowed; do not read list; Probe: are there any other messages you give?)	<div>Use Kit Yamoyo</div> <div>Use ORS & Zinc together to treat diarrhoea</div> <div>Mix 1 sachet with Kit Yamoyo container full of water</div> <div>Give 1 tablet of zinc per day</div> <div>Finish all ten pills of zinc</div> <div>Give ORS after each liquid stool/loose motion</div> <div>Wash hands with soap</div> <div>Give antibiotic (e.g. Flagyl)</div> <div>Give increased fluids</div> <div>Continue breastfeeding</div> <div>Take to clinic/health centre/hospital when danger signs (i.e. blood in stool, severely dehydrated, vomiting)</div> <div>Give ORS</div> <div>Give zinc</div> <div>Give more than usual to eat</div> <div>Information on prevention of diarrhea</div> <div>I don't provide any advice</div> <div>Don't know</div> <div>Other (specify)_____</div>	<div>1</div> <div>2</div> <div>3</div> <div>4</div> <div>5</div> <div>6</div> <div>7</div> <div>8</div> <div>9</div> <div>10</div> <div>11</div> <div>12</div> <div>13</div> <div>14</div> <div>15</div> <div>16</div> <div>888</div> <div>999</div>	
Q1.	Do you know what ORS is? (Interviewer: refer to it in different ways – local name (Manzi yamoyo), Oral Rehydration Salts, and show image of local ORS packets on screen noting that they look like this.	<div>Yes</div> <div>No</div>	<div>1</div> <div>2</div>	→1110
Q1.	Thinking back over the past 3 months, have you seen or heard any messages about ORS?	<div>Yes</div> <div>No</div> <div>Don't Know</div>	<div>1</div> <div>2</div> <div>888</div>	<div>→1105</div> <div>→1105</div>

Q1.	Where did you hear/see the message(s) about ORS? Interviewer: Multiple responses allowed. Note all that apply. Do not read list.	Kit Yamoyo Training Session for Retailers/Keepers Zambia Foundation Radio Television Community education session/health talk Community health worker Health clinic nurse/doctor/clinical officer Neighbor/friend Newspaper School Church Banner/poster/etc Kit Yamoyo Promoters Other specify)_____	1 2 3 4 5 6 7 8 9 10 11 12 999	
Q1.	Please tell me if you agree or disagree with each of these statements. Interviewer: Read this list.	Ag Dis DK ORS is medicine that gives good health 1 2 888 ORS is a treatment for diarrhea 1 2 888 ORS stops Diarrhea 1 2 888 Children do not like the taste of ORS 1 2 888 ORS prevents Dehydration 1 2 888		
Q1.	Can you describe the process of how to make ORS Solution in as detailed a way as possible? (multiple answers allowed. check all that are mentioned by caregiver. Do not read responses. Only check boxes that are mentioned by respondent)	Mix contents of ORS package with water Ensure water is clean/Purify water Ensure proper measurement of water Wash hands prior to preparing Respondent explains how to use Kit Yamoyo Sprinkle over food Swallow Powder Don't know Other (specify)_____	1 2 3 4 5 6 7 888 999	
Q1.	Do you think ORS is effective in treating diarrhea?	Yes No Don't know	1 2 888	→1108 →1109 →1110
Q1.	Why do you think ORS is effective in treating diarrhea? (Do not read responses. Multiple responses allowed. Only check boxes that are mentioned by respondent)	Diarrhea stops quickly Child recovers quickly Child regains appetite Prevents dehydration Don't know Other (specify)_____	1 2 3 4 888 999	All to 1110

Q1.	Why don't you think ORS is effective in treating diarrhea? (Do not read responses. Multiple responses allowed. Only check boxes that are mentioned by respondent)	It only prevents dehydration It is only for giving strength Diarrhea does not stop soon/diarrhea continues Child doesn't like the taste Too hard to administer Don't know Other (specify)_____	1 2 3 4 6 888 999	
Q1.	Have you ever heard about zinc as a treatment for childhood diarrhea? Interviewer: Show images of zinc examples to respondent (PedZinc, blister pack, Health Centre Zinc)	Yes No Don't know	1 2 888	→Mod3 →Mod3
Q1.	Thinking back over the last 3 months, have you heard any messages or received information about zinc?	Yes No Don't know	1 2 888	→1113 →1113
Q1.	Where did you hear/see the message(s) about Zinc? Interviewer: Multiple responses allowed. Note all that apply. Do not read list.	Kit Yamoyo Training Session for Retailers/Keepers Zambia Foundation Radio Television Community education session/health talk Community health worker Health clinic nurse/doctor/clinical officer Neighbor/friend Newspaper School Church Banner/poster/etc Kit Yamoyo Promoters Other (specify)_____	1 2 3 4 5 6 7 8 9 10 11 12 999	
Q1.	Can you tell me what you know about zinc? Interviewer: Multiple responses allowed. Do not read list. Probe: anything else?	Zinc is appropriate medicines for diarrhea Makes child stronger Zinc reduces the duration of the diarrheal episode Zinc reduces the severity of diarrhea The risk of new episode in the future is reduced Zinc is available in health centers Zinc should be taken with ORS/ORT A complete 10-day course should be administered Zinc is a micronutrient Zinc is used for malnutrition Don't know Other (specify)_____	1 2 3 4 5 6 7 8 9 10 888 999	

Q1.	Do you think zinc is effective for the treatment of diarrhea in children under 5?	Yes No Don't know	1 2 888	
Q1.	Do you sell ZINC tablets?	Yes No	1 2	→Mod3
Q1.	What brand of Zinc tablets do you sell?	[_____]		
Q1.	How many units of ZINC tablets did you sell last month? (Record number in the space provided)	[_____]units Don't know	888	
Q1.	What is your sales price per unit (pack) of ZINC tablets? (Record price per unit in Kwacha)	[_____]kwacha		
Q1.	What is the source of the ZINC tablets you have been selling? (Could be multiple response)	Manufacturer Drug distributor General wholesaler Other (specify)_____	1 2 3 999	
Q1.	How long does it take you to get to the place where you buy it from? (Record distance in minutes)	[_____]mins		
Q1.	What is the wholesale price per unit of zinc tablets when you buy?	(_____)		
Q1.	Do you have ZINC tablets right now?	Yes No	1 2	→Mod3
Q1.	How many units/packs do you have in stock?	[_____]		→Mod3

Module 3 – General Awareness

Please tell me if you “agree strongly,” “agree somewhat,” “disagree strongly,” or “disagree somewhat” with the following statements.

GENERAL AWARENESS OF ORS

Skip if “No” to Q1102

No.	Motivation: Outcome Expectations	Strongly Agree	Agree Somewhat	Disagree Somewhat	Strongly Disagree	Don't know
Q1.	ORS is effective for treatment of diarrhea	4	3	2	1	888
Q1.	ORS does not help prevent dehydration	4	3	2	1	888
Q1.	There is no need to take a child to the health facility if there is blood in the stool	4	3	2	1	888
Q1.	The amount of water mixed with the ORS does not matter	4	3	2	1	888
Q1.	Children should continue eating and drinking if they have diarrhea	4	3	2	1	888

GENERAL AWARENESS OF ZINC

Skip if “No” to 1110

No.	Motivation: Outcome Expectations	Strongly Agree	Agree Somewhat	Disagree Somewhat	Strongly Disagree	Don't know
Q1.	Zinc is effective for treatment of diarrhea	4	3	2	1	888
Q1.	Zinc reduces the duration of a diarrheal episode	4	3	2	1	888
Q1.	Zinc does not help in reducing the severity of a diarrheal episode	4	3	2	1	888
Q1.	Use of zinc reduces the risk of dehydration in children	4	3	2	1	888
Q1.	Zinc reduces the risk of a new diarrheal episode in the following 2 to 3 months	4	3	2	1	888
Q1.	Zinc should always be given with ORS for optimal diarrhea treatment	4	3	2	1	888
Q1.	What is the minimum number of days that ZINC tablets should be taken? (Record figure in the space provided)	[] days				

General awareness of soap

Q1.	What are the best ways to prevent germs that cause diarrhoea?	Purify/boil water			1	
		Wash hands (with soap)			2	
		Wash utensils			3	
		Peel raw fruit			4	
		Exclusive breastfeeding			5	
		Don't know			888	
		Strongly Agree	Agree Somewhat	Disagree Somewhat	Strongly Disagree	Don't know
Q1.	Germs that cause diarrhoea cannot be passed by people's hands (e.g. hand-shake)	4	3	2	1	888
Q1.	Washing our hands with soap protects us better than with just plain water	4	3	2	1	888
Q1.	Soap is too expensive so we don't use it	4	3	2	1	888
Q1.	Germs can be passed through handshakes	4	3	2	1	888
Q1.	When should a person wash their hands?	After using the latrine/toilet			1	
		Before preparing food and drink			2	
		Before eating				
		Before feeding children			3	
		Don't know			4	
		Other specify_____			888	
					999	

This section asks your opinion on certain issues. Please tell me if you believe the following statements are true or false.

	ABILITY: KNOWLEDGE	True	False	Don't know
Q1.	Diarrhea can be caused by drinking unsafe water	1	0	888
Q1.	Diarrhea can be caused by eating unhygienic food	1	0	888
Q1.	Only those diarrheal episodes that have blood in the stool require antibiotics	1	0	888
Q1	Most diarrhea can be managed at home without any drugs	1	0	888

Please tell me if you “agree strongly,” “agree somewhat,” “disagree strongly,” or “disagree somewhat” with the following statements.

	MOTIVATION: THREAT SEVERITY	Strongly Agree	Agree Somewhat	Disagree Somewhat	Strongly Disagree
Q1.	Children can die from diarrhea	4	3	2	1
Q1.	It does not seem like anyone around here has a problem because of diarrhea	4	3	2	1
Q1.	Diarrhea is a major health problem in my community	4	3	2	1
Q1.	Diarrhea is a problem in the poorer segment of community only	4	3	2	1

Skip if “No” to 1110

No.	Capacity/Ability: Use of Products	Strongly Agree	Agree Somewhat	Disagree Somewhat	Strongly Disagree	Don't know
K2092	Zinc is an appropriate treatment for diarrhea in children	4	3	2	1	888
K2093	Zinc with ORS should be used for every type of diarrhea in children	4	3	2	1	888
K2094	Diarrhea in children should be treated with an antibiotic	4	3	2	1	888
K2095	Zinc has too many side effects, so mothers don't like giving it to their children	4	3	2	1	888
K2096	Zinc tastes bad so children won't take it	4	3	2	1	888
K2097	It is difficult for mothers to remember to give their child zinc when the diarrhea has stopped	4	3	2	1	888

Take time to thank the respondent.

_____THE END_____

Appendix 3: Technical Note on computation of wealth quintiles

Factor Analysis was used to generate the wealth index.

Extraction method

- Principal Components Analysis (PCA) was used to generate the weights. The weights were factor scores for the first principal component.
- The first principal component is taken as the underlying index of wealth, and each household's position on it is calculated using the PCA weights. The PCA procedure produces an index that is "normalized" so that it has a mean value of zero and a standard deviation of one

Data preparation

- Before applying the PCA, variables were dichotomized, that is, all the applicable variables were reduced to Yes/No responses. Yes was coded '1' and 'No' was coded '0' in the dataset. Table 57 gives the variables that were included.
- Missing cases were coded '0'.

Factor analysis

- Factor Analysis was based on correlations.
- For each case and each component, the component score was computed by multiplying the case's standardized variable values by the component's score coefficients (done internally by spss).
- The factor scores were computed using regression analysis procedure.
- Factor analysis was done using SPSS.

Quintiles

The quintiles were generated from the factor scores for the first principal component.

Table 57: Variables included in the calculation of the wealth index

GOATS	Owns goats	Phone	Has mobile phone
SHEEP	Owns sheep	WATER	Main sources of water
COWS	Owns cows	Water1	borehole
CHICKENS	Owns chickens	Water2	Dam
PIGS	Owns pigs	Water3	Hand pump
Rooms	Number of rooms in dwelling	Water4	pipd_public_tap
Housing1	Three rooms and less	Water5	pipd_residence
Housing2	Four to six rooms	Water6	protected_well
Housing3	Seven rooms and above	Water7	river_canal_surface
Q1020Recoded	Main material of floor	Water8	unprotected_well
Housematerial1	Carpet floor	Water9	Water pump
Housematerial2	Cement floor	TOILET	Type of toilet
Housematerial3	Ceramic tiles	ENERGY	Fuel for cooking
Housematerial4	Earth floor	ENERGY1	Uses Charcoal
ROOF1	Asbestos roof	ENERGY2	uses coal
ROOF2	clay roof	ENERGY3	uses electricity
ROOF3	concrete roof	ENERGY5	wood straw
ROOF4	metal sheet roof	TOILET1	integrated latrine
ROOF5	straw roof	TOILET2	Neighbours pit latrine
Electricity	Has electricity	TOILET3	own_flush_toilet
Radio	Has radio	TOILET4	pit latrine
Television	Has television	TOILET5	shared_flush_toilet
Bicycle	Has bicycle	TOILET6	Still building
Motorcycle	Has motorbike	TOILET7	toilet bush
Mini_truck	Has mini truck	TOILET8	vip_latrine.

Appendix 4: Questions where clarity was made at endline

Given that the baseline and endline are evaluations, they were carried out using internationally accepted norms and principles. One of these principles relates to the need to ensure that the quantitative data collection instrument remained the same between the baseline and the endline. This was critical if the data collected between the two points were to be compared. What was modified during the endline with respect to the data collection instrument was not the questions but rather the filters/ explanatory notes to the interviewee aimed at adding clarity. In practice, this related to the presentation of pictures to the Interviewees as shown in Table 1 below.

The use of pictures at endline for a few questions was aimed at shortening the period of explaining things and consequently improving the efficiency of the data collection process. It needs to be underscored that there was no risk of bias notable. Refer to Table 1 below for details.

Table 1: Showing questions with pictures was used during endline

Question No.	Question
2006.A	Was the person delivering the message wearing a t-shirt that looked like this? SHOW PICTURE OF ORANGE PROMOTERS T-Shirt& RED SHOPKEEPER T-SHIRT
2006.B	Was it one of these posters? Show Picture of Kit Yamoyo promotional posters
3009.B	Do you remember if the person delivering the message was wearing a t-shirt that looked like this? SHOW PICTURE OF ORANGE PROMOTERS T-Shirt
3009.C	Was it one of these posters? Show Picture of Kit Yamoyo promotional poster
3017	Which ORS product(s) was given to (NAME)? (Interviewer: Multiple responses allowed. If they don't know, you can show them the poster with samples of local products (ORS packets and the actual kit yamoyo sachet, and ask respondent to select any/all used during the recent episode of diarrhea If more then one answer is selected, confirm that they used two different types of ORS during the most recent episode of diarrhoea
3017.A	Thinking back over the past 6 months, have you heard a message/received information about an anti-diarrheal kit called Kit Yamoyo? Interviewer: Show Image of Kit Yamoyo
3041	Can you tell me or show me what treatments were given to (NAME)? Interviewer: If the respondent is not sure which products were given, show image with local options. Multiple options allowed. Click all that apply.
3042	Have you ever heard about zinc as a treatment for childhood diarrhea? Interviewer: Show images of zinc examples to respondent (PedZinc, blister pack, Health Centre Zinc)
3045	Was the person delivering the message wearing a t-shirt that looked like this? SHOW PICTURE OF ORANGE PROMOTERS T-Shirt and RED SHOPKEEPER T-SHIRT(Include on tablet if possible)
3046	Was it one of these posters? Show Picture of Kit Yamoyo promotional posters (include on tablet if possible)

Appendix 5:

Selected Confidence Levels

TABLE 1: PROPORTION OF CAREGIVERS WHO KNEW THE BENEFITS OF ZINC

What information did you get from the message (s) that you heard?										
Benefits of Zinc	Non-Kit Yamoyo users				Kit Yamoyo users				PVALUE	
	Kalomo	Katete	Monze	Petauke	Kalomo	Katete	Monze	Petauke	Kalomo	Katete
Zinc reduces the duration of the diarrheal episode	13 %	0%	3%	0%	36%	8%	0%	0%	0.1866	0.3032
Zinc reduces the severity of diarrhea	12%	0%	3%	0%	46%	18%	0%	0%	0.8412	0.1170
The risk of new episode in the future is reduced	8%	0%	0%	0%	30%	1%	0%	0%	0.8294	0.7186
Zinc is available in health centres	3%	0%	3%	0%	3%	0%	0%	0%	0.0599	
Zinc should be taken with ORS/ORT	7%	4%	0%	0%	26%	5%	0%	0%	0.8234	0.0016
A complete 10-day dose should be administered	18%	0%	3%	0%	55%	27%	0%	0%	0.2154	0.0516
Zinc is an appropriate treatment for diarrhea	10%	8%	6%	0%	58%	55%	0%	0%	0.2220	0.7335
Zinc is a micronutrient	5%	0%	0%	0%	16%	1%	0%	0%	0.6275	0.7186
Zinc is used for malnutrition	3%	0%	0%	0%	27%	0.3%	0%	0%	0.1530	

TABLE 2: ORS USE IN CHILDREN UNDER 5 WITH DIARRHOEA IN PAST TWO WEEKS PRECEDING THE SURVEY

ORS use in children under 5 with diarrhoea in the two weeks preceding the survey				
District	Baseline (n=830)	Endline (n=696)	Percentage Points	PValue
Kalomo	50% (114/230)	82% (144/175)	+32	0.0000
Katete	71% (174/245)	70% (135/194)	-1	0.1135
Monze	63% (122/194)	55% (95/173)	-8	0.8889
Petauke	69% (180/261)	62% (100/162)	-7	0.0105

TABLE 4: USE OF ORS AND ZINC AS TREATMENT FOR DIARRHOEA

Proportion of caregivers with children under 5 years of age with diarrhoea in the last two weeks who used both ORS and Zinc as treatment for diarrhoea			PVALUE
District	Midline	Endline	
Kalomo	26% (40/154)	47% (82/175)	
Katete	56% (98/176)	43% (84/194)	
Total	42%	45%	0.8315

TABLE 5: USE OF ZINC AS TREATMENT FOR DIARRHOEA

Caregivers who had a child with diarrhoea in the last two weeks and used each of the items in Kit Yamoyo (including zinc)				
	Midline		Endline	PVALUE
District	Proportion of caregivers	District	Proportion of caregivers	
Kalomo (n=154)	26% (40)	Kalomo (n=175)	47% (82/175)	0.0298
Katete (n=176)	56% (98)	Katete (n=176)	43% (84/194)	0.1233
Total (n=330)	42% (138)	Total (n=351)	45% (166)	0.9709

TABLE 6: PROPORTION OF CAREGIVERS WHO KNEW THE BENEFITS OF ZINC

What information did you get from the message (s) that you heard?										
Benefits of zinc	Non-Kit Yamoyo users				Kit Yamoyo users				PVALUE	
	Kalomo	Katete	Monze	Petauke	Kalomo	Katete	Monze	Petauke	Kalomo	Katete
Zinc reduces the duration of the diarrheal episode	13%	0%	3%	0%	36%	8%	0%	0%	0.1866	0.3032
Zinc reduces the severity of diarrhea	12%	0%	3%	0%	46%	18%	0%	0%	0.8412	0.1170
The risk of new episode in the future is reduced	8%	0%	0%	0%	30%	1%	0%	0%	0.8294	0.7186
Zinc is available in health centres	3%	0%	3%	0%	3%	0%	0%	0%	0.0599	
Zinc should be taken with ORS/ORT	7%	4%	0%	0%	26%	5%	0%	0%	0.8234	0.0016
A complete 10-day dose should be administered	18%	0%	3%	0%	55%	27%	0%	0%	0.2154	0.0516
Zinc is an appropriate treatment for diarrhea	10%	8%	6%	0%	58%	55%	0%	0%	0.2220	0.7335
Zinc is a micronutrient	5%	0%	0%	0%	16%	1%	0%	0%	0.6275	
Zinc is used for malnutrition	3%	0%	0%	0%	27%	0.3%	0%	0%	0.1530	0.7186

Appendix 6: Additional Reports

	Stage	Report Details	Date	Comment/purpose
1	Pre-trial/ inception	COTZ Trial Plan ColaLife and partners	Jun-11	To summarise desk and field research undertaken in the pre-funded, stakeholder development period, to make case for funding.
2	Baseline	Baseline Survey Report RuralNet Associates	Jun-13	Draft findings and working copy available from Nov-12. To establish baseline.
3	Midline	COTZ Midline Report ColaLife and partners	Jun-13	A detailed summary of progress and achievements to midline. Discussion of trends seen, risks, issues and challenges. Discussion of strategy and business development including value chain, costing/pricing design, procurement, and future proposals.
4	Midline	Midline Survey Report, RuralNet Associates	Oct-13	Drafts available from Jul-13. To establish midline trends in key indicators against baseline; assist with any necessary mid-course corrections.
5	Phase 2 Planning	KYTS Trial Plan ColaLife and partners	Aug-13	Proposal to existing funders building on favourable midline trends, to prepare for a second phase/national scale-up. Costings and pricing/business planning.
6	Phase 2 Planning	Mapping the Kit Yamoyo demand curve, IDinsight	Oct-13	Independent willingness to pay /demand curve study in rural Monze using the original Kit Yamoyo used in COTZ.
7	Endline	COTZ Endline Report ColaLife and partners	Jan-14	Summarise and report on learning and results.
8	Endline	Endline Survey Report (ColaLife Impact Evaluation) RuralNet Associates (this report)	Jun-14	Drafts/preliminary findings available from Nov-13. Survey findings: comparing endline survey results with baseline for key indicators, looking at Use, Access, Availability, and Awareness. Passed by DfID London.
9	COTZ-to- KYTS	Mapping the Kit Yamoyo demand curve in Copperbelt, IDinsight	May-14	Independent willingness to pay /demand curve study in rural and urban Copperbelt of the scale-up formats of the Kit Yamoyo (flexi-pack and screw-top).

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