



Foreign Affairs, Trade and
Development Canada



A GUIDE FOR CONDUCTING POST-EVENT COVERAGE SURVEYS FOR VITAMIN A SUPPLEMENTATION, DEWORMING AND IMMUNIZATION EVENTS



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ABOUT THIS GUIDE

The purpose of this guide is to provide a standardized methodology to assess coverage of services during vitamin A supplementation, deworming and immunization events. Post-event coverage survey (PECS) can be used to verify administrative or tally sheet coverage data following a distribution or campaign, evaluate the quality of service delivery and determine factors that affected coverage, knowledge about services distributed and whether program activities were effective.

PECS should ideally be conducted within six weeks of service distribution in order to ensure accurate recall. Using a standard survey methodology for this type of survey is important because it enables comparison of data over time and across countries and regions.

While this guide was designed for program managers, governmental bodies, non-governmental organizations (NGOs) and their partners conducting vitamin A supplementation, deworming and immunization events, the strategies discussed are widely applicable and the methodology may be adapted for other programs.

OVERVIEW OF THE POST-EVENT COVERAGE SURVEY (PECS) PROCESS

<p>Stage 1: Planning</p>	<ul style="list-style-type: none"> • Contact governmental and non-governmental partners to present the survey and get necessary permissions; • Select survey locations and make contact with local administration; • Interview and select survey teams (supervisor, team leaders, enumerators, data entry personnel); • Organize survey logistics (transportation, survey materials, itinerary, payment for survey team members, etc.); • Pilot the survey tools to ensure questions are interpreted correctly, responses listed are comprehensive and skip patterns are correct; • Organize and conduct team leader and enumerator trainings; • Ensure team leaders and enumerators pre-test the survey tools, understand the questions, and record responses correctly.
<p>Stage 2: Implementation</p>	<ul style="list-style-type: none"> • Travel to survey sites; • Meet with local health officials and village leaders; • Map the cluster to be surveyed and divide the cluster into four quadrants • Select a starting point at random in each quadrant and identify the first house to be surveyed; • Administer questionnaires to the target population (e.g. caretakers of children 6-59 months); • Supervise data collection to ensure questions are asked properly and responses are recorded correctly; • Review questionnaires for completeness and accuracy; • Hold daily review meetings with the survey team to discuss the successes, challenges and questions about the survey; • Monitor data from mobile phone surveys as it is received to ensure the correct number of surveys is submitted from each cluster.
<p>Stage 3: Data Analysis & Dissemination</p>	<ul style="list-style-type: none"> • Double data entry & comparison (if paper forms are used); • Data cleaning; • Data analysis; • Report writing; • Dissemination of results

1 OVERVIEW OF POST-EVENT COVERAGE SURVEYS (PECS) FOR VITAMIN A SUPPLEMENTATION, DEWORMING AND IMMUNIZATION EVENTS

Who does the PECS target?

The target groups of PECS for VAS, deworming and immunization events are parents and caretakers of children who were eligible to receive services during the distribution. Community leaders, facility-based health workers, distributors, community health workers and other individuals involved in the distribution can also be surveyed as their knowledge and perspectives provide insight into how distribution programs can be strengthened.

When should a PECS be conducted?

PECS should be conducted within six weeks of VAS, deworming and immunization events. This ensures that caretakers can accurately recall whether their child received the service(s) distributed during the campaign. PECS should be planned well in advance of distribution events to ensure that all necessary approvals are received, survey questionnaires and training materials are complete and reviewed in detail, and all logistics are made.

What information should be collected in a PECS?

Information collected in a PECS should include whether a child received VAS, deworming and/or immunizations during the event, the age and sex of the child, where they received the service, how they heard about the event and caregiver knowledge of the benefits of the service(s) received. For caretakers whose children did not receive services, information should be collected on why they did not receive services, how they usually get health information, and what would enable or encourage them to receive services in the future.

Health workers should be surveyed to determine how they administer the service(s) of interest (VAS/deworming/immunizations), their knowledge about the service(s) and the availability of supplies (vitamin A capsules, deworming tablets, immunizations, etc.). Community leaders and other stakeholders can also be surveyed to understand how services are distributed and their knowledge about the service(s) provided.

PECS can also be used to determine the effectiveness of communication materials, social mobilization, and other activities implemented to increase coverage. For example, if a radio spot was introduced to increase awareness of a distribution event, targeted recipients can be asked if they heard the radio spot, the station where they heard the message, and if they can recall the message.

What amount of time is needed to complete a PECS?

The amount of time needed to complete a PECS depends on the size and characteristics of the area to be surveyed and the length of the questionnaire. For example, national surveys take a longer amount of time than regional and district level surveys. Likewise, surveys in rural areas where households are far apart take longer to complete than surveys in urban areas. In order to allocate enough time for a PECS, questionnaires should be piloted to estimate how much time is needed to complete the target number of households in cluster.

For a 30 to 40 question PEC survey, a survey team of three to four individuals should be able to complete at least one cluster of 30 households per day. If three teams are used, a 30 x 30 cluster survey (900 households) should take 10 days or less to complete. For a nationwide survey, or a survey measuring coverage in multiple regions, the number of teams required will depend on the number of areas or regions that will be covered by the survey and amount of time available to complete the survey. For example, the 2010 PECS in Tanzania covered 16 regions. Therefore, it was decided that 6 teams, consisting of 5-6 interviewers per team, would be sufficient to cover these regions within the six-week recall period.

2 PLANNING POST-EVENT COVERAGE SURVEYS (PECS)

In order to plan for a PECS, the following steps below should be followed:

Determine the regions and populations to be surveyed

In order to determine the regions and populations to be surveyed, the questions in **Table 1** should be answered. The regions and populations to be surveyed will depend on the type of information that is needed and the budget that is available.

Table 1. Questions to determine the populations and regions to be surveyed

1. Does the country need information on a national level? Regional level? District level?
2. Is there a need to understand coverage of services by region/province and stratify the country into different regions/provinces?
3. Is there a need to target specific districts or health zones? For example, districts that have had low service coverage in the past?
4. Is there a need to understand service coverage by different service programs/strategies that have been implemented?
5. Is there a need to focus on populations who are not being reached (hard to reach populations) and why these children are missed?
6. How many staff and partners are available for enumerator training and supervision? What is their survey experience and fluency in local languages?
7. What is the budget available for the survey?
8. Is it possible to survey all regions of interest within six weeks after the distribution and with adequate support and supervision?

Get buy-in

Prior to implementing the survey, meetings should be held with stakeholders and government officials to discuss the importance of the survey and to get their support. At the initial meeting, stakeholders should discuss the survey priorities considering the available budget. This is also a time when additional survey objectives and questions from stakeholders can be suggested and discussed by all parties. In order to ensure the success of the survey, it is important to observe any existing governmental or organizational protocols for conducting surveys.

Design the questionnaires

Questionnaires should be designed based on the goals of the survey. Decisions regarding the survey instrument should be collaborative and incorporate feedback from the Ministry of Health and stakeholders. Questions can be added to assess other programs or outcomes of interest. However, the length of the surveys should be kept in mind, as a shorter survey is much more agreeable to a busy caretaker. Once all partners agree upon the questionnaire, it may need to be translated into the local language(s).

Pre-test the questionnaires

Before the survey begins, the questionnaires must be piloted, or pre-tested in the community. The pre-test should be done in a village that will not be part of the actual survey. During pre-testing, surveys should be administered to the target recipients (parents/caretakers, health workers, village leaders etc.) to confirm that all the survey questions are easy to understand and the responses listed for multiple-choice questions are complete. Another key objective of the pre-test is to determine if the skip patterns in the questionnaire are accurate. After pre-testing, the pre-testing team should meet to discuss whether there are any changes that should be made, and revisions to the questionnaires should be made accordingly.

Establish the PECS team

The size and composition of the PECS team depends on the total number surveys being conducted, the amount of time needed to complete a survey, whether enumerators will be working in pairs or individually, and the size and number of vehicles. In general, for a 30 x 30 cluster survey, the PECS team is composed of three teams, each with one team leader and three to four enumerators.

Interviews should be conducted with all potential members of the survey team. Interviews should consist of questions about the applicant's survey experience and language skills, as well as a mock survey to assess the manner in which applicants speak to a caretaker and whether they can accurately record survey responses. Sample interview questions can be found in Appendix 15.

The following team members are recommended:

Principal Supervisor: There should be one principal supervisor and, if possible, one to two assistants to help the principal supervisor. The principal supervisor will be responsible for the overall planning and implementation of the survey. Team leaders and survey enumerators will report to the principal supervisor, who will provide detailed instructions on how to conduct the survey, monitor the quality of the survey team's work, and make the final decision on any issues that arise.

Team Leaders: Team leaders should have extensive survey experience and ideally experience supervising a survey. Team leaders will be responsible for managing the survey team and ensuring the quality of the data collected. Depending on team size and survey conditions, each survey team should be led by one or two team leaders. When choosing the number of team leaders for a survey, the Principal Supervisor should consider the number of enumerators on each team and the distance each team will have to cover. The Principal Supervisor should assign team leaders so that they will be able to monitor the work of each enumerator in their team and be available to provide assistance when needed.

Enumerators: The number of enumerators needed for a PECS will depend on the area covered by the survey, the survey budget, the amount of time allocated to complete the survey and the seating capacity of the vehicle(s) being used. Past surveys have used two to ten enumerators per team, with three to four enumerators being most common. Depending on the survey location and experience of enumerators, it may be preferable for enumerators to work in pairs for safety and to monitor the quality and accuracy of each other's work. The survey team may want to

recruit and train a few extra enumerators who can serve as a back-up. In this case, the principal enumerators would be decided during the training based on the results of the pre-test and quality control scoring sheet completed by supervisors (Appendix 11).

Data Entry Personnel: When data is collected using paper questionnaires, approximately two to six data entry personnel will be needed to enter PECS data. The ideal number of data entry personnel depends on the number and length of the questionnaire forms, the number of days budgeted to complete the work and number of computers available. For example, in Tanzania, two data entry personnel were used for a national VAS survey and approximately 100 forms were entered per day.

Organize the training

Prior to departure for the field, training must be conducted for team leaders and enumerators. The agenda for the training should include background information on the survey and the service(s) of interest, a detailed review of the survey questionnaires, survey methodology, and logistics for the field (where to eat and sleep, safety of the team and vehicle, etc.). Trainings should include practice interviews and role-plays to prepare for the survey and challenges in the field. Some sample scenarios are listed in the Appendix 12.

The number of days required for team leader and enumerator training depends on the number of people to be trained and the level of education and experience of the hired staff. PECS trainings range from two to five days with one day allocated for field testing. A thorough PECS training schedule including training on mobile data collection might resemble the following:

Day 1 – Team leader training

Day 2 – Enumerator training (with team leaders present)

Day 3 – Training on mobile data collection (e.g. data collection using Ona)

Day 4 – Field testing and review of the field test

The purpose of having a separate training for team leaders is to review the logistics for the survey and how team leaders should monitor the enumerators' work. Alternatively, this information can be covered during the enumerator training if desired.

Field Testing: It is recommended as part of the training to have enumerators practice the entire survey process (mapping clusters, selecting the starting household, administering questionnaires etc.) in an area that is comparable to where the survey will be conducted but was not selected for the survey. The Principal Supervisor may consider having enumerators complete surveys in duplicate (i.e. two enumerators enter the responses simultaneously on their own survey forms) and compare them to confirm that they match. During this time, the team leader can observe the enumerators' work, ask questions, correct any mistakes in data collection, and check that the survey forms are filled out correctly. All aspects of survey implementation should be practiced during the field test including meeting with health officials and village leaders, mapping the cluster, dividing the cluster into quadrants, selecting a starting point in each quadrant, and administering surveys on paper or mobile phones.

During the training, it is helpful to split the enumerators and team leaders into their survey teams to encourage teamwork from the beginning and allow members to familiarize each other with their different work and communication styles. The training should include adequate time for role play so that enumerators and team leaders can get comfortable introducing and administering the survey.

Arrange logistics

Good planning and organization is key to carrying out a successful PECS. All aspects of logistics relating to the fieldwork must be planned in detail and well in advance of the team leader and enumerator training so that they can be clearly communicated during both training sessions. A planning checklist can be found in Appendix 1.

Prior to the training, the survey planning team and principal supervisor should design an itinerary for each survey team including cluster locations, the day(s) to be spent at each location, the distance between clusters and estimated driving times between each cluster. When possible, team leaders should communicate with officials in their respective survey areas prior to arrival to make the necessary arrangements and inquire about security and logistical challenges that the survey team might face. If a survey area has had an increase in robberies or political tensions, local chaperones could be requested to ensure the safety of the enumerators, team leader, driver and vehicle.

Each team should be given detailed instructions about how and when team leaders and enumerators will be paid per diems and final salaries, how gas money will be distributed, how to record daily mileage, how to determine where the team will sleep and eat, and guidelines for leisure time. When establishing the survey teams, it should be ensured that the members of the survey team are able to speak the local language of the regions they will be surveying. The gender of the enumerators may also need to be considered (e.g. in some regions women may be scared to talk to male enumerators). Rest days may be considered after periods of long travel, or on days of worship (e.g. Sundays).

If mobile phones are being used for data collection, enumerators and team leaders should receive clear instructions on when and where they should pick-up and return the mobile phones and how to keep them safe and charged throughout the survey.

For survey teams with limited experience, supervisors can arrange for teams to work together for the first cluster to ensure understanding. Enumerators can also initially work in teams with both enumerators entering data simultaneously to confirm they are recording responses correctly. Once a team departs for the field, the team leader will be responsible for handling logistics and communicating with the survey supervisor with daily updates and if anything unexpected occurs.

Planning for Field Guides: When conducting a PECS, it is important to have knowledge of the clusters to be surveyed including the geographic area, people, languages spoken and customs. This can be achieved by hiring enumerators from the area and/or by asking village elders, village chiefs or community health workers to assist as field guides. These individuals then can inform the survey team of boundaries of sampling areas, create rough maps of the area, and help navigate social interactions. In order for field guide interactions to go smoothly, team leaders should initiate contact with them in advance of arrival if possible and clearly communicate whether or not they will be offered payment and how much. It is also important to consider what field guides will eat and drink during the fieldwork, and inform them to bring their own refreshments if snacks and water will not be provided.

Arranging Transportation: The vehicles selected for PECS should be large enough to accommodate the survey team and all the necessary supplies. It is recommended to procure a vehicle with one or two extra seats to accommodate field guides and governmental or community partners who might assist with or observe the survey. The vehicles should also be suitable for the roads, terrain and weather patterns of the areas the survey team will be visiting. Ensure that the team carries the necessary tools for all potential challenges e.g. spare tires and a car jack in good condition. Each vehicle should be equipped with a first aid kit that contains necessary prophylaxis if travelling to disease endemic zones. Use of motorcycles can be considered in rural areas where houses are very far apart from each other.

Fuel: Fuel estimates should be made prior to the enumerator and team leader training according to the distances to be traveled between clusters and the number of trips to the field at each site. To calculate the amount of fuel needed, one can estimate 1 liter of fuel will be needed per 7 km. During PECS, the team leader often has the additional responsibility of interviewing a health worker who participated in the distribution event in each cluster. This may require an additional trip back and forth from the health facility to the interview site, which needs to be taken into account when estimating the distances that will be traveled. When calculating distances between sites, it is important to remember that the actual interview village or site selected may be further than the district or area center and that maps may not reflect true distances. It may therefore not be possible to calculate exact distances prior to survey implementation, so approximations should leave room for error. If no information about the cluster is available, travel within the cluster can be estimated to be 100 km.

Accidents/Breakdowns: It is important to be prepared for accidents, breakdowns and unexpected events such as weather-related problems. The Principal Supervisor and planning team should design a strategy for handling these types of situations prior to the team leader and enumerator training. The strategy should include reserving funds for such events, locating the nearest repair centers and identifying a plan for areas where cell phone coverage may not be strong enough to call for backup. The strategy should be communicated clearly to team leaders and enumerators during the training so that situations can be handled quickly and appropriately.

Eating and Sleeping Arrangements: In order for the survey to be successful, team leaders and enumerators must be well fed and rested. The team leader is responsible for locating acceptable lodging and eating places for the team as well as markets to buy snacks. This can be done via discussions with a community partner from each cluster that knows the available options. If mobile phones are being used, stable electricity to charge phones is of high importance when selecting a hotel.

Sleeping arrangements should be made at least 24 hours prior to arrival whenever possible. Ideally, the team leader(s) and enumerators will sleep at the same location to ensure prompt departure in the morning and allow for a debriefing meeting in the evening. When sleeping at a hotel, it is often helpful for the team leader to negotiate an agreeable price at the hotel that includes breakfast and dinner. The team can then coordinate with their driver to arrange stops at grocery stores or kiosks to pick up snacks and lunch items such as biscuits, nuts and fruits. It is important to keep plenty of water in the survey vehicle at all times.

Debriefing: Each team should make time for a debriefing meeting each day to discuss challenges in the field and lessons learned. During this meeting, the team leader should also share common errors, if any, being made on the survey questionnaires and any other feedback to improve team

performance. Each team member should have a notebook for noting all the challenges and lessons learnt while in the field. They should also note any additional information provided in the household that was not captured in the questionnaire. These notebooks are to be collected at the end of the survey exercise to be reviewed by the Principal Supervisor.

Communication: Throughout a PECS, communication is essential. The team leader should communicate with the survey supervisor on a daily basis to update them on the survey progress and any challenges that were faced. The Principal Supervisor should establish a daily check-in time with each team leader before leaving for the field. As previously discussed, advance communication with health officials and community partners in cluster locations is also an essential component to successful survey implementation.

The survey supervisor and planners should determine if airtime should be provided to enumerators and team leaders for communications during the survey. Airtime provisions should be communicated clearly during the training. It is important to remember that enumerators will not always be with the team leaders and will need a certain amount of airtime to call them with updates or to communicate their location.

If mobile phones will be used for data collection, enumerators and team leaders will need internet credit for their phones. Past PECS have used between 20-30 MB of data per enumerator per day (1 MB per survey if no pictures are included). When data is collected via mobile phone, the Principal Supervisor or assistant can ideally monitor incoming data on a daily basis from a location with a fair internet connection. Survey teams should carry at least one additional phone in case of a software malfunction, and carry handheld and car chargers in case an electricity source is not available. The team leader should be trained on how to troubleshoot frequently encountered problems so they can provide support when needed.

Note on attire/clothing: All field team members should consider what attire/clothing is most appropriate to wear for the areas in which they will be administering the survey and avoid wearing colors that are associated with a political party. If the information is unknown, prior inquiries should be made by communicating with local contacts in the area. For example, longer skirts or head scarves for women may be advised. The teams should be well dressed for field work with sturdy shoes and appropriate clothing for the weather.

3 CLUSTER SELECTION

What is cluster sampling?

Cluster sampling is the sampling of a collection of households that reside in a specific area, such as a village or district, with specific geographic boundaries. Cluster sampling is an efficient way of assessing the percent of a population receiving services. Thirty clusters are typically selected in each region of interest when measuring coverage.

Worldwide, cluster sampling has been used in surveys evaluating vaccine coverage, namely the WHO's Expanded Programme on Immunization (EPI). Cluster sampling has also been used in some surveys assessing VAS coverage.

It is recommended that clusters be selected using probability proportional to size (PPS) sampling so that the chance of a cluster being selected is based on its population. This helps to avoid under- or over representing one subgroup in a study and yields more accurate results. When PPS is used, clusters are selected at random; however clusters with larger populations have a greater chance of being selected.

What is the purpose of selecting 30 clusters?

Thirty clusters have been used by EPI to assess immunization coverage (WHO). The selection of 30 clusters and approximately 30 households per cluster is used to achieve a precise and rapid estimate of service coverage with +/- 5% accuracy (WHO). Using too few clusters (less than 20), results in an estimated health coverage that does not closely approximate the service coverage of the population.

Cluster selection should reflect the needs of the survey. If a survey is being conducted to obtain nationally representative data, the clusters should be selected randomly from the full national population. If a survey is being conducted in a specific region, the 30 clusters should be selected from within just that region. If one wants to have a nationally representative coverage rate and a regionally representative coverage rate, then they must treat these as two different sampling frames, with 30 clusters in each (nation and region). Stratification is only possible when there are enough clusters (30) and households (30) selected in each group.

For example, if the objective of the survey is to compare coverage between two groups, such as urban and rural populations, 30 clusters should be randomly chosen in each group (urban and rural) using PPS, so that 60 clusters are selected in total. Therefore, 1,800 children would need to be surveyed (e.g. 30 clusters x 30 households in rural areas and 30 clusters x 30 households in urban areas). If a nationwide survey was conducted and only a few clusters were chosen in the region of interest (< 20) there would not be enough data to get an accurate estimation of coverage in that region.

When doing cluster selection, it is recommended to select five "back-up" clusters so that alternate clusters are available in case a cluster cannot be reached (e.g. due to insecurity) The additional clusters should be selected independently using their own sampling interval and random number.

What sample size should I use?

The appropriate sample size for a population-based survey is determined by three factors: (i) the estimated prevalence of the variable of interest (ii) the desired level of confidence and (iii) the acceptable margin of error.

To make PECS sampling methodology simple, the sample size calculation has been done already. As shown in the box below, surveying approximately 900 children is sufficient to assess VAS/deworming/immunization coverage (WHO) with precision of $\pm 5\%$. For all contexts where PECS are to be conducted, the following is assumed for the sample calculation:

- (i.) The estimated coverage is 50% to allow for maximum sample size;
- (ii.) The desired level of confidence is 95% (z-score is 1.96);
- (iii.) The margin of error is 5%.

In addition, because PECS use a cluster method to sample (and not simple random sampling) the effect of the study design (known as the design effect) is important to consider. The more that the observations are thought to be due to the study design, the higher the design effect will be. A simple random sample – i.e. randomly choosing subjects from the entire study population – will have a design effect of 1 since there is little to no systematic similarity between each subject. In contrast, since PECS choose participants from pre-determined clusters, the subjects within each cluster may systematically have shared characteristics. This should therefore be accounted for in the sample size. For PECS, the design effect has been set at 2.3.

Below is a description of this calculation:

$n = \frac{t^2 \times p(1-p) \times de}{m^2}$	$n = \frac{(1.96)^2 \times (0.5)(1-0.5) \times 2.3}{(0.05)^2}$ $= 883.57$ <p>which may be rounded up to 900</p>
<p>n = required sample size t = confidence level z-score p = estimated coverage m = acceptable margin of error de = design effect</p>	<p>n = required sample size t = confidence level at 95% (z-score=1.96) p = estimated coverage (50%) m = margin of error 5% (0.05) de = 2.3</p>

Note: If a country is using a PECS to gain information about children who are missed, the sample size calculation must be conducted to reflect this. In this case, the value for P should be the estimated percentage of children missed (and not covered) by service campaigns.

What can happen if the clusters are selected incorrectly?

If clusters are chosen in a non-random way, the number of individuals that have received a service can be overestimated or underestimated. For example, selecting households of more educated families from wealthier neighborhoods can result in a survey showing a greater number of children that received their routine vaccinations compared to the general population. The survey will not reflect what is actually happening in the general population. Findings from the survey should show what is occurring in the *general* population that is being examined. Therefore, random sampling is a crucial step in the survey preparation process.

Selecting the clusters to be surveyed

Step 1 – Determine the region(s) to be sampled. Refer to page 7 to determine the regions to be surveyed.

Step 2 – List all of the villages (or small administrative units) in the region to be sampled.

The definition of the administrative unit will depend on the country. Some examples of the units used previously are listed in **Table 2**. Population figures are required for each unit in order to select the clusters to be surveyed.

<u>Administrative Unit</u>	<u>Country</u>
Ward (1-3 villages)	Nepal
Village	Kenya
Statistical enumeration area	Zambia
Hamlet ^a or part of a street	Tanzania
Commune ^b or neighborhood	Mali

^a Group of people living together, that is part of a village

^b Administrative sub-unit formerly given by France

Step 3 – List the population for each administrative unit. The latest figures from the census or population projections can be used to determine the population of each administrative unit.

Village	Population
1	3,000
2	416
3	1,178
4	2,178
5	978
...	...

Step 4 – Calculate the Cumulative Population. The cumulative population is the sum of the populations of each administrative unit. In order to calculate the cumulative population, the population of each administrative unit is added to the sum of the prior administrative units, as shown in **Table 3**.

<i>Village</i>	<i>Population</i>	<i>Cumulative Population</i>
1	3,000	3,000
2	416	3,000 + 416 = 3,416
3	1,178	3,416 + 1,178 = 4,594
4	2,178	4,594 + 2,178 = 6,772
5	978	6,772 + 978 = 7,750
.....
1434	253	41,762 + 253 = 42,015
1435	1474	42,015 + 1474 = 43,489
1436	1268	43,489 + 1268 = 44,757

Step 5 – Calculate the sampling interval. To calculate the sampling interval, divide the total population by the number of clusters to be selected.

Total population: 44,757
 Number of clusters to be selected: 30
 Sampling interval = $44,757 \div 30 = 1,491.9$
 In this example, the sampling interval is 1,492.

Note on rounding: When dividing, the resulting number may not be a whole number: ex. $44,757 \div 30 = 1,491.9$. If a number is not a whole number and its first digit is 0.5 or greater, the number should be rounded to the next highest integer. For example, 1,491.5 to 1,491.9, should be rounded to 1492. If the number is not an integer and its first digit is less than 0.5, the number should be rounded down. For example, 1,491.1 to 1,491.4 should be rounded down to 1,491.

Step 6 – Select a random number. A random number between 1 and the sampling interval should be chosen to determine the first cluster. The random number can be selected using a random number table (see Appendix 9), a random number generator such as the one at www.random.org, or the RANDBETWEEN command in Microsoft Excel. In this example, the random number must be between 1 and 1,492. For this example, the random number that was selected is 1,113.

Step 7 – Identify the first cluster using the random number. Look at the table with the cumulative population figures and determine the administrative unit that contains the random number. Village #1 contains the population from 1 – 3000, and 1,113 falls within this range. Therefore, the first sampling cluster selected for the PEC survey is Village 1.

<i>Village</i>	<i>Population</i>	<i>Cumulative Population</i>	<i>Sampling Cluster</i>
1	3,000	3,000	1
2	416	3,416	
3	1,178	4,594	
4	2,178	6,772	
5	978	7,750	

Step 8 – Select the second cluster. Add the sampling interval (1,492) to the random number $1,492 + 1,113 = 2,605$. Look at the table and identify the administrative unit that contains this value (2,605). Again, choose unit #1, since 2,605 falls between 1 and 3000. This means that village #1 will contain TWO sampling clusters or $n=30 * 2= 60$ children selected in the sample.

<i>Village</i>	<i>Population</i>	<i>Cumulative Population</i>	<i>Sampling Cluster</i>
1	3,000	3,000	1 & 2
2	416	3,416	
3	1,178	4,594	
4	2,178	6,772	
5	978	7,750	

Step 9 – Select the remaining clusters – by adding the sampling interval. Add the sampling interval to the number that was used to locate the previous cluster on the list. Look at the table and identify the administrative unit that contains this value. Keep repeating this step until 30 clusters are selected. For example, to calculate the 3rd and 4th cluster:

$$3^{\text{rd}} \text{ cluster: } 2,605 \text{ (number used to select the 2}^{\text{nd}} \text{ cluster)} + 1,492 = 4,097$$

$$4^{\text{th}} \text{ cluster: } 4,097 \text{ (number used to select the 3}^{\text{rd}} \text{ cluster)} + 1,492 = 5,589$$

What administrative unit s contains 4,097 and 5,589?

Village 3 contains the population values from 3,417 to 4,594, and 4,097 falls in this range. Therefore, the 3rd cluster for the survey is will be village 3. Village 4 contains the population values from 4,595 to 6,772, and 5,589 falls in this range. Therefore, the 4th cluster for the survey is also chosen from village 4.

Village	Population	Cumulative Population	Sampling Clusters
1	3,000	3,000	1 & 2
2	416	3,416	
3	1,178	4,594	3
4	2,178	6,772	4
5	978	7,750	

Note about sampling: The best way to select households is at random from a list of households provided by the census or other source. In areas where lists of households are available for each administrative unit, systematic random sampling can be used instead of the PPS method. For example, if a cluster contains 300 households and 30 houses are to be sampled, $300/30 = 10$ or every 10th household can be visited in the cluster. The first house is chosen by determining a random number from 1 to 10 and then ten is added to this value and so on until 30 households are chosen. If the random starting point is 9, then the following houses are chosen: 19th, 29th, etc. If there are no eligible children in a household, the next nearest household can be visited.

4 HOUSEHOLD SELECTION

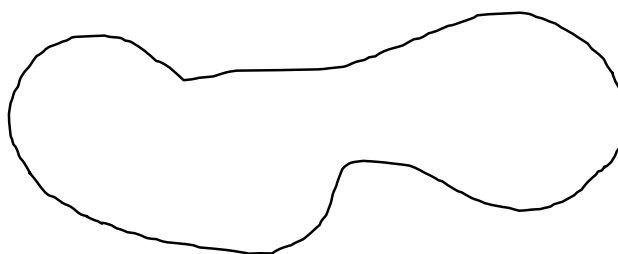
While the following methodology is recommended, if a country routinely applies a different methodology, that methodology may be reviewed by survey organizers and potentially deemed appropriate.

Step 1 – Draw a rough map of the cluster or locate a local map

In order to determine the starting location for the survey and divide the area to be surveyed, a map is needed of the cluster to be surveyed. If a local map is available, this is the easiest and likely most accurate map to use. A local map may be found at the village office, or may also be available for purchase from the Bureau of Statistics. If a local map is not available, the team leader or supervisor should inform the local health official or village leader that a map will be needed and ask them to prepare the map in advance if possible.

In cases where there is not sufficient knowledge about the area to draw a map, the team can walk or drive around the cluster with the local official to record boundaries and landmarks; however this is a very time consuming process that can take 2-3 hours, depending the size of the cluster.

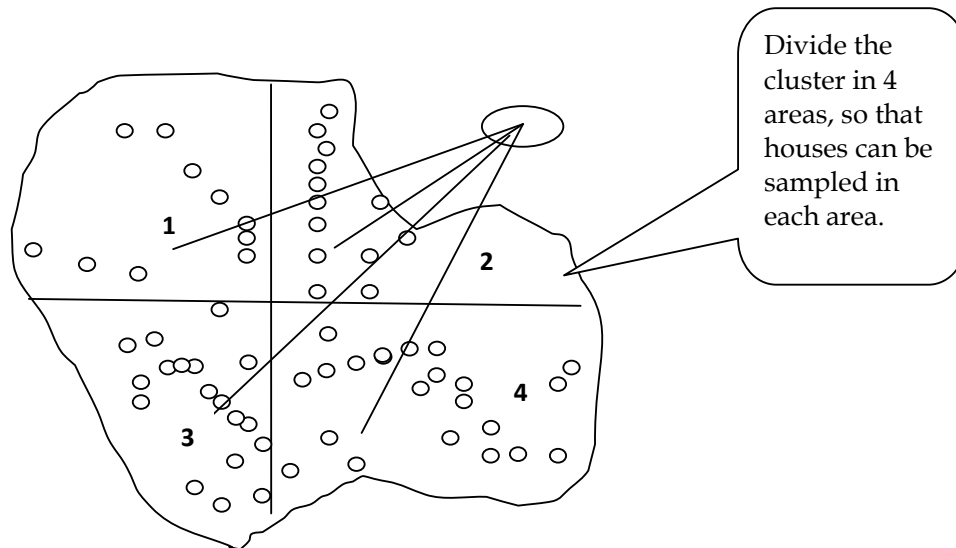
Asking a local official to draw a map of the cluster is not enough; detailed instructions should be provided or the map may look like this and not be useful:



The map should contain boundaries, main roads, schools, churches, markets, rivers and any other landmark known in the cluster.

Step 2 – Divide each cluster into four quadrants

It is important that all households in a cluster have a similar chance of being selected for the survey. Dividing the cluster into four areas will allow the selection of a group of households from four different areas in the cluster, not only one area, so that the houses surveyed are representative of the area surveyed.



Step 3 – Randomly select a starting point in each of the four quadrants

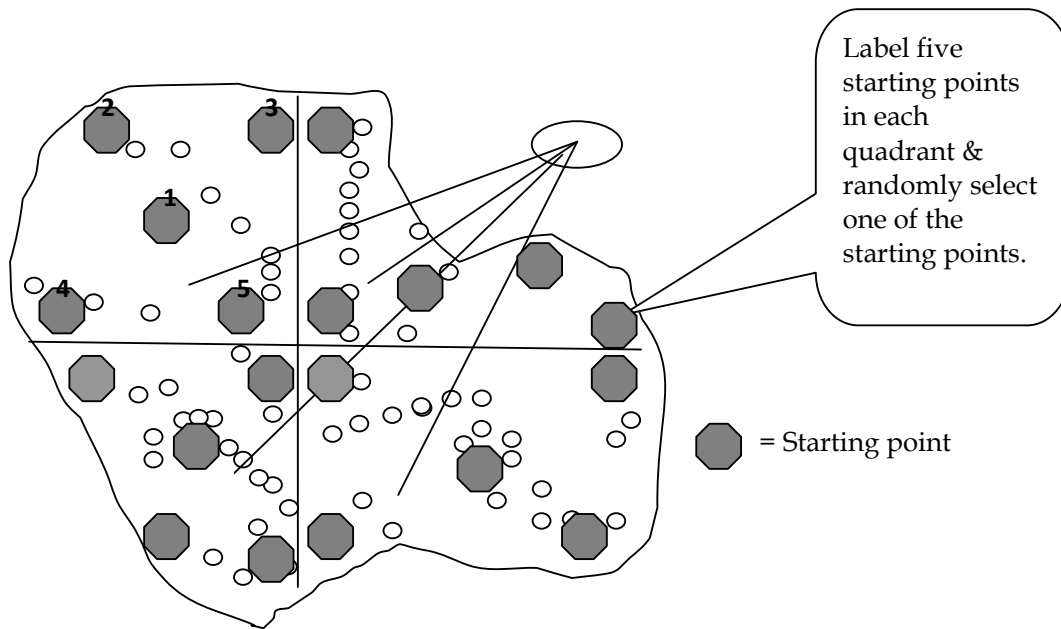
To begin selection of households, a starting point needs to be assigned in each of the four quadrants. As shown in the figure below, five starting points should be identified in each of the four quadrants.

The survey team should select one of the five starting points at random by writing the five possible starting points on pieces of paper (1, 2, 3, 4, and 5). Place these pieces of paper in a hat, sack, or envelope and have the village leader or someone observing from the community select one. For example, if #2 from Area 1 is selected, the starting point is the upper left corner for that quadrant. A starting point from EACH quadrant is needed, as households will be sampled across all four quadrants.

In cases where the majority of the cluster is uninhabited (e.g. farmland) and all residents live along the road or water, ensure that all five starting points fall into areas where people are living. If houses are in a line, the team can randomly select whether to move right or left of the starting spot rather than spinning a pen.

The benefit of quadrant methodology:

In many surveys, a central landmark is chosen as the starting location, but this is not ideal. Caretakers chosen for the survey are more likely to be near to the center of the village. People living in outlying hamlets or remote parts of the sampling area (village, neighborhood) may be harder to be reach, and their information can be excluded from the survey and not represented in the results. Therefore, choosing households randomly within four different quadrants and five different starting points in each cluster gives each household a similar probability of being chosen and makes the data collected more representative of the entire cluster.



Step 4 – Randomly select the walking direction

Once the enumerators arrive at the starting point in each quadrant, they should spin a pen on the ground. When the pen stops spinning, they should look at the direction the tip of the pen is pointing and proceed in that direction. If there are no houses in the direction that the pen spun, then the team can respin the pen to select a new direction. If the pen points towards the boundary of the quadrant/cluster, the team should walk in that direction until the boundary and then respin the pen to select a new direction.

Step 5 – Choose a starting household

Count the number of houses from the starting point to the boundary of the cluster in the direction that the pen spun. Using a random number table or other method, choose a starting house at random that is between 1 and the number of houses counted. Note: this method can be time consuming and is more feasible when enumerators divide the quadrants among themselves (e.g. each enumerator completes one quadrant).

Alternate strategy – In cases where houses are dispersed and each member of the survey team works individually to complete one quadrant, the survey team can consider starting at the first household from the starting point in the direction that the pen spun (and not counting the number of houses to the boundary of the cluster). Past survey teams have found it very time consuming to walk to the boundary of the quadrant, and return to where they started if one of the first households were chosen as the starting point.

Step 6 – Determine the eligibility of the household

Ask the caretaker the age of the children living in the household to determine if they are eligible to complete the survey. If there are no eligible caretakers in the household, proceed to the next household in the direction that the pen spun.

Step 7 – Conduct the survey

The survey should be administered once informed consent is provided by the caretaker. If a caretaker refuses to participate in the survey, reemphasize the purpose and importance of the survey in an understandable way. If they still refuse, move on to the next household.

Step 8 – Collect data from the required number of households

After the starting household has been visited, proceed in the direction the pen spun, visiting every household that is on that line. If the enumerators reach the boundary of the cluster/quadrant, they should spin a pen when they reach the boundary and proceed in a new direction within that quadrant. If the pen spins in a direction that has already been surveyed or is outside the boundary of the quadrant, then re-spin the pen until a new direction is chosen that falls within the quadrant. The survey team should continue to visit households until the required number of households are interviewed - usually 7 or 8 within each of the four quadrants.

In cases where there are less than 7-8 eligible households in a quadrant, the remaining number of surveys can be completed from the next quadrant(s).

Sampling in urban areas with apartment buildings

In cases where data is collected from an urban area with apartment buildings, one household should be surveyed in each building visited. The quadrant methodology and selection of one of five starting points in each quadrant should be followed as described above. If an apartment building is visited, enumerator(s) should randomly choose a floor, number the households on that floor and then randomly choose a household. If there are no eligible children or no caretaker present in that household, the nearest apartment on that floor should be visited. After completing one interview, enumerator(s) should continue to the next building or household in the direction the pen spun. When conducting surveys in urban areas, survey team should also consider the best way to reach caretakers at home, as many might be working during the day.

5 ASSESSING THE ELIGIBILITY OF A HOUSEHOLD

The following describes the methods of assessing the eligibility for surveys in which parents/caretakers of children 6-59 months are eligible. However, the calculation can be modified if eligibility criteria differ.

After arriving at a household, enumerators should ask the mother or caretaker present if there is a child between 6 months and 5 years of age living in the home. Enumerators should confirm that the child was within the age range of 6- 59 months **at the time of the service distribution**. Enumerators should be provided with acceptable dates of birth prior to leaving for the field.

The acceptable dates can be determined using the following calculations:

- End date of the campaign minus 6 months
- Start date of the campaign minus 59 months

For example, if a campaign took place from 15 December 2013 – 27 December 2013, and the survey was targeting caretakers of children 6-59 months at the time of the campaign, the acceptable dates of birth would be between:

- 27 Dec 2013 – 6 months = 27 Jun 2013
- 15 Dec 2013 – 59.97 months = 16 Dec 2008

To determine the eligibility of a child, enumerators should follow the procedure below:

1. Ask the parent or the caretaker if the child's health card or birth record is available.
2. If the health card is not available, ask if the caretaker can recall the specific date the child was born.
3. If the caretaker cannot recall the specific date of birth of the child, the enumerator should ask if they can recall the specific month and year that the child was born.
4. If the caretaker cannot recall the month of birth, a local events calendar can be used to estimate when the child was born. A young child that is walking is at least 9 months of age and would be eligible for the interview.

If there is more than one child 6 – 59 months of age living in the household, enumerators should write the names of the children on slips of paper, place them in an envelope, bag or hand, and have one person from the household select one piece of paper. Enumerators should then interview the mother or caretaker of the child written on the slip of paper. If there is more than one caretaker of a child 6-59 months of age living in a household, the same random selection process should be followed to choose only one caretaker to be interviewed.

Note on village leader, community health worker and health worker surveys: The sampling technique listed above is for household level sampling. For some questionnaires in PECS, village leaders or health care workers are interviewed. In these cases, the team leaders will select village leaders or health workers based on the availability of the informants, with preference for those that participated in the distribution events. For these questionnaires, statistical random sampling is not necessary because data collected are intended to provide information about the event and knowledge of the services distribute, NOT to draw statistically-based conclusions.

6 ENSURING DATA QUALITY

To make sure data is accurate, it is important to take actions to ensure data quality in every stage of the PECS process. Looking at the data quality measures listed in Figure 2 below, one can see where steps should be taken during the planning, implementation and data analysis/ dissemination stages to minimize or mitigate error in the study results.

Figure 2: Important data quality measures (DQM) for each stage of the PEC survey

<p>Stage 1: Planning</p>	<ul style="list-style-type: none"> • Interview and select survey teams (supervisor, team leaders, enumerators, data entry personnel). • DQM: Select experienced and/or well-trained team members, including those who participated in past surveys. Keep a database of enumerators who have worked on previous PECS with their contact information and a brief description of their performance. • Pilot the survey tools to ensure questions are interpreted correctly, responses listed are comprehensive and skip patterns are correct. • DQM: Conduct a thorough pilot to reveal possible errors in the survey (skip patterns, typos etc.) and take action to correct them before implementation. • Organize and conduct team leader and enumerator trainings. • DQM: Thoroughly train enumerators and team leaders on the survey tools, methodology and how to troubleshoot difficult situations in the field.
<p>Stage 2: Implementation</p>	<ul style="list-style-type: none"> • Select a starting point at random in each quadrant and identify the first house to be surveyed. • DQM: Adhere strictly to the methodology to ensure the sample is representative. Use a field guide who is familiar with the area to ensure you are walking in the right direction. • Administer questionnaires. • DQM: Ask questions as they are written, probing when appropriate, and record answers accurately. • Supervise data collection to ensure questions are asked properly and responses are recorded correctly. • DQM: Provide strong supervision to ensure that enumerators are asking questions correctly and that they are accurately recording responses. • Review questionnaires for completeness and accuracy. • DQM: Review completed surveys each day to address errors or omissions in the field rather than during data entry.

Stage 3: Data Analysis & Dissemination

- Double data entry & comparison (if paper forms are used).
 - **DQM: Do not have only one person enter data as this gives a high probability of errors in data entry. Conduct double data entry to ensure that the final database reflects the data exactly as it was collected on the paper surveys.**
- Data cleaning.
 - **DQM: Before data is analyzed, review it thoroughly to ensure that surveyed children are eligible and other discrepancies are found and addressed.**
- Data analysis.
 - **DQM: Avoid doing any data analysis before the data collection and data cleaning processes are complete.**
- Report writing.
 - **DQ: Feedback should be requested from colleagues to ensure that all data have been reported correctly and no errors were made.**

Below, the major means of ensuring data quality are discussed in more detail.

What should supervisors and team leaders do to ensure the data collected is correct and complete?

The database resulting from data collected during a PECS should be free from error and bias, representing as close to the “truth” as possible. In order to achieve this standard of data quality, mistakes due to enumerator error should be minimized. If mistakes do occur, they should be corrected as close to the time of interview as possible.

In the field, it is recommended that enumerators conduct interviews in pairs when possible. Ensuring that two enumerators visit each household together controls data quality because one enumerator can administer the questionnaire and record the answers while the other enumerator can observe and follow along. The second enumerator can confirm questions are asked correctly and responses are recorded accurately. When enumerators work in pairs, it is important for one enumerator to be responsible for both administration of the questionnaire and recording the answers; splitting the duties between two enumerators leaves no one to observe for accuracy.

To control data quality further, it is helpful for team leaders to rotate among enumerators throughout the day and attend at least one household per enumerator per day. For each enumerator, the team leader should sit in on the questionnaire administration and either observe the entry of responses or record the answers simultaneously on a separate blank questionnaire for at least one interview. This provides an opportunity to confirm that enumerators are recording answers accurately and creates an awareness of common errors so that they can be corrected. This process also allows the team leader to observe the enumerators in action, and offer advice on style of greetings and explanation of the survey, phrasing of questions, or other aspect of the survey.

Team leaders should check forms at the end of each day before leaving each cluster, so that mistakes can be corrected while the enumerator can still recall the interviews clearly and return to a household if necessary. Team leaders and survey supervisors should review completed questionnaires for errors including:

- Incomplete forms
- Illegible forms
- Skipped or blank questions
- Unclear responses to text questions or “other” responses
- Errors in skip patterns
- Duplicate/missing questionnaires

If errors are found, enumerators should correct those that can be corrected and common errors should be discussed amongst the team in order to reduce the likelihood of reoccurrence.

Once the fieldwork is complete and the Principal Supervisor has all the survey questionnaires, the surveys from each team should be meticulously reviewed again by the Principal Supervisor for the errors described above.

Ensuring data quality when using mobile phones

Before data collection begins, it is crucial for staff to review the electronic survey form extensively and ensure that all skip patterns are correct. Forms cannot be modified while data collection is ongoing, which means that faulty logic or questions that have been left out can have serious impact on the results of the survey.

Using mobile data collection tools, it is possible to view data as it is collected and view progress on key indicators by geographic region. Indicators can give the survey team an idea of how the survey is progressing and help manage the quality of the data set. Visualizing data using these indicators should normally be limited to managers and can be used to make sure that questions are being understood as intended and that data on each indicator is coming in as expected.

Examples of indicators that are useful in monitoring data collection:

- Number of surveys submitted by each enumerator
- Number of surveys submitted in cluster
- Number of surveys submitted each day

Who should review data? It is first and foremost the enumerator’s responsibility to review carefully each form that he or she has completed before leaving a household. If enumerators are working in pairs, they can confirm what they have recorded with each other to ensure that their answers match. The next level of oversight falls to the team leader. The role of the team leader during the survey is to ensure that all of the data submitted is accurate, can be understood (for text responses), is complete, and has been submitted. Further cleaning and review of the data happens by the Principal Supervisor and assistant(s) as the data is coming in (for mobile phone surveys) and after the data collection process is finished.

Common errors during mobile data collection include:

- Entering the wrong response by mistake
- The respondent later changes their answer to a previous question and the enumerator forgets to go back and change the response.
- Forgetting to enter a requested date. The default response for questions with date responses is the date of the interview. If an interviewer forgets to enter a date, the date of the interview is submitted. Enumerators should be given instructions on what to do in cases where a date is unknown. For example, enumerators can be instructed to enter 1 Jan, 1970, as long as it is not a possible response.

How should the information collected during the survey be entered into a database?

With mobile data collection, the data entry process is eliminated. When PECS are conducted using paper surveys, data should be entered using a program such as EpiInfo or CS Pro that is designed to program skip patterns and detect errors. To enter data into a database using software such as EpiInfo or SPSS, first a codebook needs to be created. A codebook is a spreadsheet that lists each question and the shortened variable name(s) assigned to each question and response.

Variables may be presented as numeric (a number) or string (text). All questions and responses should be assigned a specific variable name and description in the database, so that the data will be easier to find and analyze.

For example, if the survey contained the question: “Has your child ever received the measles vaccine?” with three possible answers: “Yes, “No” and “Don’t remember,” the variable name might be “measles_vac” and the responses might be coded 1=Yes, 0=No, 88=Don’t know. The coding should be consistent across questions (e.g. no is always coded as 0, yes is always coded as 1, don’t know is always coded as 88.)

It is helpful if the variable name also contains information about the question number. For example, for a variable labeled q1date, the following is true:

- q1 = Question 1
- date = date of caretaker interview

The codebook will allow the supervisor or assistant to easily create a data entry template in Epi Info. The template is essentially an electronic version of the survey in which the data entry personnel can enter all the survey responses.

What are some ways to make sure the data are entered into the database correctly and accurately?

There are several ways to prevent errors in data entry when designing a data entry template in Epi Info, CS Pro, or in Excel when doing mobile data collection using Ona.

Restrict the answers to certain responses. For questions where there are a finite number of possible responses, the data entry screen can be designed in a way to accept only those answers. For example, if a question has only three possible responses – Yes, No, and Don't know – the database can be set up so that it will only accept these three answers.

Set the range of acceptable numbers. Similarly, if a possible response to a question is within a large range – like age, distance or time – you may specify a numeric range of possibilities. For example, if a question asks: “In years, how old is the head of the household?” the range of reasonable responses can be specified as being between 16-100 years of age if it is unlikely that the head of the household is younger than 16 or older than 100 .

Perform consistency checks. These checks make sure the data from one question make sense with data from another question. For example, the birth date of the child should match the age of the child on the form. Likewise, if a caretaker reported that their child received a service at the last event, then the section on why the child did not receive the service should not be filled in.

For variables describing distances or time, check the data range of each variable to make sure it makes sense. For variables where only certain categories such as those coded as 1-5, 8 and 9 are possible responses and an unlisted category such as “7” appears when the data is summarized, identify and correct the error.

What computer software is needed to enter and analyze PECS data?

When PECS are conducted using paper forms, a computerized database program (Epi Info, CS Pro, etc.) should be used. Using a database program for data entry allows use of skip rules, creating limits, and capacity for double data entry and data comparison.

For data analysis, a statistical analysis program such as SPSS or STATA should be used. Programs like these enable the data analyst to clean data, perform statistical tests and generate output to present results.

Double Data Entry

The double data entry procedure requires the same data to be entered by two different data entry personnel so that two databases with the same data are created. After data are entered, the data comparison feature on common data entry programs like Epi Info or CSPro can be used to check the second entry against the first. If there is a difference between the two sets of data, the program notifies the user and allows the user to determine the correct entry. This double entry procedure significantly decreases data entry errors. ****Double data entry should be performed for every PEC survey conducted with paper survey forms.****

APPENDIX 1 – PECS Preparation Checklist

Acquire Official Approval and Establish Survey Teams

- Prepare the protocol for the survey
- Present the survey to government officials and partners and follow the necessary procedures to gain official approval
- Create a detailed budget for the PECS
- Select clusters using Census or other accepted population data
- Post announcement for enumerators and team leaders
- Conduct interviews for enumerators and team leaders
- Establish teams based on local languages spoken and other relevant characteristics
- Get a letter of approval from the relevant government office, make copies for teams to carry
- Develop and pre-test questionnaires and have them reviewed by partners
- Determine routes and travel schedule for each team

Training

- Set dates for training (usually 5-7 days before the start date of the PEC survey)
- Get quotes for and reserve meeting room
- Confirm if Wi-Fi (internet) is available in the training room
- Confirm number of individuals participating in the training
- Develop training materials (agenda, presentations, enumerator guide, team leader guide, travel schedule, contracts etc.)
- Purchase supplies needed including clipboards, pens, phone credit, name tags, etc.
- Collect and package samples of vitamin A capsules and other services included in the survey for each enumerator
- Determine location for field test and make necessary arrangements
- Confirm dates of training and survey with enumerators and team leaders

Logistics

- Arrange for vehicles to carry all teams that have adequate seating and are suitable for the terrain
- Ensure payment is in place for enumerators, team leaders (salary, per diem), lodging, communication, fuel, etc.
- Gather contact information of health officials at all levels and inform them of the survey using the standard procedures for the country
- Prepare contracts for enumerators and team leaders
- Prepare evaluation forms and set a date and time for debriefing
- Print questionnaires, contracts, enumerator and team leader guidelines, fuel logs, payment receipt forms and other materials

Preparations needed for mobile phone surveys

- Program surveys using Ona or another program such as Magpi or Dimagi
- Purchase sim cards
- Configure phones if using for the first time
- Activate phones for data and add credit/data bundles (200-250 MB is generally sufficient)
- Download survey forms to phones
- Test survey forms extensively on mobile phones to ensure skip logic is programmed correctly and all questions and responses have been entered properly
- Procure handheld chargers and car chargers as needed (Recommendation: 1 handheld charger per two enumerators and 1 car charger per car)
- Carry one power strip per team to charge phones in cases where team leaders will be responsible for charging phones
- Prepare sign out sheets for phones and other equipment (chargers, power strips, etc.)

APPENDIX 2 – Selecting Survey Team Members

A. Selecting a Principal Supervisor

The principal supervisor will be responsible for all aspects of the survey, act as a resource for information, advise if problems arise, monitor enumerator and team leader performance, review survey forms and serve as the main contact person for the survey. The selection of one supervisor and one to two assistants to help the supervisor with organizing and planning the survey is recommended.

B. Selecting Team Leaders

The team leader's main task is to guide a team of enumerators through successful survey implementation. In selecting an individual for the position of team leader, the following qualifications are recommended:

1. Secondary level of education and understands the national and local languages required to implement the survey
2. Leadership experience
3. Good communication skills
4. Health knowledge and education
5. Experience working with government health officials
6. Pays close attention to detail
7. Previous survey experience

C. Selecting Survey Enumerators

The type of enumerator selected for a PECS will depend on what is most appropriate for the community. For example, university students, university graduates and NGO workers have been used in various settings for PECS.

The enumerator's main task is to carry out the interview. In selecting an individual for the position of enumerator, the following is recommended:

1. Secondary level of education and understands the national and local languages required to implement the survey
2. Some health background or knowledge
3. Ability to communicate well with others
4. Pays close attention to detail

D. Selecting Data Entry Personnel

In selecting data entry personnel, candidates should be evaluated based on the following criteria:

1. Familiarity with data entry software.
2. Previous data entry experience.
3. Good typing skills
4. Attention to detail
5. Ability to work well under pressure

APPENDIX 3 – Suggested Responsibilities of Survey Team Members

Suggested Responsibilities of Team Leaders

Logistics:

- Communicate with village heads and health officials to convey the purpose of the survey and obtain necessary permissions.
- Manage and supervise enumerators in the field.
- Administer questionnaires to health workers, village leaders and stakeholders.
- Answer enumerator questions and concerns.
- Ensure the quality of data collected by enumerators.
- Ensure that survey forms have been sent (mobile surveys) and assembled (paper surveys) after verification.
- Arrange travel plans throughout the survey and handle all team logistics including sleeping and eating arrangements.
- Maintain regular with contact the lead survey supervisor.
- Engage and arrange field guides and/or translators as needed.
- Manage all survey expenses incurred by the team.

Suggested Responsibilities of Enumerators

- Conduct all caretaker surveys.
- Obtain consent from the mother or caretaker before conducting interviews.
- Follow specific instructions for asking questions:
 - Do not express opinions during the interview.
 - Do not influence the interviews.
- Answer caretaker questions or concerns and be respectful of the team leader.
- Pay attention to details.
- Record the answers to questions carefully and clearly.
- Check the completed surveys carefully at the end of each interview. If there any problems or missing information, return to the house and verify the answer with the mother.
- Be polite and respectful during the interview

Suggested Responsibilities of Data Entry Personnel

- Enter data from paper survey into a database
- Put aside forms that are not complete or illegible and discuss with the survey supervisor
- Organize and catalogue paper survey forms before and after entry

APPENDIX 4 –Sample PECS Enumerator Interview Form

Name of candidate: Date: Interviewer Name :.....

No.	Question	Interviewer Notes	Candidate Score	Maximum score
1.	Tell us about yourself			3
2.	Tell us about your previous survey experience			6
3.	What do you think the role of an enumerator involves and how do your skills match this position?			5
4.	What challenges have you faced in previous survey experiences and how did you resolve them?			5
5	What do you enjoy most and least about doing surveys?			5
6.	You will be responsible for about 150 surveys, how will you cope with the repetition?			5
7.	What do you know about Vitamin A?			3
8.	<i>Ask Enumerator to administer sample survey</i>			8
9.	Supposing the caretaker doesn't want to participate in the interview, how would you handle this situation?			5
10.	What are your remuneration expectations?(salary range)to		No score
11.	Do you have any questions for us?			No score
	TOTAL SCORE			45

Languages spoken fluently:

Regions familiar with:

Comment on Suitability of candidate for the position: 1.Suitable 2. Not Suitable

APPENDIX 5 – Sample PECS Team Leader Interview Form

Name of CANDIDATE: Date: Interviewer Name :.....

No.	Question	Interviewer Notes	Candidate Score	Maximum score
1.	Tell us about yourself			2
2.	Tell us about your previous survey experience			8
3.	What is the biggest challenge that you faced in previous surveys and how did you resolve it?			5
4.	What do you enjoy most in conducting surveys? What don't you like about conducting surveys?			5
5.	What do you think the role of a team leader involves and how do your skills match this position?			5
6.	As a team leader, how would you go about community entry for this PEC survey?			5
7.	What would you do to ensure the safety of your team during data collection?			5
8.	The survey can get repetitive as your team will be responsible for completing 250 of the same questionnaires. How would you build the morale of your team and keep them motivated?			5
9.	As a team leader, what would you do to be sure that your team stays focused on the tasks and that quality is collected by each enumerator?			5
10.	Suppose the community leader doesn't allow you entry into the village, how would you handle this situation?			5
11.	Suppose a health worker doesn't want to participate in the interview because they are afraid they will get into trouble, how would you handle this situation?			5
12.	What do you know about Vitamin A?			3
13.	What do you know about Child Health Days?			3

14.	What are your remuneration expectations?(salary range)	Indicate salary ranges: Kshto		No Score
15.	Do you have any questions for us?			No score
	TOTAL SCORE			60

Languages spoken fluently:

Regions familiar with:

Comment on Suitability of candidate for the position: 1.Suitable
2. Not Suitable

APPENDIX 6 – Sample Government Approval Letter

GOVERNMENT OF BENUE STATE OF NIGERIA

Telephone: 044-533528, 531604
Telegram: COMMHEALTH



Ref. No: OFF/379/VOL III/1537
Ministry of Health & Human
Services

P.M.B. 102093
Makurdi, Benue State

Date: 15 / 01 / 2014

*In replying please quote the number
and date of this letter*

The Executive Chairman,

.....
.....
.....

ATTENTION: ^{HCC} HOD/NFP

PERMISSION TO CONDUCT POST EVENT COVERAGE SURVEY (PECS) IN YOUR LGA

Helen Keller International (HKI) is a not-for-profit organization that support the Federal Government and some states to implement the bi-annual Maternal Newborn and Child Health Week (MNCHW). As part of an evaluation campaign, HKI sends enumerators to the field to conduct Post Event Coverage Survey (PECS) 4-6 weeks after the completion of the MNCHW. The survey is conducted in order to validate administrative coverage data for Vitamin A and other interventions. The results of the PECS will be shared with the state and used for course correction to improve on subsequent campaigns.

The enumerators selected for Benue State are listed below:

- Victor Osatogbe
- Deborah Obadan
- Comfort Agwu
- Faith Ishaya
- Roseline Pila
- Umaru Dankero
- Valentine Ogwuche
- Veronica Azodo
- Gbenga Joseph

These enumerators will be interviewing caretakers of children 6 – 59 months, community leaders and health workers that participated in the last November/December 2013, MNCHW.

Please accord them the necessary support and cooperation

Sincerely,

Dr. Joseph Kumba.....
Director Public Health (DPH)

APPENDIX 7- Sample Team Leader Training Schedule

TEAM LEADER TRAINING SCHEDULE FOR POST EVENT COVERAGE SURVEY (PECS) FOR VITAMIN A SUPPLEMENTATION

Wednesday June 5, 2013

08:45-09:00am	<i>Welcome Remarks.....</i>
09:00am-09:15am	<i>Introductions.....</i>
09:15am-09:30am	<i>Overview of Child Health Days, Vitamin A Supplementation and Deworming.....</i>
09:30am -09:45am	<i>Overview of the PEC Survey.....</i>
09: 45am-10:30am	<i>Daily Survey Schedule.....</i>
10: 30am-10:45am	<i>Tea/Coffee Break</i>
11:15am -11: 30am	<i>Preparing for the Survey Each Day....</i>
11: 30am-1:00pm	<i>Caretaker Surveys..... Ensuring Data Accuracy</i>
1:00pm-2:00pm	<i>Lunch</i>
2:00pm-03:00pm	<i>Conducting Heather Worker and and CHW Surveys.....</i>
03:00pm-03:15pm	<i>Lodging and Meals.....</i>
03:15pm-03:30pm	<i>Ensuring the Safety of the Team.....</i>
03:30pm-4:30pm	<i>Managing Tough Situations.....</i>
04:30pm-04:45pm	<i>Tracking Fuel and Expenses.....</i>
04:45pm-05:00pm	<i>Debriefings.....</i>
	<i>Communicating with HKI Staff.....</i>
05:00pm-05:15pm	<i>Closing Remarks.....</i>

APPENDIX 8 – Sample Enumerator Training Schedule

ENUMERATOR TRAINING SCHEDULE FOR POST EVENT COVERAGE SURVEY (PECS) FOR VITAMIN A SUPPLEMENTATION

Thursday June 6, 2012

08:45am-09:00am	<i>Welcome Remarks.....</i>
09:00am-09:15am	<i>Introduction.....</i>
09:15am-9:45am	<i>Ice Breaker.....</i>
09:45am-10:15am	<i>Overview of Child Health Days and VAS coverage</i>
10:15am-10:30am	<i>Overview of Vitamin A Supplementation</i>
10:30am-10:45am	<i>Tea/Coffee Break</i>
10:45am-11:30pm	<i>PECS Survey Methodology.....</i>
11:30pm-01:00pm	<i>PECS Survey Tools.....</i>
1:00pm-2:00pm	<i>Lunch</i>
02:00pm-03:30pm	<i>Role Play - Groups.....</i>
3:30pm-5:00pm	<i>Role Play – Together.....</i>
05:00pm-05:15pm	<i>Evaluation.....</i>
05:15pm-05:30pm	<i>Closing Remarks.....</i>

Friday June 7, 2013

08:45am-09:00am	<i>Recap.....</i>
09:00am-09:30am	<i>Introduction to Ona.....</i>
09:30am-10:30am	<i>Conducting a Survey Using Ona.....</i>
10:30am-10:45am	<i>Tea/Coffee Break</i>
10:45am-11:30am	<i>Role Play/Practice – Large Group.....</i>
11:30am-12:30pm	<i>Role Play/Practice in Pairs.....</i>
12:30pm-1:00pm	<i>Discussion and Questions.....</i>
1:00pm-2:00pm	<i>Lunch</i>
02:00pm-03:30pm	<i>Role Play in Large Group.....</i> <i>Evaluation of Survey Skills.....</i>
3:30pm-4:00pm	<i>Use of Mobile Phones During the Survey</i> <i>Logistics.....</i>
04:00pm-04:30pm	<i>Planning for Field Visit.....</i>
04:30pm-05:00pm	<i>Closing Remarks.....</i>

Saturday June 8, 2013

08:00am-12:30pm	<i>Field Testing PEC Surveys</i>
1:00pm – 2:00 pm	<i>Lunch</i>
2:00pm – 5:30 pm	<i>Debriefing and Preparation for Departure</i>

APPENDIX 9 – Random Number Table

8 2 0 3 1 4 5 8 2 1 7 2 7 3 8 5 5 2 9 0 6 3 1 6 4
 0 8 7 3 3 1 9 7 5 2 5 7 6 9 8 0 3 6 2 5 1 2 7 5 2
 2 3 3 8 6 1 4 2 4 0 2 6 1 8 9 5 2 6 9 8 3 4 0 1 0
 4 7 5 5 6 3 0 7 7 1 9 1 6 1 7 4 1 7 1 3 7 9 3 3 7
 1 9 3 9 5 3 4 9 5 5 2 7 5 8 0 3 4 8 8 1 2 7 5 3 4
 2 8 7 8 1 4 1 4 9 4 2 4 1 5 2 9 4 6 2 1 5 2 8 1 9
 8 4 8 5 1 3 9 6 6 0 7 2 1 9 0 2 0 6 7 0 6 0 1 3 0
 0 3 8 8 4 7 5 1 5 1 7 3 4 5 2 0 7 4 7 9 6 6 7 7 4
 3 5 3 1 9 3 7 4 9 5 0 2 0 1 4 6 2 5 4 5 8 5 0 9 2
 3 4 5 9 5 2 7 9 8 9 0 5 5 8 5 1 7 7 3 5 5 4 7 7 2
 4 1 5 3 0 9 1 3 7 2 5 8 7 7 1 3 6 3 9 7 8 7 9 1 7
 7 2 9 5 6 7 8 5 4 5 3 4 5 4 1 9 8 6 7 5 7 9 3 1 8
 5 9 2 8 9 8 6 4 4 1 5 3 7 7 0 8 0 2 5 6 0 6 1 2 0
 1 3 3 3 9 0 5 2 8 7 4 0 9 0 3 7 3 1 7 9 4 5 5 2 8
 4 6 0 1 0 8 6 2 1 0 0 5 0 3 1 5 4 9 0 3 7 4 7 0 1
 7 7 0 6 6 3 2 8 8 5 8 9 5 6 4 0 5 9 1 8 0 5 4 9 4
 3 3 8 5 7 5 7 4 3 4 5 7 9 6 9 5 0 7 7 6 6 8 8 5 9
 9 1 7 1 3 6 9 2 9 1 9 4 2 3 3 0 8 1 8 7 7 6 4 7 2
 6 2 2 8 0 9 4 5 3 7 2 5 4 6 6 5 6 6 5 0 4 6 5 6 8
 1 7 5 9 0 0 2 0 5 6 5 8 5 1 9 5 3 3 7 4 0 5 8 2 4
 0 3 9 6 9 4 7 3 5 7 0 6 5 4 7 1 1 8 5 3 2 8 0 9 8
 3 0 8 2 8 1 4 4 1 6 7 6 6 9 9 9 7 5 8 9 6 4 5 9 0
 0 4 9 1 2 2 0 1 3 2 4 6 7 9 1 8 8 2 9 8 3 2 6 2 9
 7 2 5 1 4 4 9 6 5 2 8 5 5 1 0 8 2 6 2 0 6 9 2 2 3
 9 9 2 5 7 4 3 1 2 3 6 4 1 5 2 4 0 4 2 2 8 7 1 8 2
 2 0 9 1 8 9 4 4 6 1 4 8 6 7 9 2 5 0 6 9 3 3 0 1 2
 6 5 2 6 1 2 1 7 7 1 4 7 8 1 4 2 7 3 7 4 0 0 1 2 9
 1 2 9 9 6 4 2 5 3 2 7 4 3 2 3 3 8 5 3 3 6 5 5 3 2
 3 2 8 3 7 9 6 0 4 8 6 0 5 4 1 1 4 9 0 5 0 9 4 4 1
 0 9 3 4 1 1 9 5 8 3 2 4 6 7 3 4 4 9 2 3 7 2 5 7 8
 6 7 5 3 4 2 1 5 5 0 1 2 4 7 5 5 2 6 8 7 8 2 8 0 3
 9 6 0 1 3 0 5 3 6 6 2 9 6 0 3 4 7 6 1 1 9 1 6 5 3
 4 6 9 9 6 7 8 5 8 1 2 9 2 6 2 4 4 9 0 5 5 4 5 2 0
 9 7 7 1 9 2 6 5 6 3 3 6 3 6 8 3 9 9 8 7 7 2 7 9 7
 7 5 3 3 3 3 7 3 7 6 7 3 9 1 1 2 3 9 0 9 5 9 6 5 7
 2 8 1 3 1 4 2 1 0 3 1 2 3 2 0 2 3 9 7 7 3 5 0 6 9
 6 0 9 4 8 8 5 5 3 7 9 0 0 0 0 1 9 2 0 6 1 5 8 4 2
 3 5 9 0 7 7 0 1 8 1 2 9 3 4 6 9 2 8 9 8 9 8 6 5 5
 4 4 8 1 1 7 4 4 7 4 4 4 1 6 5 9 3 6 5 9 8 3 2 4 3
 6 3 9 7 0 6 2 5 3 3 2 6 0 5 1 2 4 3 7 1 0 7 8 2 1

APPENDIX 10: Vitamin A Supplementation and Deworming Referral Slip

Date _____

To:	
Name of person referred:	
Date of birth of the person referred:	
Referred by:	
Signature:	

As part of the Vitamin A Supplementation Post Event Coverage Survey conducted by Helen Keller International in partnership with the Tanzania Food and Nutrition Center and Ministry of Health and Social Welfare, the individual named above has been identified as being 6-59 months of age but DID NOT receive a vitamin A capsule or deworming tablet during the most recent vitamin A supplementation distribution.

Your kind assistance to this person is very much appreciated.

Vitamin A Supplementation and Deworming Referral Slip

Date _____

To:	
Name of person referred:	
Date of birth of the person referred:	
Referred by:	
Signature:	

As part of the Vitamin A Supplementation Post Event Coverage Survey conducted by Helen Keller International in partnership with the Tanzania Food and Nutrition Center and Ministry of Health and Social Welfare, the individual named above has been identified as being 6-59 months of age but DID NOT receive a vitamin A capsule or deworming tablet during the most recent vitamin A supplementation distribution.

Your kind assistance to this person is very much appreciated.

APPENDIX 11: Quality Control Scoring Sheet

Quality Control Scoring Sheet						
Enumerator: _____		QC conducted by: _____				
Village/Town _____		Date _____				
		Performance				
		Poor			Excellent	
		1	2	3	4	5
1. Enumerator introduces her/himself.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Polite, respectful, develops rapport						
2. Enumerator seeks consent.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Explains the survey, patiently answers Questions/concerns, does not pressure						
3. Asks questions as written		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does not paraphrase/rephrase questions						
4. Enumerator probes where necessary.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Offers assistance without biasing response						
5. Enumerator records responses correctly		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ticks in the appropriate box, codes the corresponding response, follows skip pattern, record answers clearly in the Form Hub						
6. Thoroughly checks questionnaire upon completion		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Total _____				
Requires Much Improvement 6- 15	Requires Some Improvement 16 – 24	Requires Little Improvement 25-30				
You need to pay more attention to detail, be more mindful of your interviewing skills, and become more familiar with the survey tool	You are already aware of how to conduct interviews and have some familiarity with the survey but require a bit more practice and attention to detail.	You prioritize data quality, are familiar with the survey, are well-versed in interview technique, and are committed to maintaining high performance for the entire survey				

APPENDIX 12: Role Play Scenarios

1. Some of the enumerators on your team sneak out at night to have fun because they do not like the chosen hotel. The following morning, you realize that one enumerator is missing.

Potential Solution: Inquire whether anyone on the survey team or in the hotel has information about the enumerator's whereabouts. If not, visit the location(s) that the enumerator was known to have been at the previous night and ask if anyone has information about the enumerator's whereabouts. Contact the survey supervisor to inform them of the situation and the actions you have taken, then report the matter to the police.
2. On your way to the cluster, your vehicle gets a flat tire and the spare tire has no pressure. The distance to the next town is very far and would take a number of hours to walk.

Potential Solution: Reach out to the survey team's contact in the nearest survey location to request an additional spare tire be brought via motorbike or taxi. Contact the survey supervisor to report the problem and the actions you have taken and are planning to take.
3. You arrive at the survey destination on time, but when you try to contact the health worker, their phone is off. You continue to call their phone for the next 30 minutes but it remains off and you do not have any other contact information for them.

Potential solution: Go to the health facility that serves the community, introduce the survey team and request for someone who can introduce you to the village leader. Alternatively, visit the nearest local administration official, introduce the team and your purpose and request to speak to the village elder.
4. You arrive at the survey destination and meet the health extension worker who directs you to the village leader's home. However, when you reach the village leader's home a young family member tells you that he/she has left for a funeral 6 hours away and will not return for one week.

Potential solution: Ask for some else be it youth leader, village chairman or anybody familiar with the whole village that can assist the survey team.
5. Three out of the four enumerators and the team leader get a severe flu. They are throwing up and will not be able to travel for at least two days.

Potential Solution: In the event that the survey team is unable to carry out the survey, the survey schedule will need to be adjusted. Changes in travel dates and budgetary consequences should be discussed with the survey supervisor.
6. You receive a call from a health worker in the village you are scheduled to survey the next day. They tell you that something has happened in the village and you cannot come to survey as planned. They suggest you re-route your travel and return to this village after four days.

Potential Solution: If that something that happened is relating to the security of absence of the villagers, continue with another cluster and then make follow-up calls when it can be possible to visit this particular one.

7. One of the team enumerators receives a call that they are urgently needed back at their home. They tell the group they want to take a bus back immediately.
Potential Solution: Contact the survey supervisor to seek guidance and inquire whether the parameters of the enumerator contract allow for premature departure. If the enumerator insists on leaving, the survey team will face budgetary and scheduling consequences so solutions should be discussed with the survey supervisor. One possible option is for the team leader to take up the workload of the enumerator.
8. It is clear that the map provided by the village leader is not accurate as the landmarks are in the wrong place and the roads are not correctly labeled.
Potential Solution: Walk the cluster with the community guide and/or review the map in detail to confirm the location of boundaries and street names.
9. An enumerator was sent to survey caretakers in an area with no network access and cannot be found by the rest of the survey team.
Potential Solution: Visit the quadrant where the enumerator was working and enquire from caretakers or anyone outside if they had seen the enumerator and which direction they had gone. To prevent this situation from happening, it is advisable to agree on a meeting place before beginning work in each cluster/quadrant and have enumerators contact the team leader frequently via SMS or phone call to update them of their location.
10. Tribal violence breaks out in the night, and police are now in the area to be surveyed.
Potential Solution: The team leader should find out the security situation of the area from the community leader and the practicality of conducting a survey. If the situation is calm but there is tension then you can ask for a known community leader and some security to accompany the survey team. If it is dangerous for the survey team to work in the area, proceed to the next cluster and ask for the contacts of the community leader and health worker in order to communicate when the situation is calmer. However if by the end of the survey the situation is still not conducive, then select a replacement cluster from the additional clusters selected.
11. When searching for the cluster to be surveyed, the survey team learns the village they are searching has been wiped out by a flood and no one lives there any longer.
Potential Solution: Use an alternative cluster from the additional clusters selected. It is best practice to make arrangements prior to departure. If this had been done, the survey team would have known in advance the village didn't exist and this situation would have been prevented.
12. The cluster to be surveyed is very large and is mostly farmland. All of the residents live along the roads, so if the cluster is split into four even quadrants, the survey team will waste a lot of time crossing farmland with no houses.
Potential Solution: Randomly select five starting points along the settlement areas rather than throughout the entire cluster. In cases where houses are along a road and there are only two directions that the survey team could travel, they can write down the two directions (left, right) on a slip of paper and select one at random.

13. Health workers and community health workers start a nationwide strike and refuse to participate in the survey.
Potential Solution: Once you get to the village ask for directions to the community leader's home. Go there, introduce the survey team, explain why you are there and ask for his consent to access the community. If they agree proceed with the survey as usual.
14. The local guide informs the survey team that the location chosen as the starting point is dangerous as it is a hideout for criminals in the area.
Potential Solution: Either request for security to accompany the team. If the guide feels that the location is too dangerous, randomly select a different starting point and request that a guide accompany the survey team to ensure that the team avoids dangerous areas.
15. A caretaker and child just moved into the community just a few days after the campaign took place, however, she is aware of health services from where she originally stayed.
Potential solution: Collecting information from a person who just moved in and was not living in the village while the campaign took place would skew the data. Inform the caretaker that she is not eligible for the survey and proceed to the next household. If desired, the survey team can provide counseling on the purpose of the survey and provide information about the next round of the campaign.
16. In the middle of data collection the head of the family comes in and asks what you are doing. Once he learns that you are working with the government he stops the interview and says he cannot co-operate with the government.
Potential solution: Try to explain to him that the whole exercise is to benefit the children and the health services they receive. If he is adamant, stop the interview and proceed to the next household. In certain contexts, it may be advisable to first introduce the survey to the head of the household and then request permission to conduct the interview with the primary caretaker.
17. The survey team enters a remote village and no member of the survey team can speak the local language. None of the caretakers speak the national language.
Potential solution: Request for someone in the community to assist in the translation. Instruct them to ask the questions exactly as you say them, and not to advise the caretaker on how to respond. Previous survey teams have found that guides often misinterpret the questions, so it is best to know the local languages ahead of time and ensure than an enumerator is hired who can speak the local language.
18. The caretaker has been staying with her sister for the past two months in the village being surveyed and her child was supplemented during the campaign.
Potential Solution: Proceed with the interview given that the caretaker was in the village during the time period of all campaign activities.
19. No local official is available who can write a detailed map of cluster to be surveyed.
Potential Solution: Request a guide who is very familiar with the cluster to take the survey team through the cluster. Work with the guide to create a map with boundaries and landmarks.

20. In the middle of the survey, the caretaker walks into her house and does not return.
Potential Solution: Try to call for the caretaker and if they do not respond, see if a neighbor would be able to assist to talk to the caretaker about the importance of the survey and request just a few more minutes of their time. If the caretaker goes and refuses to return, terminate the survey, move to the next household, and survey an additional caretaker in that cluster. To prevent this situation from happening, when enumerators introduce the survey, they should state the importance of the survey, how the child of the caretaker will benefit from the information gathered and the amount of time needed for the survey. Enumerators should be always appreciative of caretakers for their participation and always treat them with respect. It is advisable to have a community health worker or village leader assist in such situations.
21. The caretaker is willing to be interviewed, but she will only participate if she is paid.
Potential Solution: Explain that the respondents are not paid for their participation in the survey and the results of the survey will bring more than just the cash she needs. If she does not comply, move to the next household; payment should not be provided.
22. A polio campaign was held the week before child health days, and many caretakers are confusing receipt of vitamin A supplementation with receipt of polio.
Potential Solution: Ensure that enumerators are showing caretakers the vitamin A capsules and stressing that this is a vitamin A supplement and not polio vaccine and what the difference is. The team leader should always find out health events and immunizations campaigns that recently took place in enumerator areas from health and community officials. This will help the team leader brief the enumerators adequately.
23. You enter a household and the person you find informs you that the parents are away on some errands and that in their absence, he/she can answer the questions.
Potential Solution: The survey respondent should be the primary caregiver. Ask if they watch the child most of the time, if they are responsible for the child's health, if they know whether the child attended the campaign and if they are familiar with the child's eating habits. If they answer "yes" to all of these questions, then they can be interviewed. ,
24. The survey vehicle gets a flat tire as it is travelling to the next cluster. The flat tire is repaired, but the survey team arrives two hours later than planned and is informed that the community leader is attending a burial. There are several people who can assist, but they are all currently in meetings and will not be able to arrive for at least one hour.
Potential Solution: Try to reach the community leader or other community representative by phone and ask for permission to conduct the survey. Request for a guide and someone who can help to develop a map of the cluster.
25. The caretaker does not know any information of the date of the child's birth or age but you can clearly see the child is eligible for the survey.
Potential solution: Probe for information about the age of the child. If the caretaker can provide no information, the caretaker should not be interviewed. Some children may appear to be eligible but are actually older than the target age group due to stunting or malnutrition.

26. The survey team visits the village leader at his home to introduce the survey. The village leader gives permission to conduct the survey, but insists on having his family members interviewed.
Potential solution: Explain that the households need to be randomly selected and if his is selected then you will ask them to be interviewed. If the village leader creates problems, conduct the survey on a blank form and then throw away the data.
27. The health worker is new this month and therefore not involved in the last Child Health Days. The health worker who was there during the campaign has moved to a new post.
Potential solution: Ask for a supervisor or other staff the health post who participated in Child Health Days and can answer some questions. If no one else is available, administer the survey to the health worker present and indicating 'don't know' where necessary.
28. The mother is clearly uncomfortable because there are many onlookers during the interview.
Potential solution: Ask the onlookers to give you some privacy. Do what feels comfortable, each situation is different.
29. After interviewing caretakers at the 4th and 9th house you realize these two households are related, the two women are married to the same man.
Potential solution: Since they don't live in the same compound, and the houses in between are not all related, it is okay to use the data for both surveys. In cases where there are multiple wives for the same man living in one compound, only one of the wives should be surveyed.
30. The mother brought her child to the health center last month because they were sick. The child was given VAS while they were there, but the mother didn't know there was a 'campaign.'
Potential solution: It should still be indicated that the child received VAS during the event, but it should be indicated somewhere that it was during a clinic visit for a sick child.
31. You enter a large house with many mothers and young children, some birthdates are not known for some of the children and there are no health cards to validate ages
Potential solution: Estimate dates of birth by probing with mother about life events that happened around the time the child was born. You can do some estimation on the child based on walking, talking, comparing to siblings whose ages may be known. Put all children whose ages you believe are eligible into the randomization lottery. You must try to ascertain age even month and year on the selected child in order to estimate the child's age.
32. The mother is pressed for time and needs to leave half way through interview.
Potential solution: Reassure the caretaker that you understand that she is busy and request for just a few more minutes of her time to finish the interview. Remind the caretaker that her responses will provide valuable information that can help improve health services in her area. If she insists on leaving, arrange for a time to come back to complete the interview. If she is not available later or if you come back and she is not there, consider her survey incomplete and indicate why on the household register. Select the next eligible household as a replacement. Enumerators should always be up front with caretakers about how long the survey will take to prevent this situation from occurring.

33. The mother you are interviewing is mentally ill, you are uncertain if you are getting valid data from her and she is somewhat uncooperative.

Potential solution: Get as much information as possible from this mother. See if this can be confirmed by someone else in the house. Seek guidance from the local guide on how to manage discussions with the mother. Minimally ascertain whether the child was given the VAS supplement and other campaign services. Do all you can to collect information on that child.

34. The informant is the primary caretaker/mother but did not attend the VAS with the child herself, but rather sent older siblings to the supplementation day

Potential solution: Get as much information as you can from the mother and then ask the older siblings about issues directly relevant to the distribution (how the capsule was given, etc.)

35. All caretakers in the cluster are attending a funeral and it will be done in 5-6 hours.

Potential solution: Call your supervisor and discuss options. If the next cluster is nearby, consider going to the next cluster and returning to complete this one the next day. Alternatively, begin data collection for this cluster later in the day and work through the evening if the area is safe.

APPENDIX 13 - PECS Enumerator Guidelines

Background and Objectives

Vitamin A Supplementation (VAS) is one of the most cost-effective child survival strategies in areas where vitamin A deficiency exists. There is strong evidence to show that in settings where vitamin A deficiency is prevalent, twice-yearly receipt of VAS by at least 80% of children 6-59 months reduces risk of mortality from measles by an average 50%, from diarrhea by an average of 40%, and from all-cause mortality by 24%. Twice-yearly delivery of VAS through integrated events such as Child Health Days is an efficient method of reaching high and equitable coverage of essential child survival services. It is important for programming purposes to understand the coverage of VAS and deworming in Kenya to inform strategies necessary to achieve the 90% WHO recommended coverage.

In June 2012, Helen Keller International conducted a post event coverage survey (PECS) in non-ASAL regions of Kenya in which coverage for VAS and deworming during Child Health Days were 31% and 18% respectively.

Recommendations were then drawn and a pilot program was conducted in Kwale and Mumias sub-counties of Kenya to address some of the barriers identified. The pilot program had many components including demand creation for VAS and deworming through community mobilization, supply chain management, and community health outreach programs including at ECDs. It was also ensured that proper documentation was in place.

It is against this backdrop that a PECS was conducted to evaluate the effectiveness of the interventions implemented during the pilot program in the two sub-counties. The purpose of the PECS is to understand if the interventions contributed towards improving coverage and knowledge of VAS and deworming among caregivers.

The objectives of the survey are to:

- Determine coverage of VAS and deworming during May 2013 Child Health Days
- Identify reasons why children did not receive vitamin A capsules
- Evaluate knowledge of VAS by caretakers and health workers
- Identify opportunities for improving coverage

Survey Teams

Each survey team will consist of one team leader and four enumerators. As an enumerator, you will be collecting essential information about vitamin A supplementation and Child Health Days in Kenya. Specifically, you will be administering questionnaires to mothers of children 6-59 months. The numbers of questionnaires to be administered in each cluster are listed in the following table:

Respondent	Number of Questionnaires	Administered by
Mothers / caretakers	30 per cluster	Enumerators
Nurse or Health worker	1 per cluster	Team Leader
Community Health Worker	1 per cluster	Team Leader

Enumerator Responsibilities

As an enumerator, you have many responsibilities for making sure the survey is conducted properly, which are listed below:

1. Prepare supplies for data collection

Before departing for the field, you should have the following materials:

- Clipboard
- Paper surveys
- Pens
- Plastic envelope for organizing, protecting and carrying questionnaires
- Vitamin A and deworming capsules
- Referral slips
- Introduction letter from the Ministry of Public Health and Sanitation
- Food and water
- Charged personal mobile phone with credit and charger
- Charged Samsung mobile phone and charger for data collection

2. Meet with district officials and village leaders

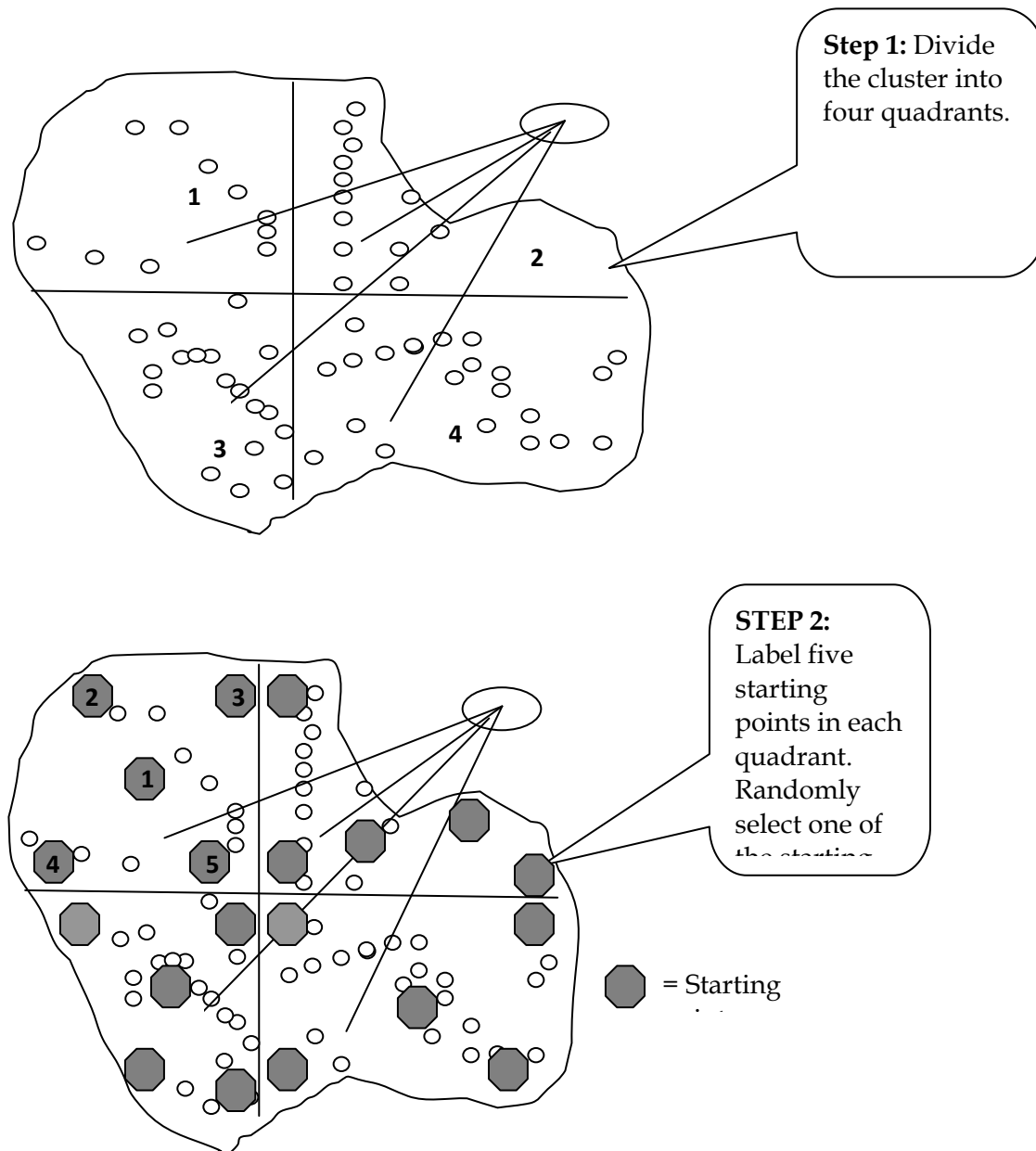
Prior to arriving in the district to be surveyed, your team leader will:

- Contact the District Nutrition Officer (DNO), Public Health Technician (PHT) and/or Community Health Extension Worker (CHEW) to inform them of the date and time of arrival of the survey team and ask if they can accompany the team to serve as a guide and facilitate entry into households.
- Arrange a time and place to meet on the day of the team's arrival.
- Request that they contact the village leader to inform them of the survey and arrange a meeting time.
- Ask if they could also help to arrange a meeting time with the nurse or health worker for the village.
- Request a map of the cluster with main roads, landmarks and boundaries clearly marked, including schools, churches, mosques, rivers and roads.

3. Select households and conduct the survey

Thirty clusters in Kwale & Mumias sub-counties will be selected for the survey. Each cluster will be divided into four quadrants and 7 or 8 households will be surveyed in each quadrant. A total of 30 households will be surveyed in each cluster, for a grand total of 900 households. By surveying households from four different areas in each cluster, a more accurate estimate of coverage will be achieved. A local map will be used to divide clusters into four parts as shown below.

Methodology for selecting households to be surveyed in each cluster:



Step 3: Identify a starting point in each quadrant by writing the 5 possible starting points on pieces of paper (1, 2, 3, 4, and 5), placing these pieces of paper in a hat, sack, or envelope and selecting one for each quadrant. For example, if #2 from Area 1 is selected, the starting point is the upper left corner for that quadrant. A starting point from EACH quadrant is needed, as households will be sampled across all four quadrants

Step 4: Upon arrival at the starting point in a quadrant, the survey team should:

1. Spin a pen on the ground. When the pen stops spinning, look at the direction the tip of the pen is pointing and proceed in that direction.
2. Proceed to the first house in the direction that the pen spun.
3. Determine if a child 6-59 months lives in the household and if their primary caretaker is present. If yes, request permission to conduct the survey. If no, proceed to the next household.
4. After the first household, proceed to nearest next house in the direction that the pen spun and so forth until the target number of surveys is completed. If the boundary of the cluster is reached, spin a pen to determine the direction to proceed in.
5. In each quadrant, a maximum of 8 households and a minimum of 7 households should be sampled.

Instructions for conducting interviews with mothers and caretakers

- In order to make respondents feel more at ease, dress simply and modestly. Use clear and simple language. Seating arrangements should be at the same height. If the mother is sitting on the floor, you should sit on the floor also.
- Make a good first impression by showing respect and being friendly.
- Make sure that the mother you are interviewing is as comfortable as possible.
- Explain where you are from, what you are doing, and how long the interview will take (approximately 30 minutes). Tell the mother or caretaker that her/his input on vitamin A supplementation and health services is important and can help plan future health services and vitamin A supplementation distributions for families in the community.
- Always ask the mother/caretaker for permission before conducting the interview. If a mother or caretaker refuses to be interviewed, you can explain the importance of her participation and try to persuade her. If she still refuses, simply thank her and move on to the next house.
- Do not show your emotions during the interview. Ask the questions from the questionnaire, and do not encourage or discourage the mother or caretaker to answer the questions in a specific way. Do not show your opinions about how the mother or caretaker should answer the question.
- If the respondent cannot understand a particular question, try repeating it slowly. Then, if the mother or caretaker still does not understand, you can provide some explanation.
- Avoid suggesting possible answers to questions. If she doesn't know how to answer a question, try repeating it, give her time to think, and then give a brief explanation. **Do not read from the possible answers on the questionnaire.**
- Know the survey questions well. This will help the interview progress smoothly. Probe the mother and ask the mother for further explanation as needed. Follow the survey systematically – do not skip any questions (unless the questionnaire tells you to skip certain questions according to the mother/caretaker's answers), and read each question exactly as it is written.
- Thank the mother or caretaker at the end of the interview.

Managing the survey forms

Please remember these important points while you are in the field:

1. Before you begin an interview, enter your enumerator name and survey number in the respective locations.
2. Record the answers to questions carefully and confirm that you entered the right response before proceeding to the next question.
3. When you finish the interview, check the form for missing answers and for accuracy. Are there any questions that you forgot to answer? Do the responses that you recorded match what the caretaker said?
4. Check to make sure that all applicable questions have been completed. If you miss one or are unsure if you entered the right response, go back to the house and get an answer before leaving the village.
5. Adhere to the questionnaire carefully and ask questions as they are written in the questionnaire. As much as possible, **do not rephrase or use your own language, when asking questions for the survey.**
6. If you are feeling uncertain about how to ask any particular question or you have questions about the survey questionnaires, talk with your Team Leader as soon as possible.
7. Talk with your team leader about any problems or inconsistencies with the survey forms

You must adhere to the deadlines in the schedule provided. Please plan carefully to meet the required submission times. We encourage you to complete data collection as efficiently and thoroughly as possible.

Selecting households in urban areas with apartment buildings

In cases where data is collected from an urban area with apartment buildings, one household should be surveyed in each building visited. The quadrant methodology and selection of one of five starting points in each quadrant should be followed as described above. If an apartment building is visited, randomly choose a floor, number the households on that floor and then randomly choose a household. If there are no eligible children or no caretaker present in that household, the nearest apartment on that floor should be visited. After completing one interview, continue to the next building or household in the direction the pen spun.

Guidelines for using Ona

When using Ona for data collection, it is very important to ensure that the correct response is selected, as it is easy to mistakenly select the wrong response. Always confirm that the response entered is correct before proceeding to the next question.

Care of the mobile phone

Each enumerator is responsible for the phone(s) assigned to them while in the field. Care should be taken to protect the phones against rain and any other wear and tear. Remember, this is where all of the data collected for your surveys will be stored.

Conducting the surveys

Always ensure that your phone is in a flight mode. The power consumption of Android phones is high. If you leave the phone in a general (normal) mode there are a lot of applications running in the background that will drain the battery.

Answering a GPS question

When you are nearing to the household to be surveyed, ensure that the GPS is turned on so that the phone can access the coordinates of your location.

Saving the survey

After you've completed a survey, save the survey and make sure the box to mark the form as finalized is checked.

Survey Comparison:

Ask the respondent to give you a few minutes to confirm that your responses are entered correctly and match with the paper survey. Go question by question through the entire survey and ensure that all questions have been answered correctly. In case you find a mismatch or a missing response, this is your chance to clarify with the respondent.

Finally thank the respondent for cooperating to participate in the survey before heading to the next household.

Data submission:

Data is to be submitted after it has been reviewed by the team leader.

What are the most common errors in data collection?

- Forms that are not marked as complete
- Incomplete text answers
- Incorrect dates or cluster names
- GPS coordinates that have not been recorded
- Text answers are difficult to interpret (use quotations when citing respondents)

APPENDIX 14 - PECS Team Leader Guidelines

Background and Objectives

Vitamin A Supplementation (VAS) is one of the most cost-effective child survival strategies in areas where vitamin A deficiency exists. There is strong evidence to show that in settings where vitamin A deficiency is prevalent, twice-yearly receipt of VAS by at least 80% of children 6-59 months reduces risk of mortality from measles by an average 50%, from diarrhea by an average of 40%, and from all-cause mortality by 24%. Twice-yearly delivery of VAS through integrated events such as Child Health Days is an efficient method of reaching high and equitable coverage of essential child survival services. It is important for programming purposes to understand the coverage of VAS and deworming in Kenya to inform strategies necessary to achieve the 90% WHO recommended coverage.

In June 2012, Helen Keller International conducted a post event coverage survey (PECS) in non-ASAL regions of Kenya in which coverage for VAS and deworming during Child Health Days were 31% and 18% respectively.

Recommendations were then drawn and a pilot program was conducted in Kwale and Mumias sub-counties of Kenya to address some of the barriers identified. The pilot program had many components including demand creation for VAS and deworming through community mobilization, supply chain management, and community health outreach programs including at ECDs. It was also ensured that proper documentation was in place.

It is against this backdrop that a PECS was conducted to evaluate the effectiveness of the interventions implemented during the pilot program in the two sub-counties. The purpose of the PECS is to understand if the interventions contributed towards improving coverage and knowledge of VAS and deworming among caregivers.

The objectives of the survey are to:

- Determine coverage of VAS and deworming during May 2013 Child Health Days
- Identify reasons why children did not receive vitamin A capsules
- Evaluate knowledge of VAS by caretakers and health workers
- Identify opportunities for improving coverage

Survey Team Supervision

As team leader, you play a very important role in collecting information about Child Health Days and vitamin A supplementation. Your role is to oversee the work of four interviewers who will be administering questionnaires to mothers/caretakers of children 6-59 months of age, and to administer questionnaires to health workers, nurses, and community health workers.

Respondent	Number of Questionnaires	Administered by
Mothers / caretakers	30 per cluster	Enumerators
Nurse or Health worker	1 per cluster	Team Leader
Community Health Worker	1 per cluster	Team Leader

Team Leader Responsibilities

As team leader, you have many responsibilities for making sure the survey is conducted properly, which are listed below:

1. Prepare supplies for data collection

Before departing for the field, each team should have the following materials:

- Fully charged phones
- Paper surveys
- Clipboards for all team members
- Pens
- Referral slips
- Payment receipt forms if payments are to be made to village guides or health officials
- List of clusters
- Maps
- Plastic envelopes for organizing, protecting and carrying questionnaires
- Extra vitamin A and deworming capsules
- Introduction letter from the Ministry of Public Health and Sanitation
- Food and water
- Money for food and lodging
- Enough fuel and a car in good condition

2. Facility entry into the survey district

Before arriving at the district:

- Contact the District Nutrition Officer (DNO), Public Health Technician (PHT) and/or Community Health Extension Worker (CHEW) to inform them of the date and time of arrival of the survey team and ask if they can accompany the team to serve as a guide and facilitate entry into households.
- Arrange a time and place to meet on the day of the team's arrival.
- Request that they contact the village leader to inform them of the survey and arrange a meeting time.
- Ask if they could also help to arrange a meeting time with the nurse or health worker for the village.
- Request a map of the cluster with main roads, landmarks and boundaries clearly marked, including schools, churches, mosques, rivers and roads.

3. Set logistics for data collection

- Establish the timeline for survey completion with the team. The recommended start time each day is 7 am.
- Review the map of the cluster and ensure there is adequate detail. Confirm the location of landmarks and boundaries.
- Divide the cluster into four quadrants, identify five starting points in each quadrant, and randomly select a starting point in each quadrant.
- Set meeting places for the team to regroup upon completion of the cluster.
- Provide instructions for requesting assistance if needed.

4. Ensure the safety of your survey team

- Arrange for all team members to sleep in one place
- Ask the DNO, PHT, CHEW and/or health worker if there are any safety concerns for the area
- Arrange a call system in case of emergency.

See that the survey team members:

- Avoid discussing politics
- Dress appropriately – including long skirts for women in rural areas
- Do not travel alone. Everyone should be in pairs.
- Let you know if they are going somewhere.
- Inform you immediately if someone is missing.

5. Ensure the quality of completed surveys

Ensure the answers match the responses from the mother.

- Observe at least one caretaker survey per day for each enumerator and watch as enumerators enter each response to ensure the correct responses are entered.
- Ensure that each enumerator has completed the required number of surveys and that 30 surveys have been completed in each cluster.
- Discuss with the enumerators any problems or questions with their written answers or missing information on the questionnaires.
- Send the interviewer back to the house if there are problems with the form or missing information that must be resolved with the mother or caretaker.

** All survey forms on Ona should be reviewed by enumerators before leaving the survey location. **

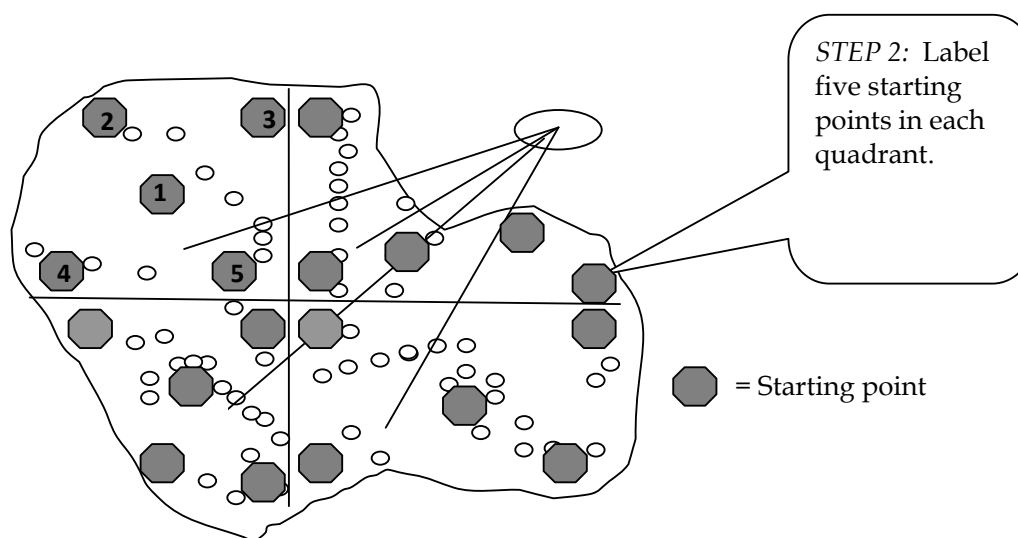
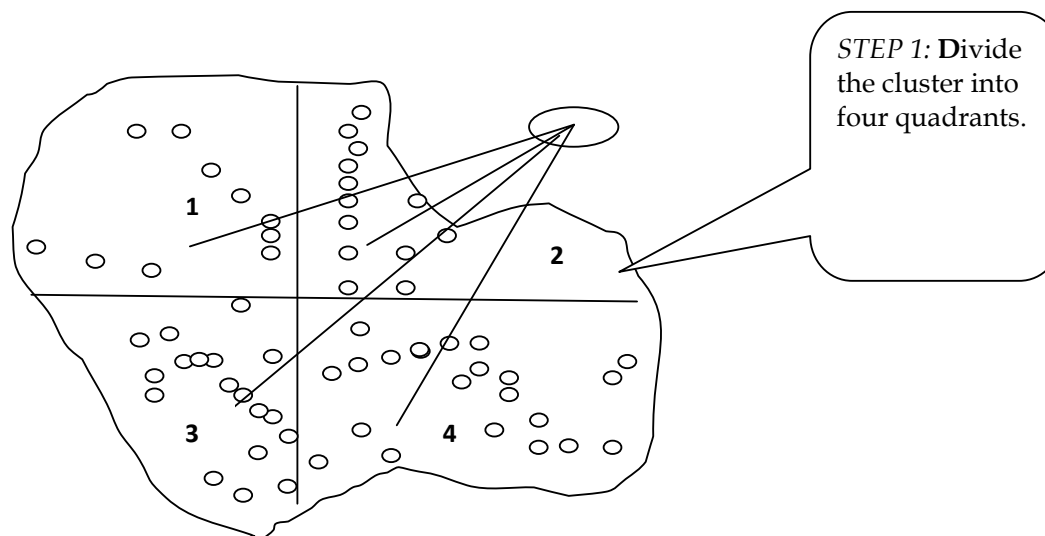
6. Conduct a debriefing with the survey team daily and at the end of the survey.

Discuss and troubleshoot:

- Challenges
- Successes
- Lessons learned

7. Household Selection

Thirty clusters in Kwale & Mumias sub-counties will be randomly selected using probability proportionate to size (PPS) sampling. The source of population data will be the 2009 Kenya National Census. A total of 30 households will be surveyed in each cluster, for a grand total of 900 households. By surveying households from four different areas in each cluster, a more accurate estimate of coverage will be achieved. A local map will be used to divide clusters into four parts as shown below.



Step 3: Identify a starting point in each quadrant by writing the 5 possible starting points on pieces of paper (1, 2, 3, 4, and 5), placing these pieces of paper in a hat, sack, or envelope and selecting one for each quadrant. For example, if #2 from Area 1 is selected, the starting point is the upper left corner for that quadrant. A starting point from EACH quadrant is needed, as households will be sampled across all four quadrants

Step 4: Upon arrival at the starting point in a quadrant, the survey team should:

- Spin a pen on the ground. When the pen stops spinning, look at the direction the tip of the pen is pointing and proceed in that direction.
- Proceed to the first house in the direction that the pen spun.
- Determine if a child 6-59 months lives in the household and if their primary caretaker is present. If yes, request permission to conduct the survey. If no, proceed to the next household.
- After the first household, proceed to nearest next house in the direction that the pen spun and so forth until the target number of surveys is completed. If the boundary of the cluster is reached, spin a pen to determine the direction to proceed in. In each quadrant, a maximum of 8 households and a minimum of 7 households should be sampled.

8. Selecting households in urban areas with apartment buildings

In cases where data is collected from an urban area with apartment buildings, one household should be surveyed in each building visited. The quadrant methodology and selection of one of five starting points in each quadrant should be followed as described above. If an apartment building is visited, randomly choose a floor, number the households on that floor and then randomly choose a household. If there are no eligible children or no caretaker present in that household, the nearest apartment on that floor should be visited.

After completing one interview, continue to the next building or household in the direction the pen spun. When conducting surveys in urban areas, survey team should also consider the best way to reach caretakers at home, as many might be working during the day.

9. Administer questionnaires to health workers and community health workers

- Introduce yourself to the health worker or CHW and explain the purpose of the survey
- Obtain consent before conducting the interview
- Be polite and respectful during the interview
- Do not express your opinions or advice during the interview
- Do not influence the interview
- Answer questions or concerns from the health worker
- Pay attention to details
- Record the answers to questions carefully
- Check your work carefully at the end of the interview.

Selecting Nurses/Health Workers:

- Visit the health facility for the village
- Ask for the nurse or health worker(s) who was involved in Child Health Days.
- If there is more than one health worker or nurse who was involved in Child Health Days, select one at random.
- If there is no health facility at the selected site, visit the nearest health facility and conduct the interview

Selecting Community Health Workers:

Visit the health facility for the village:

- Ask for the community health worker(s) who was involved in Child Health Days.
- This information can also be requested from the local health official.

10. Check in with your HKI supervisor daily

Provide an update on the success of the day's interviews, successes and challenges, current location of the team, and travel plans.

- Edgar – 0723 73 16 33

11. Additional Responsibilities

- Arrange travel plans and handle all team logistics, including lodging and meals
- Answer questions and concerns of interviewers
- Serve as a resource for families that may have questions about vitamin A supplementation
- Maintain regular contact with the lead survey supervisor
- Manage all survey expenses incurred by the team
- Provide encouragement and have a positive attitude
- Ensure the safety of the team
- Understand the importance of gathering accurate information
- Pay attention to details
- Adhere to the survey schedule

Team leader's role when using phones for data collection

- As team leader, you will be ultimately responsible for all phones provided to your team. Make sure that during distribution, enumerators sign against their names to accept responsibility for the phones while in the field.
- Review all completed survey forms and check for completeness, errors during data entry, and whether the surveys have been checked as finalized before sending it to the server.
- Ensure that 30 completed surveys are submitted for each cluster.
- Ensure that enumerators charge their phones each night and have a fully charged battery on their phones each morning when beginning survey work.
- Address any kind of question or problem that might be encountered in the field concerning mobile data collection. If the problem is beyond your ability, contact the appropriate technical person who will then assist you.
- Remind enumerators that they should always be working on a flight mode to conserve the phone's battery.
- In case network access is not available, back up data to ensure that survey data is not lost.

APPENDIX 15 - Sample PECS Questionnaire

Mother/Caretaker Questionnaire

Hello. Good morning/afternoon/day. My name is _____ and I am from Helen Keller International. We are working with the Ministry of Health to do research on health services in your community, specifically Vitamin A supplementation, provided to children. We would like to speak to the mother/caretaker of children under 5 in this household. We would like to ask you a few questions about these health services and vitamin A supplementation. These questions should only take a short period of time (25 - 30 minutes). You do not have to participate and/or can stop the interview at any time. There are no risks to you for answering these questions and your name will not be used in any reports or findings shared. By participating you will be providing valuable information to us on how to improve VAS programming in your area and make sure that more children are protected. Are there any children between the ages of 6 months and 5 years in the household? Is the mother or primary caretaker of these children available? Would you like to participate? Yes ____ No ____

This section is to be filled PRIOR to data collection

Unique ID		Code	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
			d	d	m	m	y	y	y	y			
Date of interview			<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	2	0	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Interviewer's Name and Initials	_____		<input type="text"/>	<input type="text"/>									
State	_____		<input type="text"/>	<input type="text"/>									
LGA	_____		<input type="text"/>	<input type="text"/>									
Ward	_____		<input type="text"/>	<input type="text"/>									
Village	_____		<input type="text"/>	<input type="text"/>									
			d	d	m	m	y	y	y	y			
Start Date of Last MNCH Week			<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	2	0	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Type of Area		Non Rural ---1	<input type="checkbox"/>										
		Rural --- 2	<input type="checkbox"/>										

If there is more than one child between the age of 6-59 months in the household, write down each name on a slip of paper and put them in a basket. Mix the papers well. Then ask the mother/caretaker to select a slip of paper to determine which child will be the focus of the interview (index child). **Ensure the informant is the primary caretaker of the child selected.**

Section A: Child information

Question	Response	Code									
<i>We will now ask you questions about the selected child (INSTRUCTION: Tick as appropriate)</i>											
1 What is the sex of the child?	Male--1	<input type="checkbox"/>									
	Female--2	<input type="checkbox"/>									
2 What is your relationship to the child mentioned above?	Mother--1	<input type="checkbox"/>									
	Father--2	<input type="checkbox"/>									
	Grandmother/ Grandfather--3	<input type="checkbox"/>									
	Aunt/Uncle--4	<input type="checkbox"/>									
	Sibling (Brother/Sister)--5	<input type="checkbox"/>									
	Other, specify--9	<input type="text"/>									
3 Do you have a birth certificate or child health card for this child? (May I see it?)	No-- 0	<input type="checkbox"/>									
	Yes--1	<input type="checkbox"/>									
3a If no, do you know the DOB?	No-- 0	<input type="checkbox"/>									
	Yes--1	<input type="checkbox"/>									
3b What is the date of birth of this child?	<i>If a field is unknown, enter "88"</i>										
		d d m m y y y y									
		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	2	0	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Confirm the age of the child from the birth certificate/ health card. If child was NOT 6-59 months during the last MNCHW, randomly pick another child from the same house, and go back to Question 1. If there is no other child, proceed to the next household.

4 Has this child received his/her routine measles vaccine?

No--0

Yes--1

I don't know--8

4a When did this child receive the measles vaccine?

If a field is unknown, enter "88"

d	d	m	m	y	y	y	y
				2	0		

4b If no, why not?

Not yet 9 months of age--1

Did not take the child to the clinic--2

Did not know child needed it--3

It was not in stock at the health center--4

Was traveling--5

My husband/family does not want it--6

Other (specify)--9

Section B: Maternal Newborn and Child Health Week (MNCHW)

5 Was there a Maternal Newborn and Child Health Weeks (MNCHW) / Vitamin A

No--0 >> Skip to q 7

Yes--1

I don't know--2 >> Skip to q 7

6 Who should attend MNCHW events?

Everyone--1

All children--2

Children 6-59 months--3

Women of reproductive age--4

Don't know--88

Other (specify)--99

7 Where did the MNCHW distribution take place?

Homes/door-to-door--1

Health facility/hospital--2

Outreach post--3

School--4

Don't know--88

Other--99

8 What services were provided during the last MNCHW?

LLIN / Bednets--1

Deworming--2

Vitamin A capsules--3

Immunizations--4

Family planning advice--5

Growth monitoring--6

Oral rehydration salts--7

Health Education --8

Other,specify--9

Tick all that apply

9 Did your child receive a deworming tablet like this during the last MNCHW (in the last 2 months)? (Show tablet)

No--0

Yes--1

Don't know--8

10 Did your child receive a Vitamin A capsule like this during the last MNCHW (in the last 2 months)? (Show capsules)

No - 0	<input type="checkbox"/>	>> Skip to q 14
Yes - 1	<input type="checkbox"/>	
I don't know--8	<input type="checkbox"/>	>> Skip to q 15

11 Where did the child receive the Vitamin A capsule?

General hospital--1	<input type="checkbox"/>
Primary Health Center--2	<input type="checkbox"/>
Temporary/mobile health post--3	<input type="checkbox"/>
Home via door to door distribution---4	<input type="checkbox"/>
School---5	<input type="checkbox"/>
Church ---5	<input type="checkbox"/>
Other, specify---9	<input type="checkbox"/>

12 How was the Vitamin A capsule given to the child?

Swallowed whole with water---1	<input type="checkbox"/>
Opened with scissors and squeezed into mouth---2	<input type="checkbox"/>
Open with razor blade and squeezed into mouth---3	<input type="checkbox"/>
Handed out to be taken at another time--4	<input type="checkbox"/>
Opened with teeth and squeezed into mouth---5	<input type="checkbox"/>
Don't remember/ Don't know--8	<input type="checkbox"/>
Other, specify--9	<input type="checkbox"/>

PROBE / GUIDE

13a How did you find out about the MNCHW / VAS campaign?

Poster--01	<input type="checkbox"/>
Newspaper--02	<input type="checkbox"/>
TV--03	<input type="checkbox"/>
Radio--04	<input type="checkbox"/>
Other mothers/ word of mouth--05	<input type="checkbox"/>
Health Worker/Community Health Extension Worker---06	<input type="checkbox"/>
In my child's school---07	<input type="checkbox"/>
Religious leaders--08	<input type="checkbox"/>
Community leaders--09	<input type="checkbox"/>
Town Announcer/Roaming vehicles with loudspeakers--10	<input type="checkbox"/>
Don't remember--88	<input type="checkbox"/>
Other (specify)---99	<input type="checkbox"/>

Tick all that apply

13b Did you get information about MNCH/VAS campaign through these means of communication?

Poster--01	<input type="checkbox"/>
Newspaper--02	<input type="checkbox"/>
TV--03	<input type="checkbox"/>
Radio--04	<input type="checkbox"/>
Other mothers/ word of mouth--05	<input type="checkbox"/>
Health Worker/Community Health Extension Worker---06	<input type="checkbox"/>
In my child's school---07	<input type="checkbox"/>
Religious leaders--08	<input type="checkbox"/>
Community leaders--09	<input type="checkbox"/>
Town Announcer/Roaming vehicles with loudspeakers--10	<input type="checkbox"/>
Don't remember--88	<input type="checkbox"/>
Other (specify)---99	<input type="checkbox"/>

Tick all that apply

ONLY for caretakers whose children DID NOT attend MNCHW (Tick as appropriate)

14 What was the **main** reason this child did not get a vitamin A capsule during the last MNCHW (in the last 2months)? Tick only one option)

- Have not heard of MNCHW--01
- There was no MNCHW event in our area--02
- Health facility ran out of capsules--03
- Journey was too far--04
- Journey was too expensive--05
- Too much work at home--06
- Child was ill--07
- Didn't want child to take vitamin A--08
- Child was out of the area--09
- No one available to take child--10
- Family decision maker refused to allow child to come--11
- Don't remember/ Don't know--88
- Other (specify)--99

Section C: Knowledge of Vitamin A - FOR ALL CARETAKERS

15 Have you ever heard of vitamin A?

- No--0
- Yes--1

>> **Skip to q 20**

16 How did you hear about Vitamin A?

- Poster--01
- Newspaper--02
- TV--03
- Radio--04
- Other mothers/ word of mouth--05
- Health Worker/Community Health Extension Worker--06
- In my child's school--07
- Religious leaders--08
- Community leaders--09
- Town Announcer/Roaming vehicles with loudspeakers--10
- Don't remember--88
- Other (specify)--99

Tick all that apply

17 What are the benefits of Vitamin A? (check all that are mentioned)

- Prevents blindness/helps vision--1
- Protects against disease--2
- Reduces risk of death--3
- Improves child health--4
- Helps with growth--5
- Increases appetite--6
- Don't know/ Don't remember--8
- Others, specify all--9

Tick all that apply

18 At what age should children receive a vitamin A capsule for the first time?

- At birth--1
- 6 months--2
- 9 months--3
- Don't know--8
- Other, specify--9

19 How often should children age 6-59 months receive a vitamin A capsule?

- During each MNCHW--1
- Every 6 months (2 times/year)--2
- Every day--3
- Don't know--8
- Other, specify--9

Section D: Caregiver Information - FOR ALL CARETAKERS (Tick as appropriate)

20 What is your age? years

21 Are you married?
 No--0
 Yes--1

22 What is your religion?
 Muslim--1
 Christian--2
 Traditional--3
 No Religion -- 4
 Other, specify--9

23 What is the highest level of schooling you have received?
 None---0
 Primary education---1
 Secondary education---2
 University education---3
 Post graduate education---4
 Other, specify--9

24 What is your primary source of income?
 Farmer---1
 Trader / Business---2
 Civil Servant---3
 Artisan---4
 Unemployed/Stay at home -- 6
 Other, specify---9

25 What is the main source of drinking water for this household?
 Private pipe/tap--1
 Public tap/pipe--2
 Well/Bore Hole--3
 River, lake--4
 Pond---5
 Other, specify--9

26 What type of toilet do you have / use in your home?
 Pit Latrine--1
 Bush--2
 River--3
 Water closet / system--4
 VIP Latrine--5
 Other, specify--9

27 What is your primary source of cooking fuel?
 Electricity--1
 Gas--2
 Kerosine--3
 Firewood--4
 Charcoal--5
 Other, specify--9

28 Do you or anyone in your household own a working cell phone?
 No--0
 Yes--1

29 Is there a working radio in your household

No--0	<input type="checkbox"/>
Yes--1	<input type="checkbox"/>

30 Is there a working television in your household?

No--0	<input type="checkbox"/>
Yes--1	<input type="checkbox"/>

31 For what reasons do you take your child to the health facility?

Have never taken the child to a health facility--0	<input type="checkbox"/>
Routine visits/ checkups/growth monitoring--1	<input type="checkbox"/>
Vaccinations--2	<input type="checkbox"/>
For treatment when sick--3	<input type="checkbox"/>
Other, specify--9	<input type="checkbox"/>

Tick all that apply

32 How do you usually learn about health-related campaigns and services?

Poster--01	<input type="checkbox"/>
Newspaper--02	<input type="checkbox"/>
TV--03	<input type="checkbox"/>
Radio--04	<input type="checkbox"/>
Other mothers/ word of mouth--05	<input type="checkbox"/>
Health Worker/Community Health Extension Worker---06	<input type="checkbox"/>
In my child's school---07	<input type="checkbox"/>
Religious leaders--08	<input type="checkbox"/>
Community leaders--09	<input type="checkbox"/>
Town Announcer/Roaming vehicles with loudspeakers--10	<input type="checkbox"/>
Don't remember--88	<input type="checkbox"/>
Other, specify---99	<input type="checkbox"/>

Tick all that apply

Additional comments about MNCHW or vitamin A supplementation to share with national level partners:

End of Interview: THANK YOU FOR YOUR COOPERATION AND YOUR TIME

APPENDIX 16 - Enumerator and Team Leader Survey Evaluation

Malezi Bora Post Event Coverage Survey Evaluation

Instructions: Please rate your satisfaction with the following aspects of the survey. Comments and feedback are appreciated.

Number of people on your team:

Very Dissatisfied

Very Satisfied

1-----2-----3-----4-----5-----6-----7-----8-----9-----10

Comments:

Number of days of the survey:

Very Dissatisfied

Very Satisfied

1-----2-----3-----4-----5-----6-----7-----8-----9-----10

Comments:

Number of households you had to survey per day:

Very Dissatisfied

Very Satisfied

1-----2-----3-----4-----5-----6-----7-----8-----9-----10

Comments:

Amount of time to complete each cluster:

Very Dissatisfied

Very Satisfied

1-----2-----3-----4-----5-----6-----7-----8-----9-----10

Comments:

Vehicle used for transport:

Very Dissatisfied

Very Satisfied

1-----2-----3-----4-----5-----6-----7-----8-----9-----10

Comments:

Driver:

Very Dissatisfied

Very Satisfied

1-----2-----3-----4-----5-----6-----7-----8-----9-----10

Comments:

Team leader:

Very Dissatisfied

Very Satisfied

1-----2-----3-----4-----5-----6-----7-----8-----9-----10

Comments:

Food:

Very Dissatisfied

Very Satisfied

1-----2-----3-----4-----5-----6-----7-----8-----9-----10

Comments:

Hotels:

Very Dissatisfied

Very Satisfied

1-----2-----3-----4-----5-----6-----7-----8-----9-----10

Comments:

Are there certain questions on the survey that you would add, remove, or modify for future surveys? Which questions? What would you change?

What did you learn about Malezi Bora and vitamin A supplementation in Kenya?

Is there anything that you feel should have been included in the training?

Is there anything else about the survey that you would like to share?