Child Survival XVI Mozambique

Final Knowledge, Practices and Coverage (KPC) Report

The Strength Project

Nacala A Velha and Memba Districts
Nampula Province, Mozambique

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Acronyms/Translations

Activista	Community health volunteer
ANC	Antenatal Care
APE	Agente Polivalente Elementar (community curative care health worker – volunteer, trained by the MOH)
ARI	Acute Respiratory Infections
BCG	Tuberculosis vaccine
Cabo	Traditional leader, one level below *régulo*
Capitão	Traditional leader, one level below *cabo*
Capulana	Cloth used traditionally as clothing or covering
CS	Child Survival
DHO	District Health Office
DIP	Detailed Implementation Plan
DPT	Diptheria, Pertusis and Tetanus
EPI	Extended Program of Immunization
FP	Family Planning
HAF	Home Available Fluids
HFA	Health Facility Assessment
IMCI	Integrated Management of Childhood Illnesses
KPC	Knowledge, Practices and Coverage
MOH	Ministry of Health
OPV	Oral Polio Vaccine
ORS	Oral Rehdration Solution
ORT	Oral Rehydration Therapy
PHO	Provincial Health Office
Regulado	Domain of Régulo. Memba has 33 regulados.
Régulo	Traditional leader
SC/US	Save the Children Federation, Inc.
TBA	Traditional Birth Attendant
TH	Traditional Healer
USAID	United States Agency for International Development/Washington

EXECUTIVE SUMMARY

Breastfeeding:

- 17% of women with children <1 month old are exclusively breastfeeding.
- 90% of women are still breastfeeding their children 20-23 months of age.

Immunization and Vitamin A:

- 66% of children aged 6 – 23 months had a vitamin-A supplement in the last 6 months.
- 56% of children aged 12 – 23 months had complete vaccination coverage.
- Drop out rate for Diptheria, Pertusis and Tetanus (DPT) is 20% and Drop out rate for Oral Polio Vaccine (OPV) is 19%.

Diarrhea Case Management:

- 52% of mothers currently treat diarrhea with oral rehydration therapy (ORT), including home available fluids.
- 33% of mothers don't treat diarrhea with either oral rehydration solution (ORS), home availiable fluids (HAF), or increased fluids of any kind.

Respiratory Illness:

- 16% of mothers currently don't seek treatment for a cough with rapid and difficult breathing.
- 66% of mothers said they would seek treatment at a health facility.
- The summary of the figures showed that 44% of mothers would seek treatment only from a health facility.
- The summary of the figures showed that 23% of mothers would seek treatment from a health facility and in the community.

Maternal Health/Family Planning:

- 83% of women had at least two prenatal contacts in their last pregnancy.
- 61% of women had a delivery assisted by Ministry of Health (MOH)-trained personnel (includes trained traditional birth attedants (TBAs).
- 16% of women not currently pregnant and not wanting children in the next two years are using a modern family planning method (the pill, condom, injections).

Access to Health Information:

- 51% of women received health information from activistas in the previous month.
- 44% of women received health information from the radio.
- 36% of women received health information from an elementary midwife
- 23% of women received health information from a regulo
- 14% of women received health information from the church or mosque.

I. INTRODUCTION

1. Project Description

The CS-16 Project managed by Save the Children Federation, Inc. (SC/US) with funding from the United States Agency for International Development (USAID), operated in the Districts of Nacala-a-Velha, Memba, Monapo, and Nacala-Porto, Nampula Province, Mozambique (Appendix I). Project activities started in October 2000, when preparation began for the baseline knowledge, practice, and coverage (KPC) survey. The three-year project goal was to sustainably reduce under-five mortality and maternal mortality in the two (Memba and Nacala-a-Velha) health districts through achieving the following results:

- Improve the capability of the health districts to implement CS approaches and support community structures;
- Improve the capability of communities to identify and respond to their health needs;
- Increase use of key health services and improve CS practices at the household level;
- Increase the capability of SC to achieve large scale innovative CS programs in the Southern Africa setting; and
- Inform Nampula Provincial Health Office of innovative CS strategies.

2. KPC Survey

The KPC survey, designed in 1993 by the John Hopkins University Child Survival Program and updated for 2000, has as its primary goal the assessment of levels of health knowledge and practices of mothers of young children. For CS-16, The Strength Project, this is a preliminary survey. The results obtained from the survey will be used in evaluating the current situation in terms of mother and child health in the Memba District and together with results from the 2000 KPC in Nacala-a-Velha, will be used in planning the indicators to be used in the project, and to plan project priorities.

II. METHODOLOGY:

1. Sample Size:

The formula based on the WHO standard methodology for quick EPI coverage surveys was used to calculate sample size:

$$n = z^2 \ ((p \times q)/d^2)$$

where the estimated level or prevalence of general knowledge (p) is 0.5, q = 1-p, the desired precision (d) is 0.08 and the statistical certainty (z) is 1.96 (i.e. we aim to be 95% sure that the value we find is not more than +/- 8% different from the actual value in the population, assuming an estimated

prevalence of 50%[1]). The resulting sample size n=150 was doubled to 300 taking into account the design effect of cluster sampling. Additional interviews were conducted to ensure a minimum of ten complete interviews per cluster. The total number of interviews considered in the analysis is 360.

2. Sampling Frame:

A two-stage cluster sampling method was used to select the 30 communities visited in Memba and Nacala Velha for the final evaluation. A list of communities were made, based on most recent District Administration Data which is from the census in 1997 and gave the total district population of the communities included in the list. (Communities with access and more than 50 inhabitants) for Memba as 190.284 and for Nacala Velha as 83.990. With population data available per Regulado. District administration and SC staff listed numbers of Cabos (communities) within each regulo, SC staff and community people gave the names of these cabos (communities), augmenting in cases where there were more cabos (communities) recognized by the community members than listed by the Administration. Since there were population data for regulados, but not at the cabo (community) level, SC assumed equal population within each cabo (community) for a regulado, and based on the list from KPC 2000, prepared a list of all cabos (communities) in Memba and Nacala Velha respectively. SC staff revised the list from 2000, leaving out communities without access, (one in Nacala a Velha and three in Memba),communities which no longer exist and communities with less than 50 inhabitants. The total population size of each district was given by adding population size of all communities from the revised list of communities.

Since the population size of Memba is roughly twice the size of Nacala Velha it was decided to do a proportionately larger sample size in Memba than in Nacala Velha. The sample size in each community was based on adding the total population size from each district. To find out the proportion from each district, the population size of each district was divided by the total population size of both districts which gave the total percentage of population between the districts. Hence the population of Memba is 68% of the total population and Nacala Velha has 32% of the total population. Thus, out of 30 communities 32% will be in Nacala Velha and 68% will be from Memba. Since 32% of 30 is 10 and 68% of 30 is 20, 10 clusters were selected in Nacala Velha and 20 clusters were selected in Memba.

A total of 12 interviews are carried out in each cluster/community which makes a total of 360 interviews. Since twice as many communities were chosen in Memba as in Nacala Velha, 240 of the interviews were carried out in Memba and 120 interviews were carried out in Nacala Velha (Twice as many communities and twice as many interviews).

To select the communities visited, a random number of 3967 was chosen for Nacala a Velha and 6582 was chosen for Memba (the numbers were found using “Rand Between” in Excel). To find the sampling interval, the total

[1] 50% is chosen because it gives the greatest sample size, accounting for the most error.

population of each community was divided by the number of communities to be visited in that particular district.

Nacala a Velha = Total population Divided by 10
Memba= Total population Divided by 20

Hence,

Nacala a Velha total population; 83.990. Random number; 3967.
83990: 10= 8399; Sampling Interval (k)

Memba total population; 190.284. Random number; 6582.
190.284: 20= 9514; Sampling Interval (k)

Based on the two Sample Interval numbers the communities were selected starting with the random number and adding the interval number. From a row of accumulative numbers starting with the average population size of the first community on the list, the number which includes the random number is the first community, the second community is the community with the accumulative number which includes the random number plus the interval number and so forth, until the correct number of communities were found (20 and 10 respectively).

3. Survey Questionnaire

The survey questionnaire was based on the Johns Hopkins' KPC 2000 survey. The Memba and Nacala Velha survey totaled 61 questions covering twelve topics:

1)	Respondent's background characteristics (3)
2)	Child nutrition and breastfeeding (6)
3)	Immunization (4)
4)	IMCI (1)
5)	Diarrheal diseases (9)
6)	Respiratory illness (3)
7)	Malaria (7)
8)	Prenatal care (9)
9)	Delivery (5)
10)	Postpartum care (5)
11)	Child spacing (6)
12)	Sources of health information (3)

The interviews averaged between 45 minutes and 1 hour 15 minutes in length. The KPC survey questionnaire was translated from Portuguese into Macua by SC staff and the KPC team, for the KPC 2000. Questions are all written only in Macua; responses are written on the form in Portuguese[2] (Appendix, Surveys in English, Portuguese and Macua).

[2] Macua is the spoken language of Nampula Province, but Portuguese is the more common written language. Therefore, the decision was made to write questions in Macua, so that they would be spoken exactly as read, but put the responses in the more commonly read language, to reduce error.

4. Project Indicators:

The project indicators as written in the CS-16 DIP measured by the KPC are as follows:

Objectives	Principal Indicators for CS-16 proposal	Numer-ator	Deno minato r	Percen t	Confidenc e Limits[3]
Pneumonia					
Improved care-seeking behavior in suspected cases of pneumonia	85% of mothers with children < 24 months with cough and difficult/rapid breathing in previous two weeks sought care from a health facility. (64%N, 73%M)	127	191	66	+/- .08
Diarrhea					
Improved home care of diarrhea cases	80% of mothers with children < 24 months with diarrhea in previous two weeks who managed the diarrhea with ORT (ORS or community-based oral rehydration fluids such as watery porridge) (66%N, 67%M)	160	199	80	+/- .09
Malaria					
Improved care-seeking behavior in cases of suspected malaria	80% of mothers with children < 24 months with fever in previous two weeks sought care within 48 hours (57%N, 66%M)	86	129	67	+/- .10
Vaccinations					
Improved immunization coverage in children aged from 0 – 4 years old	55% of children age 12-23 months fully immunized by age 12 months (BCG, DPT1-DPT3, Polio0-Polio3 and measles vaccinations by 12 months of age) (32%N, 34%M)	70	126	55.6	+/- .10

[3] Assuming the design effect is 2. This is a conservative estimate as the true design effect is often less than 2.

Objectives	Principal Indicators for CS-16 proposal	Numer-ator	Deno minato r	Percen t	Confidenc e Limits[3]
Child Spacing					
Increased usage of modern methods of child spacing	25% of mothers with children < 24 months old, who do not desire to have a child in the next two years will use a modern family planning method. (18%N, 15%M)	22	137	16	+/- .08
Increased knowledge of modern methods of contraceptives among women	50% of women with children < 24 months old will know at least two modern methods for child spacing (25%N, 37%M)	226	360	63	+/- .07
Mother and Newborn Child Care					
Improved use of antenatal care services	85% of women had at least two antenatal care (ANC) visit with trained health personnel during their last pregnancy (77%N, 74%M)	300	360	83	+/- .06
Improved immunization coverage for pregnant women	80% of women with children < 24 mo. old received two doses of tetanus toxoid during their last pregnancy (30%N, 62%M)	264	360	73	+/- .06
Increased use of trained maternity providers	50% of women attended by trained personnel[4] during their last delivery (34%N, 38%M)	220	360	61	+/- .07
Improved home planning for	10% of women had birth plans (3 of 5 components as defined in the KPC)	7 (201/36	360	1.9% (55.8%	+/- .05

[4] Trained personnel include nurses, doctors and trained TBAs.

Objectives	Principal Indicators for CS-16 proposal	Numer-ator	Deno minato r	Percen t	Confidenc e Limits[3]
obstetrical emergencie s	during their last pregnancy (0%N, 0%M) (who would deliver baby, where delivery would happen, what to do in case of emergency, bought razor blade, saved money for emergency).	0 mention ed at least one)		)	
Increase knowledge of danger signals related to pregnancy	50% (50%) of women aged 15 – 49 years will know at least three danger signs during pregnancy.	127	360	35.3	+/- .07

5. Survey Preparation

When the sample frame was found, all Régulos, Districts and the DPS were informed of the upcoming survey. During the two weeks prior to initiating the survey, the team sent letters to each of the régulos responsible for the communities that were selected for the survey.

The SC survey was based on the survey design of the baseline study KPC.

A six-day training was held in Memba with 28 people participating[5]. The training was carried out with all the participants acting as enumerators. Towards the end of the training period practice interviews were carried out in the nearby community. It was decided to conduct two additional interviews in all communities, in the event that an interview would be invalid because of incomplete responses on the survey form not noted in the field.

It should be noted that since the baseline study was carried out, Hepatitis B has been added to the DPT vaccine (DTP + Hep. B), and new Vaccinations cards have been made which are filled out differently than the former ones. Hence a special training session was carried out teaching the enumerators to fill out the questionnaire correctly. Mothers who were at the Memba hospital to have their children vaccinated lend their authentical vaccination cards to the enumerators who filled out the concerned questions in the questionnaire based on the data on the Vaccination cards. They were guided by supervisors and SC staff.

Six survey teams were formed, each with one supervisor and three enumerators. The survey coordinator and the survey responsible chose six

[5] Ten (10) of whom had participated in at least one KPC survey previously.

supervisors based on previous KPC experience and performance during the training. (Please see Appendix –Survey Teams).

Participants	Supervisors	Enumerators	Eliminated
SC staff	2	2	
Local peopleMemba, Nacala a Velha and Nacala Porto	4	16	8
Total	6	18	8

6. Field Work

The KPC survey team interviewed a total of 360 women from 30 communities in Memba and Nacala a Velha District (20 and 10 communities respectively) for which surveys were used. Survey interviews were conducted between 4th of August and 9th of August 2003. Each team surveyed one community per day.

Six teams of one supervisor and three enumerators were doing 120 interviews in Nacala Velha and 240 interviews in Memba. A total of 72 interviews were carried out each day in order to carry out all interviews in five days, with a sixth day as a buffer in case of unforeseen events. We carried out 12 interviews in each community, in order to have two extra in case some turned out to be invalid.

Thus, 2 teams in Nacala Velha, visited 2 communities a day = 24 interviews, and 4 teams in Memba visited 4 communities a day = 48 interviews (a total of 72 interviews a day for 5 days). Each enumerator carried out 4 interviews a day.

The teams each carried a copy of the letter sent out to each of the régulos which they had signed and sent back to the SC office. After arriving in the community and meeting with the local leader, the survey team asked to be taken to the geographic center of the community. At this point a pen was spun on the ground to determine the direction the survey team would take.

A random number, 2,[6] was used to identify the first house where the team would begin interviewing. Following identification of the first house, the survey team stopped at each subsequent house walking in the direction initially selected until a total of at least twelve mothers was interviewed. In the event the team reached the border of the community before completing the twelve interviews, they would return to the center, spin the pen again and continue surveying in the new direction until the interviews were completed.

Because only one visit was scheduled to each community for collecting data, return visits were not made to houses where children lived but who were not at home at the time the survey team passed. Because of the advance notice given, many mothers were at home.

[6] Chosen by flipping a coin on a piece of paper with the numbers 1-4.

In the event that the mother had two children less than 24 months old, the interview was directed to the younger of the two children. No more than one mother was interviewed per household, and only the birth mother of the child was interviewed.

The interview started with a request to see the child's health card to verify age. If there was no health card, and the mother did not know the birth date of the child, the team used an events calendar to determine the month and year of the child's birth. (Please see Appendix -Events Calendar). In the cases that an exact day of birth was not known, the child's birthday was considered to be the 15th of the month, and was registered as "estimated."

The supervisors identified households for interviews and helped to communicate the purpose of the interviews. The supervisors also ensured the respondent's privacy by asking other family members and friends present to sit apart from the mother being interviewed. Enumerators all carried a sample yellow health card and Vitamin A capsule to help the mother recognize which document the enumerator was requesting and to what vitamin the enumerator was referring.

Each supervisor checked the quality of interviews[7]. He double-checked the information on the health card as recorded by the enumerator, filled in several compilation questions, and reviewed all questionnaires prior to leaving the community. The supervisors met on a daily basis with the survey coordinator and the survey responsible respectively for review of the survey forms and to discuss the fieldwork.

On the first day of the Field Work it turned out that one of the selected communities were inaccessible. The community in question was Nahavarra. Hence, the next community on the list with access was selected which was Nihequehi. The regulo of this community had to be advised, so an "aviso" was sent out, and the interviews were carried out in Nihequehi on the last day (Saturday), which was reserved to problems like this.

7. Data Processing and Analysis:

Three people were hired to enter data from the survey in Excel. One was located in Nacala Velha and two in Memba, during the field work (Appendix-database). The decision to use Excel was based on the ease with which the personnel would be able to learn and use the program as all had previous experience with Excel, but none had used EpiInfo. Also, it was believed that it would be easier to teach local staff to complete follow-up surveys in Excel, a program many staff are using, rather than EpiInfo which no one except the designer had ever used.

Many survey questions have multiple responses resulting in denominators greater than the number of women to whom the question was directed.

[7] On the first day each supervisor observed interviews to monitor quality. Throughout the following days, each supervisor moved between the three enumerators in their group, resolving any problems in the interview process.

Percentage of frequencies for multiple response questions were calculated as absolute percents, based on the number of mothers who responded.

A series of cross-tabulations were set up to analyze correlations among variables; the majority was included in the questionnaire to ease the data analysis.

RESULTS AND DISCUSSION

1. Demographics

Of all the mothers interviewed, 47.2% (170/360) did not know their ages. A breakdown of the ages, both actual and estimated, are shown in the table below:

Age groupings of mothers	% in each age group	Total in age groups
15 – 19	16.1%	58
20 – 24	25.8%	93
25 – 29	29.4%	106
30 – 34	15.2%	55
35 – 39	8.3%	30
40 – 44	3.8%	14
45 – 49	1.1%	4
Total	100.0%	360

The KPC team was taught how to estimate children's ages during the training. Staff estimated 10.8% (39/360) of the children's ages using the events calendar. Mothers of 186 boys and 174 girls were interviewed. Of the 358 children in the survey:

- 24.4% (88/360) were aged 0 – 3 months;
- 11.9% (43/360) were aged 4 – 5 months;
- 28.6% (103/360) were aged 6 – 11 months;
- 29.4% (106/360) were aged 12 – 19 months; and
- 5.5% (20/360) were aged 20 – 23 months.

2. Mother's Education/Occupation

Almost one-half of mothers interviewed (49.1%, 177/360) had attended primary school. A large number, 47.7% (172/360) had never attended school. Ten (2.7%) mothers reported having secondary level education, and only one (0.2%) reported having a higher education than that.

The majority of women (89.4% 322/360) said that they did not work outside the home to earn money. Of the 10.6% (38/360) of mothers who do have income generating activities 3 (3/360 0.86%) make handicrafts 7 (7/360 1.9%) carry out harvesting. 15 sell agricultural products (15/360 4.16%). 9 are street

vendors (9/360 2.5%). One is a domestic maid (1/360 0.27%), two have salary work (2/360 0.55) and one (1/360 0.27%) does some other type of work to earn money (sells wine).

When mothers are away from home they leave their children in the care of one or more of the following: older children (50.5%, 182/360); family members (44.4%, 160/360); husband or father (27.7%, 100/360), a neighbor or friend (2.7%, 10/360). Furthermore, 38.3% (138/360) said they take their child with them.

3. Child Nutrition

Early Breastfeeding

All but one mother surveyed were either breastfeeding or have breastfed their youngest child. After delivery, 52.7% (190/360) of mothers initiated breastfeeding within one hour; 82.8% (298/360) reported breastfeeding within the first eight hours.

Exclusive Breastfeeding

Of the 131 mothers with children <6 months of age, 9.2% (14/155) exclusively breastfeed. Of the 24 children <1 month 23 mothers breastfeed, 16.7% (4/24) exclusively breastfed. Three children over four months old was breastfed exclusively.

Ages of all children in survey who are breastfed exclusively

Age	# breastfed exclusively / total in age group	% of the Total
<1 month	4/24	16.7%
2 – 3 months	5/44	15.9%
4-5 months	3/43	6.8%
Total	12/131	9.2%

General Diet

The following table represents the percentage of children getting a variety of foods. The types of foods which were counted are: energy dense (fats), semi-solid (porridges), animal foods/protein (meats), and fruits and vegetables.

Age group of children	Total in age group	Energy dense AND Semi-solid	Fats AND meats AND Fruits and vegetables	
			# in past 24 hours of each is ≥3	Number in last 24 hours of each is ≥5

		Yes	% Yes	Yes	% Yes	Yes	% Yes
0 - 3	88	1	1.1%	0	0%	0	0%
4 - 5	43	3	6.9%	5	11.6%	5	11.6%
6 - 11	103	32	31%	42	40.8%	22	21.4%
12 - 19	106	35	33%	59	55.6%	33	31.1%
20 - 23	20	7	35%	15	75%	6	30%
Total	360	78	21.6%	121	33.6%	66	18.3%

The table above shows that 31% (32/103) of children aged 6 – 11 months ate energy dense and semi-solid food at least once in the last week.

Few children ate three or more of a combination of fats, meats and fruits/vegetables over the past 24 hours:

- 11.6% (5/43) of children aged 4 – 5 months;
- 40.8% (42/103) of 6 – 11 month old children;
- 55.6% (59/106) of 12 – 19 month old children; and
- 75% (15/20) of 20 – 23 month old children.

Even fewer were likely to have eaten five or more of a combination of fats, meats and fruits/vegetables over the past 24 hours:

- 21.4% (22/103) of 6 – 11 month old children;
- 31.1% (33/106) of 12 – 19 month old children; and
- 30% (6/20) of 20 – 23 month old children.

Children were more likely to have eaten Vitamin A-rich fruit than vegetables:

- 35.3% (127/360) of the children had Vitamin A-rich fruits in the past week. 11.6% had them at least three times last week.
- 12.5%((45/360) of the children had Vitamin A-rich vegetables in the past week and 2.2 % (8/360)had them at least three times last week.

Legumes/nuts:

- 40.2% (145/360) of the children ate legumes or nuts in the past week, 31.3% (113/3607) ate them at least twice a week and 25.5% (92/360) ate them at least 3 times last week.

Save the Children recommends adding fat to children's diets to help them gain weight. A third of mothers are doing this.

- 32% (33/103) of children 6-11 months old ate added fat in the last week; 19% (20/103) ate it at least three times.;
- 37.7% (40/106) of children 12–19 months old ate added fat in the last week; 18.8% (20/106) did so at least three times a week; and
- 40% (8/20) of children 20–23 months old ate added fat; 20% (4/20) did so at least three times a week.

Continuation of Breastfeeding

Of all of the mothers interviewed, 98.8% (355/359) indicated that they were currently breastfeeding; 90% (18/20) of children between 20 and 23 months were still being breastfed.

4. Immunization/Growth Monitoring/Vitamin A supplements

The majority of children, 67.5% (243/360) currently have yellow health cards.

- 78.6% (99/126) of children 12-23 months old had received DPT1.
- *62.7% (79/126) of children 12-23 months old had received OPV3.*
- 57.1% (72/126) of children 12-23 months old had received the measles vaccine.
- 56.4% (71/126) of children aged 12-23 months had completed all their vaccines.

Drop out rates are considered important indicators of an immunization program's success. WHO considers there is a problem with immunization coverage when any rate is greater than 10%.

DPT Drop Out Rate formula:
Age 12-23 : [(DPT1-DPT3)/DPT1] x 100

2003 (n=126): [(99-79)/99] x 100 = 20.2%

OPV Drop Out Rate Formula:
Age 12-23: [(OPV1-OPV3)/OPV1] x 100

2003 (n=126): [(97-79)/97] x 100 = 18.6%

Vitamin A

In the last six months, 66.3% (152/229) of all children 6 – 23 months old received a Vitamin A supplement.

5. IMCI

When asked about signs or symptoms that would cause them to seek treatment or advice when the child is sick, most mothers have a fairly good understanding of some health danger signs:

- 80.2% (289/360) mentioned fever; and
- 61.9% (223/360) mentioned diarrhea.

Other common signs/symptoms of concern less frequently noted by the mothers were when the child:

- is not eating (28.6%, 103/360);

- has fast breathing (4.4%, 16/360);
- has difficult breathing (8.8%, 32/360);
- is becoming sicker despite homecare (7.5%, 27/360);
- has blood in the stools (3.6%, 13/360); and
- is drinking poorly (4.7%, 17/360).

Diarrheal Diseases

Of the children of the mothers interviewed, 44.7% (161/360) suffered diarrhea in the past two weeks:

- 19.2% (31/161) of children with diarrhea in the past two weeks were given more to drink than usual;
- 6.2% (10/161) of children with diarrhea in the past two weeks were given more food than normal;
- 22.3% (36/161) received no food; and
- 7.4% (12/161) received no liquid.

Mothers were asked where they sought help and 60.7% of the mothers (36/84) went to a formal health facility. When including agentes polivalente elementares (APE) in the numerator, the percent increases to 69% (58/84) who solicited aid from an MOH-trained person.

Mothers were asked what was given to treat diarrhea. 15.2% (25/161) of the mothers reported that nothing was given to treat the diarrhea. 51.5% (83/161) treated with Oral Rehydration Solution (ORS) and only 4.3% (7/161) were treated with Home Available Fluid (HAF). 4.3% (70/161) of the children were treated with pills or syrup and 22.3% (36/161) were treated with home made/traditional medicine.

Most of the children with diarrhea i.e. 57.7% (93/161) were given less to drink than normal, 14.9% (24/161) were given the same amount to drink as usual, 19.2% (31/161) drank more than usual, and 7% (12/161) got nothing to drink.

74% of the mothers treated diarrhea with at least one of ORS, HAF or increased liquids.

Mothers were asked how to prevent diarrhea: 8.6% (31/360) knew no way to prevent diarrhea. The remaining 329 mothers mentioned a total of 560 specific, appropriate responses to diarrhea prevention, including:

- 45.8% (165/360) mentioned washing hands;
- 35.2% (127/360) mentioned using a latrine;
- 39.7% (143/360) mentioned keeping food clean; and
- 34.7% (125/360) mentioned drinking clean water.

Respiratory Illness

Of all the women surveyed, 53% (191/360) said their child had experienced a cough with rapid and difficult breathing. When asked where they would seek treatment for a cough and fast/difficult breathing:

- 66.4% (127/191) mothers replied at a health facility;
- 27.2% (52/191) said with a traditional practitioner; and
- 16.2% (31/191) said they didn't seek treatment.

The summary of the answers given by the mothers showed that:

- 43.9% (84/191) of the mothers of these children would seek treatment only from a health facility;
- 13.6% (26/191) would seek treatment only in the community; and
- 23% (44/191) would seek treatment both in the community and at a health facility;

Malaria

Sixty-nine point seven percent (69.7%) (251/360) of the children had had a fever in the last two weeks and 35.8% (129/360) currently had a fever. Only 19.2% of mothers (24/125) took the child to the health facility on the day of the fever's onset. The majority, 49.6% (62/125) went the following day. The most commonly indicated malaria drug was chloroquine, which was given to 40.2% (101/251) of the children, most frequently on the day of onset of fever (61/101).

Aspirin (19.9%, 50/251) was given more or less as often as Panadol (19.1%, 48/251); and both were most likely to be given within the same day as onset (12.3%, 31/251 and 13.1%, 33/251). Of the 140 children with fever who were not taken to a health facility, 85.7% (120/142) were not treated with any medicine.

6. Maternal Health/Family Planning

Tetanus Toxoid Vaccine

Of all the mothers interviewed, 13.3% (48/360) said that they had not received a vaccine; 10.8% (39/360) said that they had received only one vaccine; 73.3% (264/360) said that they had received two doses or more[8].

Prenatal Care/Birth Plans

Self-reports[9] indicate that 2.5% (9/360) of mothers had no prenatal consultations, 82.5% (297/360) had one consult, and 83.3% (300/360) reported at least two visits. Eighty two point five percent (82.5%) or 297/360 reported having a consultation with a health professional, while 83.3%

[8] The prenatal care health card is returned to the health center after the birth of the child, so KPC interviewers asked for tetanus toxoid (TT) information from the mothers, instead of referring to a card. As these figures are self-reported, they may be inflated.
[9] Since these answers are self-reported the figures may be inflated.

(300/360) were assisted with prenatal care by a trained health worker (either a health professional or a TBA). The most common source of care was an elementary-level midwife (66.6%, 240/360).

One point six percent (1.6%, 6/360) of women did not know any danger signs related to pregnancy; 35% (127/360) knew three or more.

When asked whether they had made any plan for the birth of their child, 90.5% (326/360) said they had:

- 36.1% (118/326) had bought a razor blade;
- 14.1% (51/326) had saved money for an emergency,; and
- 4.3% (14/326) mentioned deciding where the delivery would occur.

The most common birth plan was to buy capulanas (63.2%, 206/326), or buy food for people helping with the birth of the child (46.3%, 151/326).

Of the kinds of plan mentioned, five are most appropriate: who would deliver the baby, where would the delivery happen, what to do in case of an emergency, bought a razor blade, and saved money for an emergency. The following table gives a summary of the number of these five most appropriate answers given by the mothers:

# of the 5 most appropriate mentioned	Frequency	%
Bought a razor blade	118/360	32.8%
Saved money for emergency	51/360	14.7%
Who would deliver the baby	14/360	3.8%
Where delivery would happen	14/360	3.8%
What to do in case of emergency	4/360	1.1%

- 55.8% (201/360) of the mothers mentioned at least one of the five appropriate answers; and
- 9.4% (34/360) of the mothers didn't mention plan at all with respect to their birth.

<u>Labor and Delivery/Postpartum</u>

Women were asked about signs of danger during labor:

- 1.6% (6/360) did not know any danger signs related to labor and delivery; and
- 10.5% (38/360) knew two or more signs.

Women were asked who assisted their labor:

- 30% (107/360) had at least one MOH-trained health worker in attendance at delivery;

- 61% (220/360) had at least one health professional to assist with delivery; and
- The Muatane (sister of the regulo) assisted in 55.8%(201/360) of deliveries
- 55.5% (200/360) of deliveries were assisted by family members
- TBAs attended 34.1%,(123/360) of the deliveries, and
- Only 1.7 deliveries were assisted by a Community Health Worker.

After birth, 38% (137/360) of the children were placed on a cot. 46% (155/360) were left with the mother. After the birth of their child, 28% (101/360) of the mothers saw a health professional for postpartum care, the most common being TBA 29.4%(106/360), followed by Muatane 25.5% (92/360) and elementary midwives 21.1% (76/360). Fifty-five percent (55%, 200/360) were seen postpartum by at least one MOH-trained health worker (includes a trained TBA). Of these MOH-trained staff, the majority visited the mother on the day of delivery (149/160). Of women seen by non-MOH staff the majority were seen on the day of delivery (35/184).

Women were asked if they knew danger signs related to the postpartum period; 22.5% (81/360) knew one or more sign.

Family Planning

Women were asked where to obtain family planning services. Of the 95.5% (344/360) of mothers who know where to obtain family planning services:

- 54.6% (188/344) mentioned a health facility;
- 41.3%% (142/344) mentioned a traditional healer; and
- 7.3% (25/344) mentioned a friend or relative.

The most common types of family planning known are:

- the Pill (54.1%, 195/360);
- injections (41.4%, 149/360)
- traditional rope[10] (36.6%, 132/360);
- abstinence (33%, 120/360) and
- 62.8% (226/360) know at least one modern FP method.

Only 2.2% of mothers (8/360) answered “yes” when asked if pregnant. Four of the mothers stated that they didn’t know if they were pregnant. 56.1% (202/360) want another child in the next two years.

The remaining 150 (360-8-202=150) (women who are not pregnant and do not want a child in the next two years) were questioned about which family planning methods they are using;

- 14.7% (22/150) are using a modern family planning method;
  - pills (11/150);
  - injection (10/150);

[10] A special rope is tied around the woman’s waist to keep her from getting pregnant.

- tubal ligation (1/150); and
- condoms (0/150).

- 12.5% (19/150) are using abstinence;
- 17.8% (27/150) specifically referred to waiting until the child can walk before having sexual relations;
- 44.7% (68/150) mentioned using no method at all.

7. Access to Health Information

Mothers are most likely to have received health information from elementary midwives (35.5%, 128/360), activistas (32.2%, 116/360), regulo (23.3%, 84/360) and at the church or mosque (14.4%, 52/360).Only 11.9% (43/360) stated that they had received no health information.

Mothers are more likely to receive information from community sources (36.4%, 132/360) than from MOH workers (10.8%, 39/360).[11]

When asked specifically whether they had received information from specific sources in the past month:

- 51% (185/360) said that they had received information from an activista; and
- 43.6% (157/360) said that they had received health information from the radio.

[11] The question allowed for multiple answers; 36.4% (131/360) of the mothers said that they had received information from both formal and community sources.

Appendix I

Maps of Mozambique showing Project area

Appendix II

Cluster Sample

Appendix IIIa/b/c

Questionnaire in English, Portuguese and Macua

Appendix IV

Survey Teams

Survey Teams:

Survey Coordinator: Greta Stina Engelbert

Survey Responsible/Study implementer: Tilde Froyr

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