

Survey of Agentes Polivalentes Elementares (APEs) providing integrated Community Case Management in Nampula, Mozambique

April 2013



Executive Summary

BACKGROUND

In partnership with CIDA, Save the Children implemented a multi-country initiative to deliver Integrated Community Case Management (iCCM) services to remote communities in Mozambique, Malawi, and South Sudan. In Mozambique, the project reached an estimated total population of 772,753 of which 131,161 are children under-five. The iCCM workers are *Agentes Polivalentes Elementares* (APEs), an existing cadre of volunteer community health workers. In mid-2010, before the project began, all existing APEs in SC's target districts were given a one-week long training in iCCM.

As part of the endline evaluation, Save the Children conducted a survey of APEs to assess the implementation strength and quality of iCCM services delivered by them. The APE survey was conducted alongside a household survey to assess care-seeking practices and treatment coverage for iCCM conditions. The objective of the APE survey was to gain a better understanding of the APEs' knowledge, quality of services delivered, support and supervision received, and to help interpret the results of the coverage survey.

STUDY DESIGN AND METHODOLOGY

Nampula province was selected for the endline evaluation because over 90% of cases managed by APEs during the project were from Nampula, and limiting the survey to one province helped to contain costs. Four districts of Nampula province were selected, three for intervention and one for comparison. The endline evaluation used a quasi-experimental design with post-test only comparison group. The intervention area was represented by the catchment areas of 30 randomly selected APEs. The comparison group was represented by 30 randomly selected communities eligible for iCCM. The 30 APEs randomly selected for the household survey formed the sample population for the APE survey and all were interviewed. Data collection was carried out during October-November 2012.

MAIN RESULTS

APE profile and catchment areas: All sampled APEs were male and most had between seven and eight years of education. About two-thirds had a functional mobile phone. Nearly all APEs (97%; 29/30) operated from a fixed health post and 87% resided in their catchment areas. The median number of households in the APE catchment population was 203 households (range 61-3,500).

Supervision coverage: Most APEs (87%) reported receiving a supervisory visit in the last one month and 80% reported a supervision visit during which register and/or reports were reviewed. These supervision visits were conducted in large part by Save the Children staff (22/26); just 17% of APEs reported receiving a supervision visit from health facility staff¹.

Availability of iCCM medicines and diagnostics: About 80% (24/30) of APEs had at least one age formulation of first-line antimalarials (Coartem) in stock on the day of observation and the results were the same for

¹ Note that only five APEs from Monapo only have been trained under the new programme, under which health facility supervisors should supervise APEs.

amoxicillin. More than 90% of APEs had ORS and paracetemol in stock. Diagnostics were also widely available, with 89% of APEs observed to have a functional timer and 87% had RDTs in stock. A total of 77% of APEs had all essential iCCM medicines available and 77% reported no stock-outs of essential iCCM medicines in the past month.

Activity levels and record-keeping: Nearly all APEs (87%) reported treating one or more sick children in the last 7 days. The number of cases of malaria, pneumonia and diarrhea treated in children 2-59 months over in the last three completed months ranged from 13-108 (mean 59.4; median 58.5). Completeness of recording of cases in the registers was quite high for child age (97%) and RDT results (87%), but lower for results of respiratory rate counts (63%). Consistency between assessment and classification was good, with most APEs demonstrating correct classification in at least four of five cases reviewed in which the respiratory rate was recorded. The consistency between classification and treatment however was lower, with just 77% of APEs showing correct treatment for a given classification in at least four of five cases.

APE knowledge of danger signs and iCCM protocols: APE knowledge of danger signs for which they should refer a sick child was very high, with 97% able to cite all four of the most serious or general signs (vomiting everything, convulsions, not conscious and not able to drink/breastfeed). All but one of the APEs (97%) mentioned they would count breaths per minute to assess for fast-breathing and most (83%) mentioned they would ask if the child had cough. When asked what the cut-off was for fast breathing, 83% of APEs interviewed were able to give the correct cut-off for fast breathing for children aged 12-59 months (40 or more breaths/minute). All APEs correctly indicated that they would provide amoxicillin to a child determined to have pneumonia and 93% (28/30) gave the correct response for duration of treatment of malaria with Coartem (three days).

IMPLICATIONS

These findings have several implications for the iCCM program as implemented in Nampula and nationwide.

- Although the MOH policy states that APEs should no longer have fixed posts, most continue to do so. These posts are constructed by the community, with all materials and labor provided in-kind by the community, indicating a demand and need for the posts at community level. The absence of a post has made it difficult for supervisors to find APEs when during routine supervision visits to their communities.
- Some clinicians and medical professionals in Mozambique have been skeptical that APEs can assess, classify and treat correctly for the iCCM illnesses. Results of this survey show that they are able to do all three tasks if they have adequate training and supervision, and a consistent supply of medicines.
- Other concerns have been raised about potential misuse of antibiotics among APEs. However, our results indicate that 77% of APEs showed consistency between evaluation and treatment in their registers, again showing that APEs can use medicines correctly if they are supervised and supported.
- Stock outs of Coartem 6x1 and amoxicillin 125mg were the most common, suggesting the importance of consumption data to determine quantities of all iCCM medicines dispensed to APEs along with quantities of different doses of these medicines.
- Since the introduction of a new cell phone company in Mozambique, many people in rural areas, including APEs now have access to mobile networks-- over 67% of APEs in interviewed in the survey have cell phones. The project needs to take advantages of improved communication to improve supervision and supply chain issues.

RECOMMENDATIONS

Findings from this survey of APEs suggest the following recommendations for improving and strengthening of the iCCM program in Nampula province and throughout the country:

- Set up a data base that includes telephone numbers of all APEs, and encourage project staff at provincial and district level to use cell phone communication more often.
- Develop a project-wide system to track consumption for important iCCM medicines and dispense to APEs based on their consumption.
- Start a dialogue with the MOH at national level to revisit the policy indicating that APEs should be mobile and not have fixed posts.

Indicator summary table

		% of API	Es (N=30)
Domain	Indicators	n	%
Residency	Percentage of APEs residing in their catchment areas	26	87
Supervision	Percentage of APEs who received at least one supervisory contact in the prior I months during which registers and/or reports were reviewed	24	80
Medicine availability	Percentage of APEs with all essential iCCM medicines on day of survey*	23	77
	Coartem available	24	80
	Amoxicillin available	24	80
	ORS available	27	90
	Percentage of APEs with no stock-outs of any iCCM medicines during month before the survey**	22	73
	No stock-outs of Coartem	26	87
	No stock-outs of amoxicillin	26	87
	No stock-outs of ORS	26	87
Diagnostic	Percentage of APEs with functional timer on day of survey	27	90
availability	Percentage of APEs with RDTs available on day of survey	26	87
	Percentage of APEs with no stock-outs of RDTs during month before survey	24	80
Activity levels	Percentage of APEs who treated a sick child in the last 7 days	25	83
Recording completeness	Percentage of APEs with complete recording for use of RDTs for fever	26	87
& quality	Percentage of APEs with complete recording of RR for ARI cases	19	63
	Percentage of APEs with assessment-classification consistency for cases with RR count	26	87
	Percentage of APEs with classification-treatment consistency for cases with RR count	23	77
APE knowledge	Percentage of APEs demonstrating knowledge of danger signs	29	97
	Percentage of APEs who know correct cut-off for respiratory rate in children 12-59 months of age	25	83

*- APE had minimum stock levels of ORS, Coartem (either age forumulation) and amoxicillin (either age formulation)

**-Indicates no stock-outs of ORS, Coartem (both formulations) or amoxicillin (both age formulations)

Acronyms

ACSD	Accelerated Child Survival and Development
APE	Agentes Polivalentes Elementares (Community Health Workers)
ARI	Acute Respiratory Infection
BMGF	Bill & Melinda Gates Foundation
CIDA	Canadian International Development Agency
iCCM	Integrated Community Case Management
IMCI	Integrated Management of Childhood Illnesses
INE	Instituto Nacional de Estatisticas (National Statistics Institute)
MOH	Ministry of Health
MDG	Millennium Development Goals
ORS	Oral Rehydration Solution
SC	Save the Children
RDT	Rapid Diagnostic Test

Acknowledgement

This endline evaluation has been supported by the Canadian International Development Agency (CIDA) through grant number 7052731 to Save the Children.

We acknowledge the contribution of the National Statistics Institute, including Dr. Carlos Creva who assisted with selection of the clusters and Dr. Alfredo Lesta and Mr. Antonio Mucopo, who supervised field work in collaboration with Save the Children. Dr. Alfredo Lesta led the activities at INE, assisted by Mr. Antonio Mucopo who served as a survey coordinator. We also thank all the survey supervisors, data collectors, editors, clerks and drivers for their valuable work in ensuring that the data were properly collected and processed.

We acknowledge the staff from Save the Children Mozambique (Erica Wetzler, Dr. Fatima Ibo, Paulo Rapaz, Maria Amisse, Jamal Teleha, Jacinto Sapatinha, Edgar Castillo, Lot Kamanga) for their support throughout the implementation of the survey activities, and data analysis and interpretation. We also thank Jeanne Koepsell, CCM Advisor, and Charles Ocan, Regional Advisor SC US, for their support on survey planning and monitoring.

Dr. Ibad UI Haque from Save the Children Pakistan provided technical assistance to INE for data collection and analysis of the data.

Dr. Salim Sadruddin and Tanya Guenther provided technical assistance for the design of the survey, data analysis and prepared the final report.

Table of Contents

EXECUTIVE SUMMARY	I
ACRONYMS	v
ACKNOWLEDGEMENT	VI
I. BACKGROUND	1
I.I. IMPLEMENTATION OF ICCM IN MOZAMBIQUE BY SAVE THE CHILDREN	1
I.2. Methods	2
1.2.1. Sample design	2
1.2.2. APE questionnaire	3
1.2.3. Data management and analysis	3
1.2.4. Ethical consideration	3
2. SURVEY FINDINGS	4
2.1. Characteristics of APEs	4
2.2. CATCHMENT AREA AND HEALTH POST	
2.3. Supervision	5
2.4. Availability of ICCM medicines and diagnostics	6
2.5. ACTIVITY LEVELS OF APES	7
2.5. APEs knowledge of danger signs	8
3. IMPLICATIONS AND RECOMMENDATIONS FOR THE ICCM PROGRAM	9
ANNEXES	11

I. Background

I.I. Implementation of iCCM in Mozambique by Save the Children

In partnership with CIDA, Save the Children implemented a multi-country initiative to deliver Integrated Community Case Management (iCCM) services to remote communities in Mozambique, Malawi, and South Sudan. In Mozambique SC pioneered iCCM in 2008 through a pilot in one district of Nampula province, which was scaled up using CIDA funds to fifteen districts in Nampula and Gaza starting in 2009. The project reached an estimated total population of 772,753, of which 131,161 are children under-five. The iCCM workers in Mozambique are *Agentes Polivalentes Elementares* (APEs), an existing cadre of volunteer community health workers. APEs have varying degrees of literacy, and different levels of training, depending on when they were recruited.

The national APE program began 1978 after the Alma-Ata declaration; however, a protracted civil war that ended in 1992 impeded continuous support to the APEs, and the program lost momentum. However, in 2010 the MoH embarked on revitalization of the national APE program across the country. Save the Children was a key partner in developing strategies, protocols and tools for the new national program. Under the new program, each district has a fixed number of APEs (25 per district), and each of these APEs is trained in a 4-month long training course that encompasses iCCM of malaria, diarrhea and pneumonia. Each APE is responsible for a catchment area of up to 2,000 people, and should be located 8 to 25 km for the nearest health facility. Traditionally, APEs operate out of health posts constructed by the community using local materials. They conduct preventive and health promotion activities, along with providing curative services for common illnesses, including iCCM. As of December 2012 the MoH had trained about 1,216 APEs nationwide under the revitalized program.

Because the SC iCCM project began prior to the development of the curriculum and training materials for the revitalized program, all existing APEs under the SC program (273 in Nampula and 46 in Gaza) were given a one-week long training in CCM, and subsequently began providing iCCM services for malaria, diarrhea and pneumonia in their communities. In March 2012, they also received a refresher training on clinical aspects of iCCM.

As part of the grant agreement with CIDA, SC conducted an endline evaluation at project end to assess the impact of iCCM on care-seeking practices and treatment coverage for malaria, pneumonia and diarrhea. Save the Children, in collaboration with the Mozambique National Statistics Institute (INE), administered an endline household survey in three implementation districts of Nampula province (Monapo, Erati and Angoche) and one comparison area (Mossuril district). Data collection was carried out during October-November 2012.

As part of the endline coverage survey, Save the Children conducted a survey of APEs to assess the implementation strength and quality of iCCM services delivered by them. The objective of the APE survey was to gain a better understanding of the APEs' knowledge, quality of services delivered, support and supervision received, and finally to help interpret the results of the coverage survey (for example, if stock-outs are reported, this could help explain levels of treatment coverage by APEs). This report focuses on the APE assessment component of the endline coverage survey.

I.2. Methods

I.2.I. Study area and sample design

Nampula province was selected for the endline evaluation because over 90% of cases attended during the project were from Nampula, and limiting the survey to one province helped to contain costs. In consultation with MOH and program implementing staff, four districts of Nampula province were selected for the endline evaluation (Angoche, Erati and Monapo for intervention and Mossuril for comparison). The three selected intervention districts - Monapo, Erati and Angoche- accounted for about half of the trained APEs (total of 157) and are geographically representative of Nampula. Mossuril, which is a large district located adjacent to Monapo, has only three APEs. Existing MOH APEs from districts that are not supported by Save the Children are also allowed to treat malaria and diarrhea and as such, it was important to select a district with limited numbers of APEs to provide an appropriate comparison area.

The endline evaluation used a quasi-experimental design with post-test only comparison group. The intervention area was represented by the catchment areas of 30 randomly selected APEs trained in CCM from the three selected districts (Angoche, Erati and Monapo). All the APEs in the intervention districts were trained prior to the pre-revitalization period, meaning they were trained before 2010. Five APEs in Monapo district had also participated in the new 4-month MOH training under the revitalized APE program. The comparison group was represented by 30 randomly selected communities from areas in Mossuril district that are considered eligible for CCM according to the MISAU criteria (at least 8 km from a health facility or APE²).

The APE catchment areas served as clusters in intervention areas while census enumeration areas (primary sampling units) eligible for CCM served as clusters in comparison areas. At the first stage of sampling, 10 APEs were randomly selected with equal probability from each of the three intervention districts for a total of 30 APE catchment areas (the districts had a similar number of APEs). For the comparison areas, 30 primary sampling units were sampled proportional-to-size from a sampling frame containing areas eligible for CCM (at least 8km from a health facility or APE). Twenty households with at least one child aged 2-59 months were randomly selected household (third stage sampling), one mother/caretaker with children aged 2-59 months was randomly selected to be interviewed. Child modules were completed for all children aged 2-59 months of the selected mother/caretaker. For the APE survey, all 30 APEs included in the endline coverage survey sample formed the sample population.

² Comparison areas were selected by INE using the 2008 census as the sampling frame; selected communities were visited by SC program staff prior to data collection to confirm that they met the eligibility criteria.

I.2.2. APE questionnaire

The APE questionnaire (see Annex I) covered the following topics: catchment area description; APE characteristics; supervision, availability of medicines and supplies, activity levels and register review, and APE knowledge. The questionnaire was administered to the APE in Portuguese by a team supervisor, and subsequently reviewed by a Save the Children staff member.

I.2.3. Data management and analysis

CSPro software was used for data entry. Double data entry was conducted and final data reconciled and cleaned. Data were analyzed using SPSS. Data analysis involved generating frequencies and cross tabulations for the indicators of interest.

I.2.4. Ethical consideration

Ethical clearance for the study was obtained by the Mozambique MOH Bio-ethics Committee. Informed consent was obtained from every APE and data files and questionnaires are securely stored at the Save the Children office in Nampula.

2. Survey Findings

A total of 30 APEs (100% of target sample) were interviewed (10 in each of Monapo, Erati and Angoche).

2.1. Characteristics of APEs

All sampled APEs were male, and most of them were 30 years of age and older (Table 2.1). Two-thirds of APEs reported having functional cell phones. No APE had less than five years of education; the majority (57%) had between seven and eight years of education. Three respondent APEs had between nine and ten years of formal education.

ble 2.1: Percent distribution of APEs by demographic characteristics , Monapo, Erat ngoche districts of Nampula province	and

Characteristics		• /
	n	%
Age group		
<29	5	17
30-39	9	30
40-49	12	40
50+	4	13
Sex		
Male	30	100
Education		
5-6 years	10	33
7-8 years	17	57
9 or more years	3	10
Have functional mobile		
Yes	20	67
No	10	33
Number of APEs		30

2.2. Catchment area and health post

APEs were asked to indicate the number of households in their catchment area. The mean and median number of households in an APE catchment area was 614 and 203 respectively. The range was 61-3,500 households. Data were missing for one APE. The majority of APEs operated from a fixed health post (posto de soccoro) and resided within their catchment area (Table 2.2). Most APEs could reach their health post in less than 30 minutes.

Characteristics	n	%
Fixed post		
Yes	29	97
No	I	3
Resides in catchment area		
Yes	26	87
No	4	13
Time to reach health post		
Less than 30 minutes	22	73
30 minutes to <1 hour	3	13
I hour - <2 hours	2	7
More than 2 hours	I	3
Missing	I	3
Number of APEs		30

Table 2.2: Percent distribution of APEs by health post and residency characteristics, Monapo,
Erati and Angoche districts of Nampula province

2.3. Supervision

The majority (87%; 26/30) of APEs reported receiving a supervisory visit in the last one month. These supervision visits were conducted in large part by Save the Children staff (22/26); just 17% of APEs reported receiving a supervision visit from health facility staff³. APEs who had received a supervisory visit in the last one month were then asked about the tasks performed by the supervisor. Activities conducted by the supervisors, as reported by the APEs, included reviewing the APE treatment register (93%), delivering supplies (80%), using a supervision checklist (87%), observing the APE manage a sick child (83%), and explaining how to care for a sick child/identify danger signs (97%).

³ Note that only a few APEs from Monapo only have been trained under the new programme, under which health facility supervisors should supervise APEs.

2.4. Availability of iCCM medicines and diagnostics

During the interview, APEs were asked to show their medicine box and supplies (Table 2.3). The interviewer recorded if the APE had at least five treatments for each iCCM medicine in his/her stock and functional diagnostics (RDTs and timers). Fifty-three percent of APEs had a full set of Coartem for children aged 6-35 months (LA 1x6) and 73% had Coartem for children aged 36-59 months (LA 2x6), however 80% had at least one age formulation available for Coartem (similar for amoxicillin) (Table 3). More than 90% of APEs had ORS and paracetemol in stock. The majority (89%) of APEs had a timer and RDTs (87%). In summary, just over three-quarters (77%) of APEs had all essential medicines for iCCM available on the day of the survey.

APEs were asked whether they had experienced a stock-out of any medicines in the last one month. Stock-outs of Coartem for children 6-35 months and amoxicillin for children 2-11 months were the most common; just over half of interviewed APEs reported having a stock out amoxicillin 125mg and 40% of Coartem for children 6-35 months (LA 1x6) in the last month. In summary, 77% of APEs reported no stock-outs of essential CCM medicines in the month before the survey.

	Available on day of		Stock-out in the last	
	su	survey		onth
	n	%	n	%
Availability of iCCM medicines*				
Coartem - LA 1x6	16	53	12	40
Coartem - LA 2x6	22	73	5	17
Amoxicillin 125mg	6	20	17	57
Amoxicillin 250 mg	21	70	4	13
ORS	27	90	4	13
Paracetemol	28	93	5	17
Availability of iCCM diagnostics				
RDTs available	26	87	6	20
Functional timer	27	90	NA	
Summary indicators				
Any Coartem (LA1x6 or LA2x6)	24	80	NA	
Any amoxicillin (125mg or 250 mg)	24	80	NA	
All essential iCCM medicines on day of survey**	23	77	NA	
No stock-outs of essential iCCM medicines***	23	77	NA	

Table 2.3: Percent of APEs with iCCM medicines and diagnostics, Monapo, Erati and Angoche districts of Nampula province

*Assessed whether APE had enough for 5 treatments; **-Includes any Coartem, any amoxicillin, ORS

***- Indicates no stock-outs of ORS, Coartem (both formulations) or Amoxicillin (both age formulations)

2.5. Activity levels and record keeping

All APEs interviewed reported conducting health education sessions in their communities during the last three months. The most common session topics included: prevention of malaria (90%); prevention of diarrhea (87%); signs/symptoms of malaria (80%); signs/symptoms of diarrhea (77%). Only 53% mentioned sessions on prevention of pneumonia and just 60% on signs/symptoms of pneumonia.

APE registers were reviewed to assess activity levels (case load) and also completeness and quality of recording. Nearly all APEs reported treating one or more sick children in the last 7 days (Table 2.4). The number of sick child cases treated by APEs in the last three completed months ranged from 34 to 162 (mean 81.5; median 74.0) and the number of cases of malaria, pneumonia and diarrhea treated over the same time period ranged from 13-108 (mean 59.4; median 58.5).

Completeness of recording of cases in the registers was quite high for child age (97%) and RDT results (87%), but lower for results of respiratory rate counts (63%). Consistency between assessment and classification was good, with most APEs demonstrating correct classification in at least four of five cases reviewed in which the respiratory rate was recorded. The consistency between classification and treatment however was lower, with just 77% of APEs showing correct treatment for a given classification in at least four of five cases.

Characteristics		
	n	%
Last treated a sick child		
Within last 3 days	21	70
4-7 days ago	4	13
8-30 days ago	3	10
More than I month ago	I	3
Not possible to determine	I	3
Recording completeness		
Child's age recorded for all cases	29	97
RR recorded for all ARI cases	19	63
RDT results recorded for all fever cases	26	87
Assessment-classification consistency		
At least 4/5 cases where RR is recorded	26	87
Classification-treatment consistency		
At least 4/5 cases where RR is recorded	23	77
Number of APEs		30

Table 2.4: Percent distribution of APEs by activity levels and recording completeness, Monapo, Erati and Angoche districts of Nampula province

2.5. APEs knowledge of danger signs and iCCM protocols

During training, APEs were taught to recognize and refer children who present with four general danger signs and danger signs specific to the three iCCM illnesses. APE knowledge of danger signs for which they should refer a sick child was very high, with 97% able to cite all four of the most serious or general signs (vomiting everything, convulsions, not conscious and not able to drink/breastfeed) (Table 2.5).

To assess knowledge of case management of pneumonia, APEs were asked what steps they would take to diagnose a case of pneumonia, what the cut-off for classification of fast-breathing rates are for a child 12-59 months and what treatments they would provide. APEs are trained to ask if the child has cough and if yes, to count the number of breaths in one minute and then classify as pneumonia or non-pneumonia according to age-specific cut-offs (50 or more breaths for children 2-11 months signals pneumonia and 40 or more children aged 12-59 months). When asked what they do to determine if a child has pneumonia, all but one of the APEs (97%) mentioned counting of breaths to assess fast-breathing and most (83%) mentioned they would ask if the child had cough. Many APEs (83%) indicated they would also visually observe whether child had heavy or fast breathing; about 60% said they would check for fever. When asked what the cut-off was for fast breathing, 83% of APEs interviewed were able to give the correct cut-off for fast breathing for children aged 12-59 months (40 or more breaths/minute). All APEs correctly indicated that they would provide amoxicillin to a child determined to have pneumonia. APEs were also asked how many days a child with fever should take ACTs, and 93% (28/30) gave the correct response of three days (two APEs indicated more than three days).

Danger signs	n	%
Vomiting everything	30	100
Chest in-drawing	29	97
Convulsions	30	100
Not able to drink/breastfeed	30	100
Very sleepy or unconscious	30	100
Red on MUAC screening	12	40
Stridor	28	93
Cough >21 days	30	100
Fever >7 days	30	100
Diarrhea >14 days	29	97
Blood in stool	24	80
Others	30	100
Knowledge of at least the first 4 danger signs	29	97
Number of APEs		30

Table 2.5: Percent distribution of APEs by knowledge of danger signs, Monapo, Erati and Angoche	
districts of Nampula province	

3. Implications and Recommendations for the iCCM program

IMPLICATIONS

Findings from this survey of APEs have several implications for the iCCM program as implemented in Nampula and nationwide.

- Although the MOH policy states that APEs should no longer have fixed posts, most continue to do so. Only 5 of the APEs interviewed in the survey had been trained under the new curriculum, but most still operated out of fixed posts. These posts are constructed by the community, with all materials and labor provided in-kind by the community, indicating a demand and need for the posts at community level. As one APE said, 'Sick people look for the hospital; the hospital doesn't look for sick people.' In addition, the absence of a post has made it difficult for supervisors to find APEs when during routine supervision visits to their communities.
- Some clinicians and medical professionals in Mozambique have been skeptical that APEs can assess, classify and treat correctly for the iCCM illnesses. Results of this survey show that they are able to do all three tasks if they have adequate training and supervision, and a consistent supply of medicines. They are also able to complete their registers accurately and completely.
- Other concerns have been raised about potential misuse of antibiotics among APEs. However, our results indicate that 77% of APEs showed consistency between evaluation and treatment in their registers, again showing that APEs can use medicines correctly if they are supervised and supported.
- Stock outs of Coartem 6x1 and amoxicillin 125mg were the most common, suggesting the importance of consumption data to determine quantities of all iCCM medicines dispensed to APEs along with quantities of different doses of these medicines (whether by the current kit system or through a traditional 'pull' system).
- Since the introduction of a new cell phone company in Mozambique, many people in rural areas, including APEs now have access to mobile networks-- over 67% of APEs in interviewed in the survey have cell phones. The project needs to take advantages of improved communication with APEs to schedule supervision, locate APEs for supervisions, and re-stock APEs if they need extra medicines.

RECOMMENDATIONS

Our findings suggest the following recommendations for improving and strengthening of the iCCM program in Nampula province and throughout the country:

- Set up a database that includes telephone numbers of all APEs and encourage project staff at provincial and district level to use cell phone communication more often to streamline supervision, report imminent stock outs, and remind APEs about monthly competency assessments at health facilities and dates for turning in monthly summary reports.
- Develop a project-wide system to track consumption for important iCCM medicines and dispense to APEs based on their consumption. It will be important to liaise with Village Reach, an NGO operating in Mozambique with expertise in last-mile supply chain issues. They recently conducted a pilot study on medicine consumption and supply chain among APEs in Maputo province.
- Start a dialogue with the MOH at national level to revisit the policy indicating that APEs should be mobile and not have fixed posts. This policy came about to 'encourage' adherence to another policy requiring that the APEs spend 80% of their time on health promotion activities—however, the reality shows that there is a need for curative services and most APEs spend the majority of their time treating children.

Annex I: APE Questionnaire

PESQUISA DE AVALIAÇÃO FINAL DO MANEJO DE CASOS NA COMUNIDADE - CCM/CIDA

Moçambique – 2012

Entrevista com o Agente Polivalente Elementar (APE)

Sim

Consentimento informado lido e aceite:

6 Novembro 2012

IDENTIFICAÇÃO DO AGLOMERADO		(A)		
A	Perguntas	Respostas		
A-1	Número e nome do Aglomerado:			
A-2	Nome do APE:			
A-3	Nome do supervisor do APE:			
A-4	Distrito:	Monapo=1 Angoche=2 Erati=3		
A-5	Número de agregados familiares no aglomerado (da listagem de agregados familiares/da info do APE)			
A-6	Nome e número do Inquiridor (se for o controlador da equipe a fazer a entrevista, ele preencha A-6 e o supervisor A-7)			
A-7	Nome e número do Controlador			
A-8	Dia / Mês / Ano da Entrevista			

#	Pergunta	Resposta
В	Antecedentes	
B-1	Gênero do APE (fazer círculo em um):	MasculinoI Feminino2
B-2	Quantos anos tem?	Idade em anos
		Não sabe 98
B-3	Qual é o nível de escolaridade mais elevado que completou? Que classe?	Não completou nenhum00 Número de classes completadas
B-4	Você vive na sua área de cobertura? ['Viver' significa que a residência principal	Sim1 Não2
	do APE está dentro da sua área de cobertura. Pode incluir comunidades periféricas; não tem que viver perto do posto]	
B-5	Tem um posto de trabalho?	Sim I Não2
B-6	Se tem posto de trabalho, quanto tempo leva para andar de sua residência para o	Menos de 30 minutosI
	local de trabalho?	30 minutos a uma hora2
		I a 2 horas
B-7	Tem telefone celular operacional?	Sim I
		Não2

#	Pergunta	Resposta			
С	SUPERVISÃO				
C-I	Recebeu uma visita de supervisão do técnico de Save the Children nos últimos 3 meses?	SimI Não2			
C-2	Uma vez recebeu uma visita de supervisão com o técnico da US ou do distrito?	Sim I Não2			
C-3	Quem fez a visita de supervisão mais recente?	Técnico distrital de SC I Técnico de DDS2 Técnico de unidade sanitaria			
C-4	Durante a visita de supervisão mais	Não sabe8	Sim	Não	
	recente, o supervisor fez o seguinte:	a) Verificou o seu livro de registo de tratamentos?	I	2	
	Leia a lista ao APE e faça um círculo em Sim ou Não para cada item	b) Entregou medicamentos e outros materiais?	I	2	
		c) Usou a lista de verificação (guião) de supervisão?	I	2	
		d) Observou como atendeu uma criança doente?	I	2	
		e) Explicou como cuidar uma criança doente e identificar sinais de perigo?	I	2	
111	MEDICAMENTO E ABASTECIMEN	ENTO			
D-I	INQUIRIDOR: Peça para ver a caixa ou armário de medicamentos do APE.	Item	Yes	Νο	
	VERIFIQUE e REGISTE se o APE tem a quantidade mínima que está entre parênteses ao lado de cada item.	a) Coartem AL (1x6) (5 carteiras)	I	2	
		b) Coartem AL (2x6) (5 carteiras)	I	2	
		c) TDRs (20 testes)	I	2	
		d) Amoxicilina125 mg (5 tratamentos)	I	2	
		e) Amoxicilina 250 mg (5 tratamentos)	I	2	
		f) Soro oral (15 pacotes)	I	2	
		g) Paracetamol (10 comprimidos)	I	2	
		h) Cronómetro (I funcional)	I	2	

#	Pergunta	Resposta		
D-2	No último mês, uma vez esteve sem	Medicamento	Sim	Não
	medicamento de qualquer um dos seguintes medicamentos?	a) AL (1×6)	I	2
		b) AL (2x6)	I	2
		c) TDRs	I	2
		d) Amoxicillina125 mg	I	2
		e) Amoxicilina 250 mg	I	2
		f) Soro oral	I	2
		g) Paracetemol	I	2
E	ACTIVIDADES E VERIFICAÇÃO E	DO REGISTO	<u> </u>	
E-1	Fez educação para saúde ou palestras educacional de saúde (palestra) para a comunidade nos últimos 3 meses?	Sim 1 Não2 :	>> >> E3	
E-2	Quais foram os temas das palestras?	TEMA		
			Sim	Não
		a. Sinais gerais de perigo	Ι	2
	Marcar todos mencionados.	b. Sinais / sintomas de malária	I	2
		c. Sinais / sintomas da diarreia	I	2
		d. Sinais / sintomas da pneumonia	Ι	2
		e. Medidas de prevenção da malária	I	2
		f. Medidas de prevenção da diarreia	I	2
		f. Medidas de prevenção da diarreia g. Medidas de prevenção da pneumonia	1	2
		g. Medidas de prevenção da pneumonia	 	2
		g. Medidas de prevenção da pneumonia h. Preparação do soro oral	I I I I I	2

#	Pergunta	Resposta		
Peça	ao APE para mostrar-lhe o seu registo			
E-3	Inquiridor: Escreva a última data que uma crianca (<5 anos) foi tratada pelo APE por malaria, diarreia, ou pneumonia. //2012 Dia Mes Ano	Sem registo/não é possivel determinar 0 Dentro dos ultimos 3 dias 1 4-7 dias atras 2 8-30 dias atras		
E-4	Inquiridor: Analise a ultima página preenchida (com 19 casos) no registo e		Sim	Não
	anote o seguinte:	 a) O APE registou a idade da criança para todos casos 	I	2
		 b) Está registada a frequência respiratória para todos casos em que "pneumonia" ou "outra IRA" estão marcados 	I	2
		 c) TDR marcado para todos casos de febre (<u>se tinham stock de TDR</u>). 	I	2
E-5	Inquiridor: Registe o número total de crianças (menores de cinco anos) atendidas pelo APE nos últimos 30 dias. Depois registe a total tratado por malaria, diarreia ou pneumonia/IRA. Se não puder determinar, escreva "998" em "tratado".	AINúmero de crianças atendidas:	pneumonia, r	nalaria,

#	Pergunta	R	esposta				
E-6	Inquiridor: Seleccione os últimos 5 casos em que foi registado a frequência respiratória. Verifique a avaliação, classificação e tratamento de cada caso	#	Elemento	Sim=1 Não= 2; Não Sabe=8	Elemento	Não=	m=1 = 2; Não be=8
	selecionado, e registe "Sim" ou "Não" se existir consistência entre a avaliação e classificação, e entre classificação e tratamento para cada caso.	I	Consistência da avaliação- classificação?	128	Consistência de classificação- tratamento?	I	28
		2	Avaliação- consistência da classificação?	128	Classificação- consistência de tratamento?	I	28
		3	Avaliação- consistência da classificação?	128	Classificação- consistência de tratamento?	I	28
		4	Avaliação- consistência da classificação?	128	Classificação- consistência de tratamento?	I	28
		5	Avaliação- consistência da classificação?	128	Classificação- consistência de tratamento?	I	28
F	Conhecimento do APE						
-1	Diga quais são os sinais gerais de perigo e sinais de perigo de malaria, pneumonia		Sinais			Sim	Não
	e diarreia que devem resultar na transferência de uma criança doente?	A Convulsões			I	2	
	transferencia de uma criança doente? Encorajar o APE a responder tudo que ele sabe:	B Letárgico ou inconsciente			I	2	
		C Não consegue beber ou comer qualquer coisa			1	2	
		D Vomita tudo que come ou bebe					2
	Pergunte:		E Tosse por 21 dias ou mais				2
	Qualquer outra coisa?	F Diarreia por 14 dias ou mais				2	
		G Prega cutanea que volta lentamente			1	2	
	Faça um círculo a tudo que foi mencionado.		H Sangue nas fezes			1	2
			Olhos encovados			1	2
		JA criança bebe com avidez			1	2	
		K	Febre nos últim	os 7 dias ou ma	ais		2

#	Pergunta	Resposta		
		L Febre com burbulhas no corpo	1	2
		M Inchaço atras da orelha	1	2
		N Pus /dor no ouvido	1	2
		O Rigidez da nuca		2
				2
		P Tiragem	'	
		Q Ruidos ao respirar (estridor)	1	2
		R Vermelho na fita do MUAC	I	2
		S Inchaço nos pés	I	2
		T Outro (especificar):	I	2
		U Não Sabe		8
	Quantos dos primeiros quatro sinais (A, B, C e D) foram marcados na pergunta			
	anterior?		[
3	,		Sim	Não
-3	anterior?	A. Pergunta se a criança tem tosse	Sim	Não 2
3	anterior?	B. Conta a frequência respiratória da		
-3	anterior? Como é que classifica a pneumonia?		1	2
-3	anterior? Como é que classifica a pneumonia?	B. Conta a frequência respiratória da criança	 	2
3	anterior? Como é que classifica a pneumonia? Não ler as respostas.	 B. Conta a frequência respiratória da criança C. Verifica se ela tem febre D. Observa se a criança respira com dificuldade ou rapidamente E. Outro 	 	2 2 2
-3	anterior? Como é que classifica a pneumonia? Não ler as respostas.	 B. Conta a frequência respiratória da criança C. Verifica se ela tem febre D. Observa se a criança respira com dificuldade ou rapidamente 		2 2 2 2 2
- 3	anterior? Como é que classifica a pneumonia? Não ler as respostas.	 B. Conta a frequência respiratória da criança C. Verifica se ela tem febre D. Observa se a criança respira com dificuldade ou rapidamente E. Outro (especificar): 		2 2 2 2 2 2 2
	anterior? Como é que classifica a pneumonia? Não ler as respostas. Faça um círculo a tudo que foi mencionado.	B. Conta a frequência respiratória da criança C. Verifica se ela tem febre D. Observa se a criança respira com dificuldade ou rapidamente E. Outro (especificar):		2 2 2 2 2 2 2
	anterior? Como é que classifica a pneumonia? Não ler as respostas. Faça um círculo a tudo que foi mencionado.	 B. Conta a frequência respiratória da criança C. Verifica se ela tem febre D. Observa se a criança respira com dificuldade ou rapidamente E. Outro (especificar):		2 2 2 2 2 2 2

#	Pergunta	Resposta
F-5	Qual é o medicamento que dá a uma criança entre 12-59 meses que tem	AmoxicilinaI
	respiração rápida?	Outros medicamentos96
	Não ler as respostas	Não sabe
F-6	Por quantos dias uma criança com febres deve tomar AL (Coartem)?	3 dias I
		Menos de 3 dias2
	Não ler as respostas	Mais de 3 dias3
		Não sabe8