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Learning Needs Assessment Survey

Annual Report Appendix C Section 3
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Liberia Improved Community Health Project
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ABBREVIATIONS

CDC	Community Development Committee
CHAL	Christian Health Association of Liberia
CHC	Community Health Committee
CHW	Community Health Worker
DPT	Diphtheria-polio-tetanus vaccine
EPI	Expanded Program of Immunization
FP	Family Planning
GOL	Government of Liberia
ICH	Liberia Improved Community Health Project
IUD	Intra-uterine device
IV	Intra-venous
LNA	Learning Needs Assessment Survey
MOH&SW	Ministry of Health & Social Welfare
NGO	Non-governmental organization
OPV	Oral polio vaccine
ORS	Oral rehydration salts
ORT	Oral rehydration therapy
PVO	Private volunteer organization
RTH	Road-to-health card
TTM	Trained traditional midwife
USAID	United States Agency for International Development
WHO	World Health Organization

Learning Needs Assessment: A Facility-Based Survey
Liberia
March 2004

BACKGROUND

The Liberia Improved Community Health (ICH) Project, implemented by a consortium composed of Africare, Johns Hopkins Bloomberg School of Public Health Center for Communication Programs (JHU/CCP) and Morehouse School of Medicine, and funded by USAID, identified the need for a refresher/update in-service education curriculum for Registered Nurses, Certified Midwifes, Licensed Practical Nurses and Physician Assistants who provide a wide range of primary and reproductive health care services at Liberia's health facilities. Due to the civil conflict that has surged and ebbed around them for years, many of the health workers have struggled to provide care in an environment fraught with uncertainties, often in poorly equipped and supplied facilities, without the benefit of regular supervision. They have had little or no opportunity to refresh their technical knowledge and skills, or to learn new information or techniques.

One of the goals of the ICH Project is that of improving health service delivery, particularly at the clinic and community levels. Inservice training is one strategy identified for achieving this goal. As one way of meeting this need, a curriculum development process commenced at the beginning in February 2004. It was agreed that the process be participatory and inclusive. It should make use of the experience and concerns of senior health workers in positions of authority who had identified weaknesses and gaps in service delivery and were likely to be primary users of the curriculum materials. Individual meetings were held with health specialists in numerous agencies, non-governmental organizations (NGOs), United Nations (UN) agencies and relevant departments of the Ministry of Health and Social Welfare (MOH&SW). In these discussions, participants were identified for the curriculum design activities. Many of those identified attended a three-day consultative meeting in early March 2004, where they agreed on a strategy for development of the update/refresher curriculum. At that time, an assessment of health workers' learning needs was identified as one important activity. (An assessment activity was also identified in the Scope of Work for the consultancy.) The participants stressed the need for including health workers from as many rural health facilities as possible, so the data would be representative of rural health workers and facilities as well as those in Monrovia and its environs.

Participants in the consultative meeting identified information that should be included in the learning needs assessment, and then worked to design the assessment instruments. Additional senior health workers helped review and refine the instruments. They were pre-tested in two locations and final adjustments made. 14 health workers, joined by members of Community Health Teams in four of the most populous counties, collected the information in the field.

SAMPLING METHODOLOGY

In this section of the Liberia Learning Needs Assessment Survey, the data collection methods used, the sampling techniques employed (sample size determination), and sample selection are explained. The survey instruments used and the data analysis are also discussed.

Data Collection Methods

The Learning Needs Assessment (LNA) was conducted in Montserrado, Margibi, Bong and Nimba Counties. Other counties are expected to conduct a similar assessment when the security situation and access to the health facilities in these counties improves. Because of the security situation that came as a result of the demonstration by combatants in Grand Bassa County, the survey team was unable to conduct the assessment in that county. Other counties had few facilities functioning, while it was not possible to reach others during the short period available for data collection.

The LNA employed three quantitative data collection techniques: 1) health worker interview; 2) exit interview with patients/clients; and 3) observation of health worker performance and record review. These three methods used structured, pre-coded and open-ended questionnaires. The structured interview, record review and observations were all conducted to collect, analyze and interpret quantitative data on safe motherhood interventions, immunization, family planning, care of the well and sick child, breastfeeding and micronutrients, HIV/AIDS, equipment and supplies, laboratory support and client knowledge and service satisfaction.

Sampling Frame

The primary sampling frame for the LNA is the list of all available and functioning clinics, health centers and hospitals in each of the counties

Sample Size Determination

The determination of the number of clinics, health centers and hospitals in which to conduct the survey was first based on the confidence limits with which to interpret the results. The confidence limit accepted was ninety-five percent. The table for sample size determination proposed by the World Health Organization (WHO) in the conduct of institutional surveys contained in the Safe Motherhood Needs Assessment Hand book was consulted and used to obtain the minimum health facilities required for the LNA. The sample of health facilities for each county was based on the number of available and functioning health facilities and the number estimated for the 95 percent confidence limits in the WHO Reference Manual.

The second consideration in determining the required minimum sample selection of the determined number of clinics, health centers and hospitals was that all health centers and hospitals in each county will be included in the sample and counties with less than 10 clinics will have all their clinics included in the sample. Sampling of clinics was done for counties that have more than 10 clinics and the number sampled was obtained using the systematic random sampling technique. The number suggested by the 95 percent confidence interval was used as the sampling interval. This sample interval was used to select from the list of all available and functioning health facilities compiled for each county.

In each health facility, a health worker and client interview was conducted. A minimum of 20 was targeted per facility. Community interview and record reviews were also conducted, targeting Community Health Workers (CHWs) and Trained Traditional Midwives (TTMs).

DATA ANALYSIS

The EPI-Info 2003 statistical computer software developed by the Centers for Disease Control and Prevention, USA, was used to input the questionnaire data and conduct statistical analysis. The survey reports simple percentages; the minimum and maximum vales are reported, including the mean, mode and median estimates. The data is interpreted with respect to identifying the strengths, weaknesses or gaps in the knowledge and clinical practice of health workers, the availability of equipment and supplies and client satisfaction. Findings that point to gaps in knowledge and practice or to lack of equipment or supplies have been highlighted for the curriculum writers.

Results

The data summarized in Table 1 provides information about the total health facilities sampled and their management and support status. A total of 69 health facilities were sampled for the survey. The results in the table shows that all sampled health facilities were surveyed. Government facilities sampled and surveyed were 31 (44.9%), followed by private health facilities 16 (23.2%) and international NGOs 13 (18.8%). Liberian NGO health facilities sampled and surveyed were 5 (7.2%). Those health facilities that were only supported and not managed by the supporting agency constitute 24.6% and those health facilities that were supported and managed by the supporting agencies constituted 65.2%.

Table 1: Management and Support Status of Health Facilities Surveyed

Type of Agency	Total		Support	Management	Support + Mgt.
	No.	%			
GOL	31	44.5	35.5	9.7	54.8
Liberian NGO	5	7.2	0	0	100.0
International NGO	13	18.8	7.7	0	92.3
PVO	16	23.2	25.0	12.5	62.5
CHAL Member	1	1.4	100.0	0.0	0.0
Community Based	3	4.3	0	66.7	33.3
TOTAL	69	100	24.6	10.1	65.2

MAJOR FINDINGS

1. OBSERVATION OF HEALTH CARE DELIVERY AND COMMUNITY INTERVIEW

1.1 Care of the Well Child (Table 1.1)

Table 1.1 Care Provided to a Well Child

INDICATOR	Number	% Yes	% No
1a. Does the health worker ask the mother or caretaker:			
1. why the child was brought to the clinic	59	96.6	3.4
2. when the child was born	56	85.7	14.3
3. what foods she feeds the child	47	83.9	16.1
4. whether the child has been immunized	55	83.6	16.4
5. if immunized, what vaccines the child has received	53	73.6	26.4
6. What the child is able to do (development: sit, walk, talk, etc.)	57	77.2	22.8
Indicator 1b. Does the health worker examine:			
1. weigh the child	56	92.9	7.1
2. record the age	57	89.5	10.5
3. record the weight on the RTH card	56	75.0	25.0
4. check and record weight for height	55	70.9	29.1
5. check the immunization record	56	62.1	17.9
6. check conjunctiva	57	87.7	12.3
Indicator 1c. Does the health worker explain:			
1. the curve on the growth chart and how the child is doing	48	68.8	31.3
2. how and where to look on the chart to see how to make homemade solution	47	78.7	21.3
3. where to look on the card to check the immunization record	48	87.5	12.5
4. how to prepare foods for this child to eat	47	83.0	17.0
5. encourage mother to consider family planning while the child is small	48	79.2	20.8

The data summarized and presented in Table 1.1 is an analysis of the information on care of the well baby child. There are basic questions the health care provider is expected to ask the mother or caretaker of the well baby child. In examining the child, the health worker is also expected to carry out some basic clinical examinations and give information to the mother or caretaker explaining clinical findings.

The information gathered from Table 1.1 indicates the following:

- Between 74 – 94 percent of the health workers were observed asking the basic questions to mothers or caretakers of well children.

- Between 71 – 93 percent of health workers were observed doing the basic things required for routine clinic examination of a well child, except checking the immunization record, which was done in 62% of observations.

- Health workers are expected to explain to mothers/caregivers of well babies the growth monitoring curve; how and where to look on the chart to see how to make homemade dehydrating solution, explain how to prepare foods for the child and encourage family planning while the child is small. The data in Table 1.1 shows that 31.3 percent of health workers observed find some problem in explaining the growth monitoring chart while 79 – 88 percent explained to the parent where to look on the card for immunizations, how to make homemade solution, how to prepare foods for the young child, and encouraged the use of family planning.

Conclusion:

➢ The curriculum must help health workers to better understand the growth chart and provide practice in recording weights and interpreting the information. The health worker should be able to explain the child's growth status to parents and tell why it is important to do so.

1.2 Care of the Sick Child

Table 1.2.1 Care Provided To a Sick Child

INDICATORS	Number	Yes	No
a. Does the health worker ask the mother or caretaker:			
1. why the child was brought to the clinic	57	80.7	19.3
2. when the child was born	55	90.9	9.1
3. when did the child become ill	60	90.0	10.0
4. what is happening to the child (the problem)	59	79.7	20.3
5. if the child has been coughing or having difficulty breathing	57	73.7	26.3
6. if the child is eating/sucking well	57	77.2	22.8
7. if the child has been given any medicine or country medicine before coming	57	80.7	19.3
b. Does the health worker examine:	**Number**	**Yes**	**No**
1. look for lethargy or unconsciousness	58	98.3	1.7
2. take the child's temperature	59	100.0	0.0
3. weigh the child	59	98.3	1.7
4. record the weight on the RTH card	59	79.7	20.3
5. (if child is younger than)check the fontanel	56	89.3	10.7
6. check the ears (look for pus)	57	77.2	22.8
7. check behind the ears for swelling	57	80.7	19.3
8. check the conjunctiva (inflammation, anemia)	51	78.4	21.6
9. check the nose (cold)	57	60.4	39.6
10. check for nasal flaring	53	60.4	39.6
11. check the mouth and throat	53	60.4	39.6
12. check the neck for stiffness	53	69.8	30.2
13. check skin turgor	53	78.2	20.8
14. watch the chest (check for in-drawing)	53	66.0	34.0
15. listen to the chest	54	94.4	.6
16. count breaths per minute	53	69.8	30.2
17. palpate the abdomen (spleen, liver)	55	76.4	23.6

18. check for edema on the feet	53	79.2	20.8
Does the health worker:	**Number**	**Yes**	**No**
1. write findings on the child's record	48	68.8	31.3
2. write the diagnosis on the record	47	78.7	21.3
3. prescribe treatment	48	87.5	12.3
4. explain to the mother/caretaker what the child's problem is	47	83.0	17.0
5. explain what medicines will be given and how to administer them	48	79.2	20.8
6. explain what care to give the child at home	48	75.2	20.8
7. discuss what the child should be given to eat/drink	45	75.6	24.4
8. Explained the signs the mother should watch for that will tell her the child is getting well or needs to be brought back to the facility.	48	79.2	20.8

The data in Table 1.2.1 presents to analysis of the indicators to assess the sick child at the clinic. The information gathered shows that:

- 74 – 90 percent of health workers were observed asking the required questions to the mother/caregiver of the sick child to allow them to understand the history of the illness.

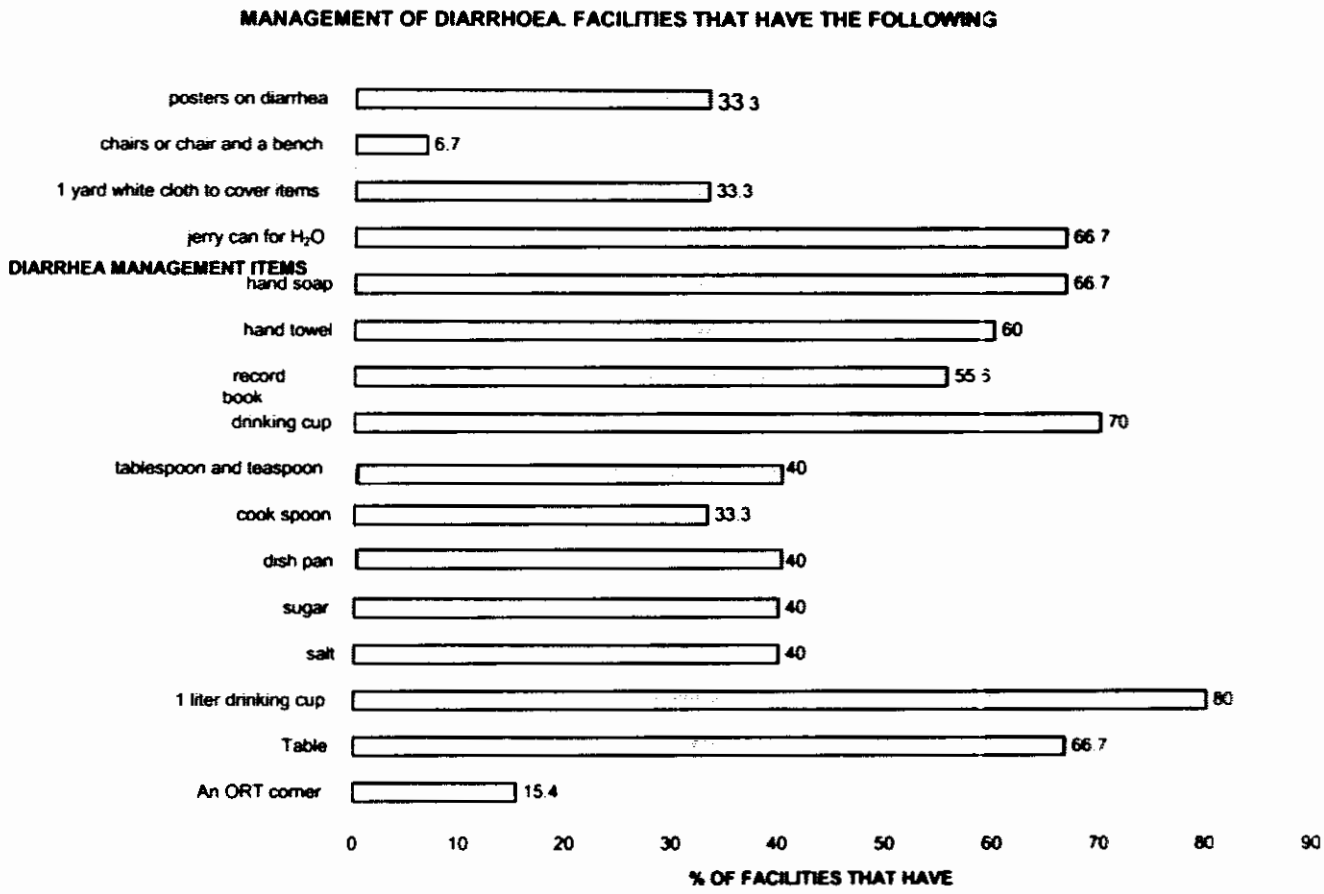
- In the area of clinic examination, only 60 – 70 percent of health workers were observed checking the nose for discharge, observing for chest in-drawing, counting breaths per minute, or checking for nasal flaring. The child's mouth and throat were checked in just 60 percent of observations and 70 percent checked for stiff neck.

- 69 percent of health workers wrote assessment findings on the child's record while 79 percent wrote the diagnosis. 83 percent explained what the child's problem was and 79 percent explained the medicines to be given and how to administer them.

Conclusion:

- Assessment skills for children with respiratory illness should receive special attention in the curriculum. Counseling of the sick child's parent/caregiver needs emphasis. A reminder of the importance of ruling out meningitis in the sick child is needed, as is the need to write assessment findings on the child's record.

1.3 Care of the child with Diarrhea (Figure 1.3)



The data in figure 1 examines the information to assess the indicators for care of the child with diarrhea at the health facility. The data shows that:

- 81 percent of health facilities were observed not to have an ORT corner
- Of the 19 percent of facilities that were observed to have an ORT corner, only 33 – 40 percent was observed to have the basic materials needed to equip it.

Conclusion:

- Because it has been found to be a very effective approach to managing diarrhea in children, health workers should revisit the idea of the ORT corner. The child health curriculum should include the rationale, how to set up an ORT corner and encourage learners to acquire the necessary equipment. Learners should demonstrate their ability to teach parents/caretakers how to care for a child with diarrhea in the home, as soon as the first symptoms are noted.

1.4 Family Planning

Table 1.4: Indicators to Assess Family Planning

INDICATORS	Number	Yes	No
1. Are clients provided with privacy?	23	91.3	8.7
2. Do the health workers appear to be communicating effectively and respectfully with clients?	56	92.9	7.1
3. If counseling is observed, did the health worker give information on all available methods?	56	75.0	25.0
4. If observing IUD insertion or injectable being given, was sterile technique used?	55	70.9	9.1

The findings from Table 1.4 reveal that:

- 91.3 percent of clients were observed to have been provided privacy.
- 93 percent of the health workers were observed communicating effectively and respectfully with clients.
- 25 percent of the health workers who gave counseling did not give information on all of the available methods.
- 9 percent of the health workers were observed not using sterile technique in the insertion of IUD.

Conclusion:

- Counseling of FP clients should be highlighted in the family planning portion of the curriculum. Standard information to be included in family planning counseling should be reviewed and discussed by the learners. Counseling skills should be reviewed and practiced.
- A review of sterile technique, including the reason for observing it, together with practice of the techniques used in family planning services, should be emphasized.

1.5 Immunization:

Table 1.5 Indicators to Assess Immunization

INDICATORS	Number	% Yes	% No
1. Does the health worker wash hands before beginning to vaccinate?	31	77.4	22.6
2. Does the health worker give:			
1. BCG intra-dermal on the upper right arm	30	90.0	10.0
2. Measles subcutaneous on the upper left arm	30	83.3	10.7
3. DPT intramuscular on the upper left thigh	31	90.3	9.7
4. Polio 2-3 drops in the mouth	29	93.1	6.9
5. Yellow fever subcutaneous on the upper left arm	31	87.1	12.9
6. TT intramuscular on the upper left arm	32	90.6	9.4
3. Does the health worker mark the relevant Tally Sheet?	30	96.7	3.3
4. Does the health worker add new children to the record	29	93.1	6.9

ledger and enter today's immunizations?			
5. Does the health worker explain to the mother or caretaker which diseases the child has been protected against today?	31	87.1	12.9
6. Does the health worker tell the mother/caretaker which side effects to expect?	53	79.2	20.8
7. Does the health worker tell the mother/caretaker when to return for the next immunizations?	30	96.7	3.3
8. Is each uncapped syringe with needle deposited in the safety box after each injection?	31	96.8	3.2
9. Are the vaccines held properly in the foam pack?	31	96.8	3.2

The findings from Table 1.5 are:

- 24 percent of the health workers did not wash hands before starting immunization
- 83 – 90 percent of health workers were observed administering the antigens with injections correctly and also correctly giving the required drops for polio.
- 13 percent did not explain to mothers/caregivers about the diseases the child has been protected against, and 20 percent did not explain the side effects the mother/caregiver should expect from the vaccines.

Conclusion:

- The curriculum must help health workers to better understand the growth chart and provide practice in recording weights and interpreting the information. The health worker should be able to explain the child's growth status to parents and tell why it is important to do so.

1.6 Breastfeeding and Micronutrients

Table 1.6 Indicators to Assess Breastfeeding and Micronutrients

INDICATORS	Number	% Yes	% No
1. Look at any nutrition posters seen at the facility. Do the pictures/drawings show:			
1. a child who is stunted	19	66.7	33.3
2. a child with a swollen abdomen and extremities	15	66.7	33.3
3. a child who is very pale	16	43.8	56.3
4. a child with wasted muscles	14	42.9	57.1
2. Other posters:			
5. water and sanitation theme	20	40.0	60.0
6. food security theme	21	42.9	57.1
7. general security theme	21	28.6	71.4

Observations in the facility were focused on health education materials. The findings indicate a need for strengthening the processes used to develop health education visual aids, to ensure they communicate the intended messages.

- 33.3 – 71.6 percent of the posters on breastfeeding and micronutrients did not clearly show stuntedness, swollen abdomen and extremities, paleness or wasted muscles.

- 57 – 71 percent of the posters on the theme of water and sanitation, food security and general security did not show clearly the theme.

1.7 Safe Motherhood

Table 1.7 Indicators to Assess Safe Motherhood

INDICATORS	Number	% Yes	% No
1. Ask to see the maternity area in the facility. Is there:			
1. Screened area for consultation	36	88.9	11.1
2. Labor and delivery room	42	88.1	11.9
3. Operation room	36	52.8	47.2
3. Does the health worker:			
1. check conjunctiva	35	68.6	31.4
2. weigh the woman	36	97.2	2.8
3. check height (first visit only)	36	77.8	22.2
4. take the detailed history (first visit only)	35	82.9	17.1
5. send the woman to the lab (first visit only)	35	68.6	31.4
6. palpate the abdomen	**0**	**0**	**0**
7. measure the abdomen	**0**	**0**	**0**
8. listen to the fetal heart	**0**	**0**	**0**
9. ask about any problems	**0**	**0**	**0**
10. teach the woman about her care	25	71.4	28.6
4. Does the health worker prescribe:	**Number**	**Yes**	**No**
1. Iron + folate	39	94.6	5.1
2. Malaria prophylaxis	35	80.6	19.4

The information gathered from the data analyzed in Table 1.7 on the indicators to assess safe motherhood reveals that:

- 89 percent of the maternity areas in the facilities were screened and therefore privacy was provided in most facilities.

- Health workers weighed the pregnant women in 97 percent of observations and measured their height 78 percent of the time. Reproductive history was taken in 83 percent of observations and some lab work was ordered in 69 percent of cases.

- ***Data related to health worker practice in checking the conjunctiva (anemia screening), palpating and measuring the abdomen, listening for the fetal heart and asking the mother about any problems was not available.***

- 80 – 95 percent were observed to have provided iron plus folate tablets and malaria prophylaxis.

Conclusion:

- The curriculum must help health workers to better understand the growth chart and provide practice in recording weights and interpreting the information. The health worker should be able to explain the child's growth status to parents and tell why it is important to do so.

1.8 Laboratory

Table 1.8 Indicators to Assess Laboratory

INDICATORS	Number	% Yes	% No
1. Is there a space/room for lab services?			
1. Well lighted?	32	90.6	9.4
2. Well ventilated?	32	93.8	6.3
3. Adequate space?	32	90.6	9.4
4. shelves/storage cupboards?	32	56.3	43.8

Findings from Table 1.8 show that:

32 of the health facilities visited had some laboratory services. Observations centered on the features of the space available for the laboratory. 91 percent were observed to be well lighted, ventilated and spacious. 44 percent lacked storage shelves or cupboards.

2.9 COMMUNITY OBSERVATION AND INTERVIEW (RURAL FACILITIES)

Table 2.0 Indicators to Assess Community Health Services

INDICATORS	Number	% Yes	% No
1. Ask to meet the CHWs and TTMs if they are available, to view their records:			
1. Deliveries recorded? (TTM)	26	80.8	19.2
2. Health statistics kept? (CHW)	26	53.8	46.2
2. Do the clinic staff visit you regularly to discuss your work?	32	65.9	34.4
3. What is the people's source of drinking water?			
1. river/creek (unprotected source)	27	25.9	74.1
2. open well	28	53.6	46.4
3. protected spring	22	9.1	90.9
4. hand pump well	31	80.6	19.4
4. Is there a Community Health Committee in the town?			
If yes: Are there meeting records available?	30	30.0	70.0
13. How do the health workers working with you in the community?			
1. Meet with us all regularly	30	66.7	3.3
2. Meet only with CHC, not with everyone	25	16.0	84.0
3. Do not come around	27	22.2	77.8
4. Meet only with or TTM and CHW	29	34.5	65.5
5. Help us to plan and implement projects to improve health	27	33.3	66.7
5. In the town:			
1. grass cut low			

2. animal/human feces not seen around	22	72.7	27.3
3. Waste is kept in specific waste disposal sites.	25	68.0	32.0
4. no pot holes (that would collect water) seen	22	54.5	45.5

The findings show that:

- 81 percent of Trained Traditional Midwives (TTMs) had recorded their deliveries, while 54 percent of Community Health Workers (CHWs) kept health statistics.
- 81 percent of the communities reported using hand pumps as their source for drinking water.
- 34.4 percent of clinic staff did not regularly visit CHWs and TTMs to discuss their work.
- 70 percent of the health facilities did not have records on Community Health Committee meetings held.
- 66 – 84 percent of health workers were reported to visit the CHWs, TTMs and communities regularly to discuss or worked with them in some way. Only 33 percent had helped the community to plan and implement projects to improve health, however.

2.1 REVIEW OF RECORDS AND AVAILABILITY OF EQUIPMENT AND SUPPLIES

The review of the records in facilities showed that in general, health workers are keeping records on patient care. Some gaps were found, particularly in the Safe Motherhood records.

Table 2.1 Indicators to Assess Care of a Child with Diarrhea

INDICATORS	Number	% Yes	% No
1. What age groups had the most diarrhea?			
1. less than 1 year	52	42.3	57.7
2. 1 – 4 years	52	69.2	30.8
3. greater than five years	52	42.3	57.7
2. Were assessment findings written on the patient record card?	59	98.3	1.7
3. Was the diagnosis written?	65	100	0
4. Look at the treatment written on the patient record. Does it include:			
1. ORS for mild/moderate dehydration	55	100	0.0
2. IV for severe dehydration	54	75.9	34.1
3. Referral when necessary	53	45.3	54.7
5. Was advice/instruction recorded on the record?	56	62.5	37.5
6. Does the treatment follow the guidelines?	57	91.2	8.8

The findings from Table 2.1 indicate the following:

- Diarrhea cases were recorded by age group and children less than five years were those most effected (69 percent of cases).

- In 98 – 100 percent of cases, assessment findings and diagnosis were written on the records of children with diarrhea.

- While all children were given oral rehydration solution (ORS), 76 percent apparently also received IV therapy.

- The advice or instruction given to the parent/caregiver was recorded on 63 percent of records.

Conclusion:

➢ Health workers should have the opportunity to further examine the practice of giving IV fluids to a high number of patients with diarrhea. The curriculum should include evidence of the great value of ORS and encourage them to determine the cost effectiveness of IV therapy. The learners should re-visit the Treatment Guidelines. Recording the information given to the parent/caregiver should be reinforced.

2.2 Family Planning Records

Table 2.2 Indicators to Assess Family Planning Records

INDICATORS	Number	% Yes	% No
Ask to see the delivery record books. Do you see:			
1. Antenatal:			
1. Record of blood pressure	57	93.0	7.0
2. Record of fundal height	57	96.5	3.5
3. Routine drugs, including vaccines, recorded	57	98.2	1.8
4. Complications and management recorded	57	65.5	34.5
2. Delivery:			
1. Apgar scores recorded at 1,5, and 10 minutes	45	88.2	11.8
2. Physical exam findings on mother and child recorded	51	82.4	17.6
3. Complications recorded	50	82.0	18.0
4. Weight of baby and time of birth recorded	49	89.8	10.2
5. Immediate care given to the newborn and mother recorded	50	78.0	22.0
3. Postpartum:			
1. Exam findings and care of mother and child recorded	43	83.7	16.3
2. Health education (nutrition, cord care, family planning, personal hygiene)	43	86.0	14.0

The data in Table 2.2 shows that:

- The number of clients and whether they have changed methods in the past month are being kept in facilities where family planning services are provided.

- Antenatal information on blood pressure, fundal height and medications given were recorded in 93 – 98 percent of record books reviewed.

- Antenatal complications and their management were recorded in 66 percent of record books reviewed.

- 78 – 89 percent of the time Information related to labor and delivery was found in the records of the 57 facilities surveyed. . The Apgar scores of newborns were recorded 88 percent of the time. Immediate care given to the mother and newborn was recorded in 78 percent of records.

- 43 facilities out of the 57 facilities surveyed recorded postpartum examination findings, care provided to the mother and child and health information given to the mother.

- Where examination findings related to the mother and baby were present 84 – 88 percent of record books.

Conclusion:

➢ Record keeping of antenatal care, delivery and postpartum care should be given emphasis in the refresher curriculum. Learners should be encouraged to discuss the problems they have in maintaining the record books.

2.3. Laboratory Records

Table 2.3 Indicators to Assess Laboratory Records

INDICATOR	Number	% Yes	% No
(Did you see)			
1. Procedures written	32	87.5	12.5
2. Reports	31	67.7	32.3
3. Requisitions	30	80.0	20
4. Inventories	30	53.3	46.7

Findings from Table 2.3 reveal that:

- Laboratory procedures were written and requisitions seen in 80 – 88 percent of laboratories visited.

- Reports were available in 68 percent of labs, while inventory lists were available in only 53 percent of labs visited.

Conclusion:

➢ Inventory procedures should be included in laboratory training.

2.4 Family Planning

2.4.1 Methods:

The analysis of the data on family planning methods shows that the most frequently available family planning methods were pills and condoms, found in 81 – 95 percent of facilities. Injectable contraceptives were stocked in 70 percent of facilities, while IUDs, foaming tablets and female condoms were available in less than 16 percent of facilities

2.4.2 Equipment and Supplies:

Table 2.4.2. Indicators to Assess Safe Motherhood Equipment

INDICATORS	Number	% Yes	% No
Safe motherhood equipment:			
1. BP cuff in working condition	62	85.5	14.5
2. Stethoscope in working condition	62	87.1	12.9
3. Sterile delivery kit with appropriate instruments	61	75.4	24.6
4. Fetoscope in working condition	62	74.2	25.8
5. Delivery table clean and ready or in use	61	77.0	23.0
6. Sterilizer in working condition	59	64.4	35.6
7. Exam table/bed ready for use/in use	62	79.0	21.0
8. Scales in working condition	61	83.6	16.4
Are the scales calibrated in pounds or kilograms?	**Number**	**% Pounds**	**%Kilograms**
	50	76	24

Findings from Table 2.4.2 show that:

- **Safe Motherhood:** Functional blood pressure cuffs and stethoscopes were found in 86 – 87 percent of facilities. The survey did not seek to determine whether this equipment was for use in providing maternal care, or if they were used for all purposes. (Problems arise when the blood pressure of a labor patient requires close monitoring during hours when general patients are being seen and there is need to check the blood pressure of those patients.) 75 percent of facilities had sterile delivery kits, and 74 percent had a fetoscope in working order. Scales in working condition were found in 84 percent of facilities. 76 percent of scales were calibrated in pounds.

Table 2.4.3 Safe Motherhood Supplies Assessment Indicators

INDICATORS	Number	% Yes	% No
Safe motherhood supplies:			
1. Magnesium sulphate	57	36.8	63.2
2. Syringes and needles (to administer Mg. sulphate and other drugs)	58	77.6	22.4
3. Foley catheters	57	61.4	38.6
4. IV fluids	57	78.9	21.1
5. IV tubing	57	78.9	21.1
6. Partograph forms	56	48.2	51.8
7. Supply of Home-based Record cards	56	57.1	42.4
8. Sterile gloves	56	71.4	28.6
9. Clean gloves	57	91.2	8.8
Is the delivery room:			
1. well lighted	56	91.1	8.9
2. well ventilated	56	83.9	16.1

Findings are:

- Delivery tables were found in 77 percent and examination tables or beds were available in 79 percent of facilities. Sterilizers were present in less than 64 percent of cases.

- Magnesium sulphate was available in only 37 percent of facilities.

- Syringes and needles, IV fluids and tubing were available in 78 – 79 percent of facilities.

- Sterile gloves were available in 71 percent of facilities and clean gloves were found in 91 percent of facilities.

- Partograph forms and Home-based record cards were available in 48 – 57 percent of facilities.

Conclusion:

➢ Since safe motherhood standards include management of pre-eclampsia and eclampsia, which requires magnesium sulphate, efforts are needed to ensure it is available in every clinic where deliveries are done by trained personnel. The curriculum will refresh and update midwives on the Partograph and will stress the use of Home-based records for antenatal women. For the refresher/update curriculum to be effective, these items must be available in every facility.

Table 2.4.3 Immunization Assessment Indicators

INDICATORS	Number	% Yes	% No
Immunization:			
1. Functioning refrigerator			
2. Adequate supply of vaccines			
3. Autodestruct syringes (1 per dose of vaccine)	9	67.3	32.7
4. Mixing needles/syringes (1 per vial)	48	75.0	25.0
5. Cotton wool	49	75.5	24.5
6. Basin to hold the cotton	49	75.5	24.5
7. Safety box	49	87.8	12.2
8. Bag for the garbage	48	58.3	41.7
9. Tape to secure the garbage bag	48	47.9	52.1
10. Water	49	79.6	20.4
11. Soap	50	76.0	24.0
12. Towel (for hand washing)	48	72.9	27.1
13. Table and chair	48	79.2	20.8
14. Road to Health cards	47	83.0	17.0
15. Child Vaccination Tally Sheets	48	87.5	12.5
16. Tetanus Toxoid Tally sheet	47	85.1	14.9

Findings from Table 2.4.3 indicate that:

- **Immunization:** Autodestruct syringes for administering vaccines and syringes with needles for mixing were found in 67 – 76 percent of facilities. Safety boxes

for used syringes were available in 88 percent of cases. Basic equipment and supplies for hand washing were available 73 – 80 percent of the time. Road to Health Cards and tally sheets were available in 83 – 88 percent of facilities

Nutrition:

Table 2.5.4 Nutrition Assessment Indicators

INDICATORS	Number	% Yes	% No
Nutrition:			
1. Infant weighing scale (functional)	49	93.9	6.1
2. MUAC Tape	46	63.0	37.0
3. Height board	48	77.1	22.9
4. Percentage Reference Chart	46	60.9.	39.1

Findings:

- **Nutrition:** Functional infant weighing scales were found in 94 percent of facilities. Other nutrition assessment equipment was available in 63 – 77 percent of units visited

Laboratory:

Table 2.5.5 Laboratory Assessment Indicators

INDICATOR	Number	% Yes	% No
Lab equipment/chemicals/supplies:			
1. microscope	44	84.1	15.9
2. pipettes, various sizes	43	60.5	39.5
3. hemoglobin meter	44	72.7	27.3
4. centrifuge	30	53.3	46.7
5. slides	43	67.4	32.6
6. stain sets	44	50.0	50.0
7. beakers	43	32.6	67.4
8. test tubes	42	71.4	28.6
9. weighing scale	44	47.7	52.3
10. sterile lancets	42	40.5	59.5
11. needles/syringes	43	48.8	51.2
12. reagents	43	58.1	41.9
13. spectrophotometer	42	40.5	59.9
14. cylinder	41	31.7	68.3

Finding:

- **Laboratory:** While microscopes were found in 84 percent of facilities with labs and 73 percent had hemoglobin meters, most other equipment and supplies were found in less than 71 percent of facilities (Table 2.5.5).

3. EXIT INTERVIEWS WITH CLIENTS AT HEALTH FACILITIES

Table 3.1 Indicators to Assess Child Health

INDICATORS	Number	% Know	% Don't Know
1. What treatment did the health worker give?			
1. ORS	57	93.0	7.0
2. Gave IV	33	54.5	45.5
3. Gave medication	49	83.7	16.3
4. Referred me	35	68.6	31.4
2. What do you think made the child to get diarrhea?			
1. different water	45	80.0	20.
2. food	38	73.0	26.3
3. failed to wash hands	39	69.0	30.8
4. other	29	58.6	41.4
3. What will you do when you return home with the child?			
1. ensure safe drinking water	55	83.6	16.6
2. take more care about the food the baby eats	49	83.7	16.3
3. wash hands after toileting	41	70.7	29.3
4. wash hands before feeding or caring for the child	42	76.2	23.8
5. continue giving ORS/homemade solution until the diarrhea stops	41	70.7	29.3
6. continue feeding the child often	38	71.1	28.9
7. continue breastfeeding the child	41	80.5	19.5
4. Are you satisfied with the care you received?			
	74	78.4	21.6

Analysis of the data summarized in Table 3.1 shows that:

- 93 percent of mothers who received medicine(s) knew how to give them to their children, while 63 percent knew what other care to provide at home.
- 69 - 83 percent of mothers know what made the child to get diarrhea and
- 70 – 83.6 percent know what to do when they return home with the child
- 78.4 percent were satisfied with the care received at the health facility 21.6 not satisfied.

Table: 3.2 Care of a Child with Diarrhea

INDICATORS	Number	% Yes	% No
1. Why have you brought the child to the clinic today?			
1. diarrhea	73	80.8	19.2
2. other reason			
If "diarrhea" is the response, continue:			
2. How do you know that you have (or the child has) diarrhea?			
1. one watery stool in one day	23	43.5	56.5
2. two watery stools in one day	41	68.3	31.7
3. multiple watery stools in one day	59	88.1	11.9

3. What action(s) did you take before coming?			
1. gave medicine	44	77.3	22.7
2. gave homemade fluids	0	0	0
3. stopped water	38	68.4	31.6
4. gave ORS	44	0	0
5. stopped food	44	0	0
6. gave country medicine	44	0	0

The information gathered from the data in Table 3.2 shows that:

- Mothers were asked what they thought caused the diarrhea. 73 – 80 percent said they thought different water or food was the cause while 59 – 60 percent mentioned failure to wash hands or other causes. Responses indicate that many mothers are aware of major factors that cause diarrhea.

- When asked what they will do after returning home, 84 percent said they will ensure that drinking water is safe and take more care about the baby's food. 71 – 76 percent of mothers mentioned they will give more attention to hand washing. 71 – 81 percent of mothers said they would give ORS or homemade solution, continue feeding the child often and breastfeed, which indicates basic advice from the health worker was understood.

- 78 percent of mothers interviewed said they were satisfied with the care they received at the facility.

Conclusion:

➢ The child health curriculum should include information on ORS and IV rehydration and a discussion of the reason health workers give so much IV therapy should be included in the learning activities.

Mothers were asked what treatment did the health workers give to the child. The information gathered from Table 3.2.1 indicates that:

Table 3.2.1. Treatment of the Child

INDICATORS	Number	% Yes	% No
4. What treatment did the health worker give?			
1. ORS	57	93.0	7.0
2. Gave IV	33	54.5	45.5
3. Gave medication	49	83.7	16.3
4. Referred me	35	68.6	31.4

- 93 percent of mothers reported that the health worker gave ORS to the child. However, 55 percent reported that the health worker gave IV fluids as well. Medication was given to 84 percent of the mothers.

3.3 Family Planning

Table 3.3 Family Planning Indicators

INDICATORS	Number	%
1. Do you understand how your family planning method works? (Able to say?)	49	61.2
2. Did the health worker answer all your questions so that you are able to understand?	19	57.9
3. How did you get to know about this family planning service?		
1. Got information during antenatal visits	32	75.0
2. Learned about it while having post-abortion care	22	68.2
3. Learned about it during postpartum visit	26	69.2
4. Saw it advertised	19	57.9
5. Heard about it from a friend/relative	41	92.7
6. Was told by a health worker	26	73.1
7. Was told at the pharmacy	12	25.0
8. Heard about it on the radio	36	80.6

Findings:

- 61 percent of clients interviewed on exit said they understood how their family planning method works and 58 percent said the health worker answered their questions in a way they were able to understand.

- 93 get to know about family planning services through radio while 81 percent heard about it from a friend or relative

3.4 Immunization

If proper and adequate health education is given to mothers and caretakers of babies a significant number and percentage of them should know that age at which child is first brought to the health facility for immunization and the diseases the child is being protected against.

The data in Table 3.4 examines the responses of the mothers to the above questions.
Table 3.4:

INDICATORS	Number	% Yes	% No
1. At what age did you first bring your child for immunization?			
1. soon after birth	68	89.7	10.3
2. one month of age	44	59.1	40.9
3. more than one month of age	40	57.5	42.5
2. Which diseases can your child be protected against by immunization?			
1. TB	53	69.8	30.2
2. Measles	79	87.3	12.7
3. Diphtheria	54	64.8	35.2
4. Yellow Fever	53	66.0	34.0
5. Polio/crippling	77	93.5	6.5
6. Whooping Cough	66	81.8	18.2
7. Tetanus	64	81.2	18.8
8. I don't know	33	42.4	54.6

4. Which diseases was the child protected against today? (to get mother's knowledge) Mother knows?	88	59.1	40.9
5. When will you bring the child back for another immunization? Mother knows?	89	82.0	18.0

Findings from Table 3.4:

- 89.7 percent of mothers said they brought baby soon after birth for immunization
- 59.1 percent of mothers have knowledge of the diseases child is being protected against
- 82 percent knows when child is to get other immunizations

3.5 Breastfeeding and Micronutrients

- 76 percent of mothers reported that the health worker asked what they were feeding their babies.
- Started breasting feeding after delivery:
- 97 percent of the 93 mothers asked what they did with the colostrum reported giving it to the baby. 79 percent said the health worker advised them to do so.

4. HEALTH WORKER INTERVIEW (APPENDIX 4)

One of the recommendations of the Safe Motherhood Needs Assessment is that health facilities are to provide integrated services. The information gathered from the data summarized in figure 2 shows that

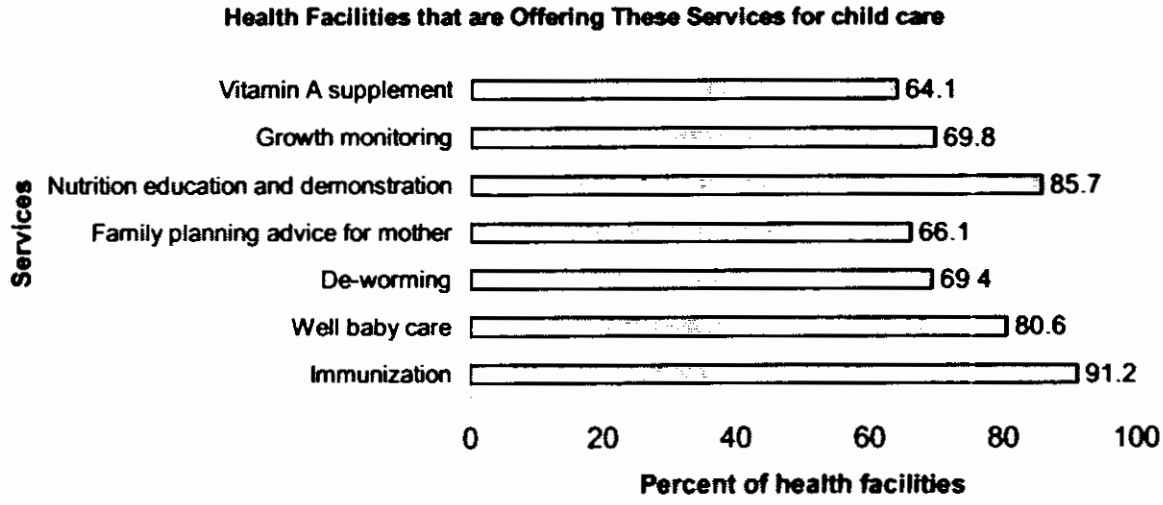


Figure 1

- Between 64 – 69 percent of health facilities are providing family planning advice to mothers, vitamin A and de-worming services.
- Between 86 – 91 percent are providing nutrition education and demonstration and immunization
- 68 percent of health facilities are currently carrying out growth monitoring

Conclusion:

➢ Curriculum needs to emphasize the provision of family planning advice to mothers; de-worming of children and vitamin A supplementation to children and lactating mothers. All facilities are expected to provide well baby care and carry out growth monitoring.

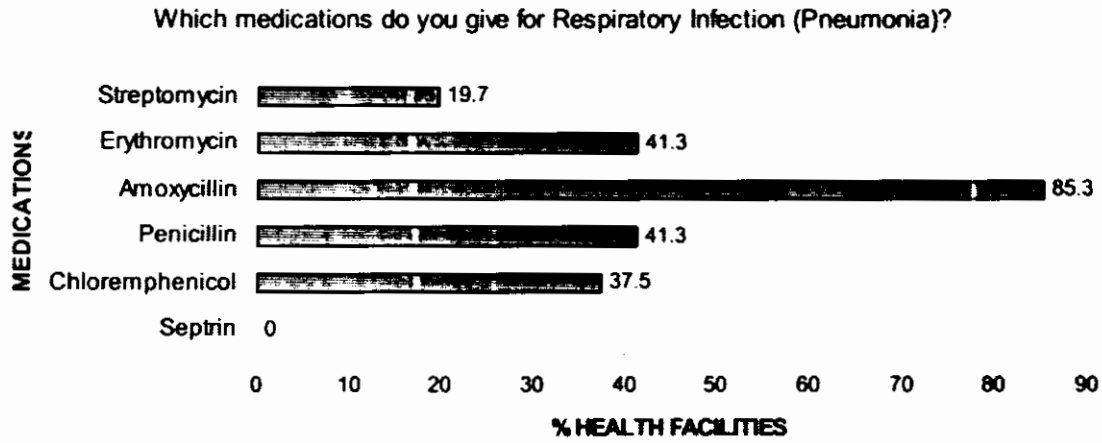


Figure 2

The findings from the data in figure 3 show that for the treatment of respiratory infection 86 percent use Amoxycillin.

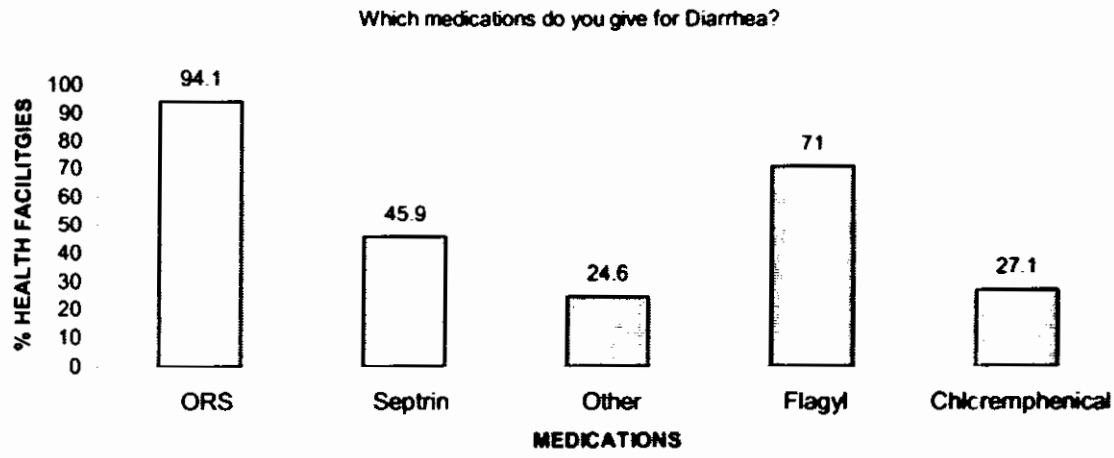


Figure 3

In the treatment of diarrhea 94 percent use ORS and 71 percent Flagyl (figure 4)

It is shown in figure 5 that 55.6 percent of the health providers go through TTM CHWs to work with the community while 42 percent do that through town chiefs and elders

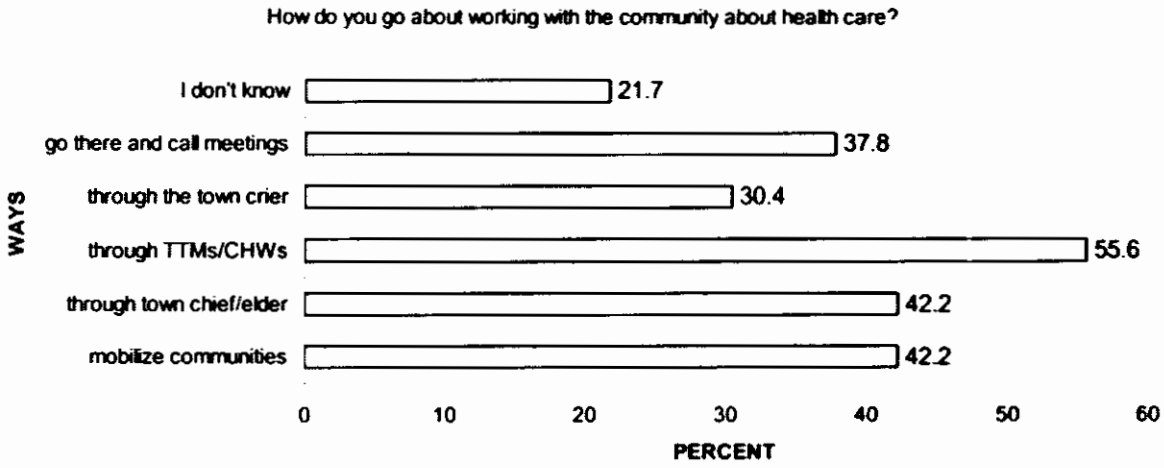


Figure 4

Conclusion:

- Curriculum needs to emphasize the appropriate approach to use to work with the community about health care.

When a child comes to the clinic with diarrhea the health worker is expected to know how to assess the child, what to ask the mother or caretaker of the sick child and the treatment to provide.

Table 4.3 Assessment Indicators for Care of Children with Diarrhea

1a. When a child comes in with diarrhea, what do you do? Assesses:	**Number of facilities**	**% that say Yes**	**% that say No**
1. check skin turgor	51	100.0	0.0
2. check fontanel	56	89.3	10.7
3. look for sunken eyes	54	96.6	3.4
4. look at behavior (are they weak or strong)	55	78.2	21.8
1b. When a child comes in with diarrhea, what do you do? Asks:			
1. how frequent are stools	57	91.2	8.8
2. when the diarrhea started	56	87.5	12.9
3. what has been given to eat/drink	58	84.5	15.9
4. source of drinking water	56	85.7	14.3
5. whether the child has been vomiting	54	5.9	24.1
1c. When a child comes in with diarrhea, what do you do? Provides care:			
1. mixes and shows caretaker how to give ORS	56	96.4	3.6
2. demonstrates how to mix to caretaker	52	76.9	23.1
3. gives IV if dehydration is severe	51	76.5	23.5
4. teaches caretaker how to make salt/sugar/juice solution if dehydration not severe	51	76.5	23.5

The information gathered from Table 4.3 indicates that:

- All of the health workers interviewed know that to look for when a child with diarrhea comes to the health facility (100 percent)
- 91 percent knows that they are expected to ask about the frequency of stool and
- 96 percent knows that they are to provide ORS for treatment

Health providers are expected to know when to refer dehydrated patients, what to explain to the caretaker about prevention of diarrhea and health teaching to give when child is improving

Table 4.4 Care Of Children with Diarrhea

1. What causes you to refer dehydrated patients?	**Number of facilities**	**% that says Yes**	**% that says No**
1. signs of shock seen	51	66.7	33.3
2. severe dehydration	50	74.0	26.0
3. lack of equipment or supplies	49	55.1	44.9
4. limited knowledge and skill for managing diarrhea	50	42.0	58.0
2. What do you explain to the caretaker about prevention of diarrhea?			
1. hand washing	57	84.2	15.8
2. safe drinking water (boil, chlorinate, filter)	57	93.0	7.0
3. wash fruits & vegetables before eating	56	73.0	26.8
4. proper covering/storage of cooked foods	55	81.8	18.2
5. proper garbage disposal	57	70.2	29.8
6. proper human waste disposal			
3. When the child is improved, what health teaching do you give?			
1. mixing ORS/homemade solution	54	75.9	24.1
2. how to encourage the child to continue taking fluids	54	59.3	40.7
3. what danger signs to watch for that will make the caretaker to bring child back	54	61.1	38.9

The information gathered from the data in Table 4.3 shows that:

- 66.7 percent mentioned signs of shock
- 74 percent mentioned severe dehydration
- 44 – 55 percent mentioned lack of supplies, equipment and limited knowledge

It is very important that health providers know how to share health information the community what to do to increase service utilization by the community members; what to look for to measure impact of health services on community health and the population they serve.

Table 4.4. Indicators to Assess Community Health, Service Utilization and Health Impact Measurement

1. How do you share health information with the community?	**Number**	**% Yes**
1. through community workshops	47	0.0
2. through community meetings	47	57.4
3. through CHWs/TTMs/CDCs	49	57.1
4. through community-based health information sessions	49	59.2
2. What do you do to increase service utilization by community members?	**Number**	**Yes**
1. health information sharing sessions and community visits	54	64.8
2. through community-based counseling activities	49	42.9
3. establishing patient friendly clinic approach	47	57.1
4. attending to patients on time	50	50.0
5. explain well about treatment	50	56.0
6. ensure availability of drugs and supplies	50	56.0
3. What do you look for to measure impact of health services in the community?	**Number**	**Yes**
1. increase in clinic attendance		
2. less cases of preventable diseases	49	49.0
3. increase in demand for service (prenatal and postpartum clinic attendance)	47	55.3
4. Timely referral by community level health workers (TTMs/CHWs) to health facility	48	39.6
5. Increase in immunization coverage (under 1's and women of child bearing age)	48	41.7
6. Community innovation and self help initiatives to do projects, e.g. water, improved environment	47	36.2
	Number	**Knows**
4. What is your estimated population of children need to receive DPT/Polio III immunization this year?	45	53.3

Findings:

- A significant percent of health providers do not know the population of children to receive DPT/OPV immunization
- Less than fifty percent to not know what to look for to measure impact of health services in the community
- Less than 60 percent do not know what to do to increase service utilization by the community and how to share health information

Conclusion:

- Curriculum most emphasize the need to know service population; what to look for to measure impact of health services in the community; what to do to increase service utilization by the community and how to share health information.

DISCUSSION:

The strength and weaknesses of the existing curriculum has been identified by this learning needs assessment survey. What the new curriculum must now emphasize has been highlighted in the conclusions drawn from the analysis of the data. It is now clear that the curriculum must emphasize the need to know service population, what to look for to measure impact of health services in the community, what to do to increase service utilization by the community and how to share health information.

There is a need to identify the appropriate approach to use to work with the community about health care. The curriculum needs to emphasize the provision of family planning advice to mothers; de-worming of children and vitamin A supplementation to children and lactating mothers. All facilities are expected to provide well baby care and carry out growth monitoring. The data has identified the need for the curriculum to include information on ORS and IV re-hydration and a discussion of the reason health workers give so much IV therapy. Since safe motherhood standards include management of pre-eclampsia and eclampsia, which requires magnesium sulphate, efforts are needed to ensure it is available in every clinic where deliveries are done by trained personnel.

The curriculum will refresh and update midwives on the Partograph and will stress the use of Home-based records for antenatal women. For the refresher/update curriculum to be effective, these items must be available in every facility. The safe motherhood curriculum should include the actions and reason for each action taken to provide good antenatal care. Learners should demonstrate their skills in providing that care to antenatal mothers.

The curriculum must help health workers to better understand the growth chart and provide practice in recording weights and interpreting the information. The health worker should be able to explain the child's growth status to parents and tell why it is important to do so. Analysis of the lab data clearly shows that inventory procedures should be included in laboratory training. Record keeping of antenatal care, delivery and postpartum care should be given emphasis in the refresher curriculum. Learners should be encouraged to discuss the problems they have in maintaining the record books. Because of the large number of the portion of the health worker interview questionnaire on gender and STI/HIV/AIDS that was not filled, the data in this section could not be included in this analysis. However, the curriculum should include issues of gender and HIV/AIDS.

If this needs assessment is going to be conducted in other counties, there is a need to review the questions and reduce them and make the questionnaire short. The time required to complete the health worker questionnaire is too long. This is one of the reasons why the STI/HIV/AIDS and gender sections were not completed in most cases.

Since the STI/HIV/AIDS and gender sections are relevant to this needs assessment resources should be provided to redo this part of the assessment.