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REACH

RESOURCES
FOR CHILD
HEALTH

**STRENGTHENING TRAINING IN THE
ACCELERATED COOPERATION FOR CHILD SURVIVAL
(ACCS) PROJECT**

Sana'a, Republic of Yemen

1 February - 8 March, 1992



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ACRONYMS

ACCS	Accelerated cooperation for child survival
COP	Chief of party
DG	Director general
EPI	Expanded program on immunization
FT/Ser	Female trainer supervisor
FPHCW	Female primary health worker
HMI	Health manpower institute
HO	Health office
HC	Health center
HTC	Health training center
LCCD	Local council for cooperative development
MCH	Mother and child health
MOH	Ministry of health
MOPH	Ministry of public health
MPHCW	Male primary health care worker
MT/Ser	Male trainer supervisor
ORT	Oral rehydration therapy
PH	Public health
PHC	Primary health care
PHCW	Primary health care worker
PHCU	Primary health care unit
REACH	Resources for child health
TOT	Training of trainers
T/Ser	Trainer supervisor
USAID	United States Agency for International Development

I. EXECUTIVE SUMMARY

Technical assistance from the training consultant was requested by ACCS/REACH with MOH and USAID concurrence to prepare and support training in six new HTC's in three target governorates: Hajjah, Mareb, and Saadah. Training started in September 1990 and is now finished in most HTC's. In June 1990, the consultant prepared and conducted a TOT workshop for the people responsible to select, train and supervise the PHCW's. During the training process, she came back twice to assess progress of training and identify problem areas; once in November 1990 in the start up phase of training, and another time in July 1991. The present consultancy is a follow up of the previous ones and will focus on the terminal evaluation of training. Training of new classes of FPHCW's will soon start in Hodeidah governorate, and the consultant was also requested to review and assess the PHCW training plan, facilities, equipment and materials in this governorate. She will also assist in preparing and conducting a TOT workshop in Hodeidah similar to the one held in June 1990.

To do the terminal training assessment, the consultant first discussed with HMI and MOH the results of the final examination of trainees in the centers where they were tested. She then developed her evaluation methodology and designed questionnaires and evaluation forms addressed to T/Sers, HTC directors, and PHC directors.

A meeting was organized with the project coordinators and they were asked to administer the evaluation forms and questionnaires to the concerned people. After the data were gathered, the consultant analyzed them and made appropriate recommendations for future training plans in the governorates. Then, the consultant made field visits to HTC's, health units, and health offices in the governorates. She met with the DG's and PHC directors and discussed with them her findings and future training plans.

After this initial phase of her consultancy, the consultant traveled to Hodeidah and discussed the preparations for the training course with the DG of the health office, MCH director, training director, and HMI. She visited the health training centers and reported on their facilities and resources.

A. The following is a recapitulation of the consultant's main findings:

1. A total of 166 MPHWC's were trained for a total of 13 months in Al Shaghadirah, Aflah Al Sham, Al Huzmah, Harib, Razeh, and Kutaf HTC's. Trainees were tested by a team from HMI and MOH training department in December 1991. 137 MPHWC's passed the final examinations, and 29 failed.
2. Six FPHCW's were trained in Harib HTC by a Sudanese FT/Ser for a total of 12 months. After completion of training and fulfillment of the required number of deliveries, FPHCW's were tested by a team from HMI and MOH MCH department. They all received excellent scores.
3. Thirteen FPHCW's were trained in Aflah Al Sham HTC for a total of 16 months. The FT/Ser changed twice, and every time she changed, training was interrupted for about 2 weeks. During the training period, every FPHCW delivered 3-5 deliveries on her own. A team from HMI Hajjah and MOH MCH department tested the trainees. Twelve of them passed, and one failed because she was poor at delivery experience.
4. Ten FPHCW's have been training in Al Shaghadirah HTC for the past 6 months. Their FT/Ser is a Sudanese midwife who was contracted by the project. Training is progressing well so far. The team from HMI and MOH MCH department evaluated them, and all trainees received very

good evaluations. Just after Ramadan, it was agreed that the trainees and their supervisor would move to Hajjah Hospital to get practical training in delivery and MCH care.

5. Ten FPHCWs have been training in Razeh HTC since April 1991. In November 1991, their T/Ser left for personal reasons and training stopped for one month. Training was then resumed when the project contracted another Sudanese FT/Ser.
6. Most MPHWCs are already posted or will soon be posted in temporary units that were provided by LCCDs or by the community. These units are not yet equipped because the project was late in ordering their furniture and equipment. Some of the MPHWCs will be posted in fixed health units, and some in HTCs. Most health units in the governorates will be staffed with one or two MPHWCs. In a great number of these, there is also a male foreign nurse working there.
7. All FPHCWs from Harib HTC and most FPHCWs from Aflah Al Sham will work in their respective center to run the MCH unit. However, in both centers, the MCH unit has not been readied yet. Five of Aflah Al Sham FPHCWs will work in temporary units.
8. In every governorate, the health office designed a supervision plan to make optimal use of its human resources. Major constraints to implementing a satisfactory supervision plan are logistic problems and the limited number of T/Sers in the governorate. Supervision of FPHCWs will be the most difficult because of shortage of FT/Sers in the governorates (one in Hajjah, one in Saadah, and none in Mareb).
9. In all governorates, there is a shortage of qualified Yemeni staff. This results in a deficient management and supervision system, and thus has a negative impact on the quality of services in the referral centers.
10. The goals and objectives of the PHCW training have partially been achieved. More MPHWCs received training than initially planned, and no needs assessment was made prior to deciding how many and from where PHCWs should be trained. This resulted in having two or more MPHWCs in some units. Recruitment of FPHCWs was partially successful as some females from health units could be recruited in addition to females from the area surrounding the health center. After training was finished in some centers, many more females from rural areas proceeded to train as FPHCWs.

After FPHCWs graduate, they will be able to run the MCH services in their respective centers, and this is a great achievement for the provision of basic services in their area.

The major problems that were identified during training are summarized as follows:

- Inappropriate trainee selection: trainee selection was made without the participation of T/Sers and often without the involvement of MOH and HMI. Criteria for PHCWs selection were not strictly followed. This resulted in selection of candidates who were either too young or inadequate. The number of PHCWs per class was also too large.
- Initially, there was only one T/Ser in charge of training, and in most centers the T/Ser had no previous experience in training. Even though the project contracted an experienced T/Ser for two months to assist in training, this assistance was insufficient. For better results, there need to be two T/Sers per class.
- Sudanese FT/Sers contracted by the project were not experienced in PHCWs training. In addition, two of them broke the contract before training was finished. In general, they

were also confused as to whom they should refer, the project or the health office in the governorate; this created some problems between them and the health offices.

- The role of the HTC director in the training process was not clearly defined. This created problems among the director, the trainers, and trainees.
- Inadequate HTCs services: Most centers lacked essential MCH services and health education activities. There was some improvement in the centers' services as the training progressed, but they are still insufficient.
- Lack of essential training resources and materials:
 - Copies of the curriculum were not distributed to the students.
 - Female curriculum has not yet been finalized.
 - Reference books and pamphlets were distributed to the centers when training was almost finished.
 - Slides and films have not yet been ordered.
- Training supervision from the health office was insufficient, partly due to logistic problems and shortage of professional staff.

Consultant's recommendations can be summarized as follows:

1. Suggestions to improve the quality of training:

- Selection of PHCWs should be done by MOH and HMI in conjunction with the health office in the governorate. Prior to selection, the number of PHCWs to be trained and the areas from where they should be selected should be defined according to a needs assessment study. This needs assessment can be done by the central MOH in conjunction with the health office in the governorate. After defining the number of trainees and their home place, LCCDs and the people from the community are asked to present candidates from which competent authorities will select PHCWs. Criteria for selection concerning age, school level, commitment to training and future employment, general behavior and attitudes, should be well defined. The number of PHCWs per class should not exceed 15.
- Selection of HTCs should be according to a criteria set by the MOPH that indicates the staffing and health service delivery standards required to meet the needs of the students and improve the utilization of services by the community. The health training center should be involved in both preventive and curative activities. This should include complete MCH services.
- Two T/Sers should be involved in training a class of PHCWs. The health center staff in addition to other professionals from the governorate health office should also get involved in giving some classes on specific subjects.
- In the course plan, devote more time to practical training, and try to link theory to practice and vice versa.
- HTC director responsibilities and participation in the training process should be defined.
- Training supervision from the governorate health office should be reinforced. Participation of HMI in training supervision could have a positive impact on the quality of training. Training supervision of FPHCWs could be done by central MOH/MCH department in the governorates where there are no FT/Sers or professional midwives.

- Involve the health education department of the governorate in the training process.
2. Provide support and supervision of the newly graduated PHCWs. This is the governorate health office's responsibility. Project could support it by:
 - Providing funds to enlarge Aflah Al Sham HTC with the aim of accommodating complete MCH services that would be run by the graduated FPHCWs.
 - Contracting with a FT/Ser who would support and follow on the graduated FPHCWs in the governorates where there is no FT/Ser.
 3. Project could support training of new classes of FPHCWs selected from the rural areas. All governorates have already selected new groups of female candidates willing to train as PHCWs. Health offices have also identified the HTCs where these females could be trained: Haidan HTC in Saadah governorate; Al Taur, Al Madan, and Harad centers in Hajjah governorate; and Al Huzmah, Juba, Sawah, and Rahabah health centers in Mareb governorate.
 4. Project could support training of professional staff (nurses, medical assistant, MT/Sers, midwives, FT/Sers) in the governorates, particularly in the rural areas. Candidates could be selected from the graduated PHCWs.
 5. Project could support service training of personnel in the governorates, and refresher courses for the PHCWs.
 6. Project could support HMI programs in Hajjah and Saadah by:
 - providing technical assistance to set up the program
 - contracting with FT/Sers to be in charge of the midwifery program training in Hajjah HMI
 - providing training materials and resource books.

II. PURPOSE OF VISIT

The purpose of the consultancy can be divided into 3 main components:

- A. Prepare and conduct a comprehensive end of term primary health care evaluation at the six MOPH/HTCs in Marib, Hajjah, and Saadah governorates where the PHCWs training took place and ended by the end of 1991.

The methods and approaches used in this consultancy are designed not only to look at the results of the theoretical and practical training experience itself; but also, to begin to look at other issues generated as a result of this training. The findings and recommendations from this consultancy will be used to help determine the direction to be taken in the development of the PHC system in these and the other governorates by the MOPH/HMI in the future.

The consultant will develop an evaluation methodology that will draw upon the experience and recommendations from the previous consultancies. The consultant will focus on evaluation of the following interrelated areas:

- The health training center's theoretical and practical training experience for male and female PHCWs. Were the training goals and objectives achieved to the satisfaction of the MOPH/

HMI and the project? What does the evaluation team consider the minimum criteria and/or operational requirements that must be established and functional in a health training center before students are received for training? Do the six health training centers now qualify? What are the recommendations of the consulting team regarding the future role of these centers?

- For any future training, what types of students should be recruited, what should be the criteria for selection, and what is the role of the MOPH and HMI in this process?
 - Future of newly graduated PHCWs. Will they be employed? Will they be provided with an adequate work facility? To what extent is the governorate health office prepared to support these graduates in the field? Is there an operational budget for drugs, medical supplies and other running costs for the basic package of services they are expected to provide?
 - Health office management and supervision. Who will supervise this newly trained cadre of personnel and how? By what methods will their progress be monitored? What practical steps in the area of management and supervision does the health office need to take to improve the delivery of health services through this new cadre of PHCWs? Are these feasible in the short and long term?
- B. Assess progress of training in Al Shaghadirah and Razih HTC where FPHCWs training is still taking place, and design a plan to fulfill their practical training.
- C. Prepare the start up phase of training at four HTCs in Hodeidah governorate (Tahreer, Marawiah, Haiss, and Zaydiah), and plan and conduct a training of trainers (TOT) workshop for the trainers and supervisors responsible for a new class of FPHCWs at these four HTCs. In preparing for this workshop, experience is to be drawn from the previous consultancies and particularly from the TOT workshop held in Sana'a in June, 1990. The design of the workshop shall include all stages in both theoretical and practical training to assure that the students will graduate and successfully assume their roles as PHCWs. Special attention will be given in the course plan to assure that the students receive the required hands on delivery experience within the training period.

Collaborating in this workshop will be a teaching methods consultant. This person will be responsible for providing assistance in developing a brief guide for the trainer/supervisors and demonstrating techniques on how to use the curriculum manual and resource materials made available by the project.

III. BACKGROUND

The ACCS project is a collaborative effort between the MOH, USAID, and its contractors to strengthen the delivery of basic health services to the remote and underserved population at risk. Its first component, which involves upgrading and expanding PHC systems, is managed by REACH. In 1990 and 1991, REACH supported training classes of PHCWs in Saadah, Hajjah, and Mareb governorates in the following HTCs: Razeh, Kutaf, Aflah Al Sham, Al Shaghadirah, Harib and Al Huzmah. Male training ended in all governorates, and female training ended in Harib and Aflah Al Sham HTCs. FPHCWs are still training in Al Shaghadirah and Razeh HTCs. In June 1990, the consultant prepared and conducted a TOT workshop for the people responsible to select, train and supervise the PHCWs. During the training process, she came back twice to assess the progress of training and identify problem areas: once in November 1990 in the start up phase of training; and

another time in July 1991. The present consultancy is a follow up of the previous ones and will focus on the final evaluation of training.

REACH is planning to support training of 60 FPHCWs in Hodeidah governorates in the following HTC's: Marawiah, Haith, Zaidiah, and Tahreer. Training will start in April 1992, and the consultant was asked to assist in the preparation phase of training, and to conduct a TOT workshop in Hodeidah similar to the one held in June 1990.

IV. TRIP ACTIVITIES

After initial briefing by REACH about the progress of training since her last visit in July 1991, the consultant had an entry briefing at USAID and MOH.

She first discussed with HMI and MOH the results of the final examination of trainees in the centers where they were already tested, and was informed of the evaluation schedule of the other trainees.

She then developed her evaluation methodology and designed questionnaires and evaluation forms addressed to T/Sers, HTC directors, and PHC directors.

A meeting was organized with the project coordinators and they were asked to administer the evaluation forms and questionnaires to the concerned people.

After this initial phase of her consultancy, the consultant traveled to Hodeidah and discussed with DG of health office, MCH director, training director, and HMI preparations for the training course. She visited the health training centers and reported on their facilities and resources. She also assisted in the preparation and participated in the TOT workshop that was held in Hodeidah on February 23, 1992.

Finally, she had field trips to all the project governorates where she visited the health centers where training is still taking place, health units, and the health offices in the governorates. She discussed the results of her evaluation and the scope of future project contribution with DGs and PHC directors.

At the end of her trip, the consultant had a debriefing with HMI, MOH, and USAID.

V. METHODOLOGY AND APPROACHES

The consultant used a variety of approaches to conduct the assignment:

- Analysis of the results of the final testing of students administered by a team from HMI and MOH. The final testing of PHCWs included a skills test, an oral exam, and a written exam to assess the various areas of knowledge. See Appendix 1 for results of the final examination.
- Analysis of T/Ser's final evaluation questionnaire. The questionnaire was designed by the consultant and administered by the project coordinators. See Appendix 4.
- Analysis of the T/Sers and PHCWs perceptions about the training activity done during the process evaluations.

- On-site evaluation of FPHCWs with a team from HMI and MOH MCH department.
- Observation of training classes.
- Interviews and discussions with key players in the training process: T/Sers and students.
- Field visits to HTC's to record their facilities, equipment, staff, and services provided including patients load. See Appendix 5 (HTC evaluation sheet).
- Analysis of the HTC's monthly report to perform a preliminary evaluation about its various activities and services. See Appendix 6 and 7.
- Data collection on the distribution of health facilities and personnel working in PHC in each governorate. The project coordinators provided data through the use of special forms designed by the consultant. See appendices 2 and 3.
- Meeting with key officials at the MOH, HMI, and governorate health offices.
- Briefing and debriefing sessions at USAID and the REACH ACCS project office.

VI. MAIN FINDINGS

A. General:

1. Results of final testing of trainees:

a. Final testing of male trainees:

After completion of their practical and theoretical training, MPHCWs were tested by a team from HMI and MOH training department. Performance as a whole was not satisfactory, and it was elected to extend their practical training for 2 additional months. The final examination was repeated at the end of 1991, and results are shown in Appendix 1.

The final examination included an oral exam, a comprehensive written exam in all areas of knowledge, and a practical testing of clinical skills. Knowledge and performance in the following areas were tested: general public health concepts, immunization, maternal care, diarrheal diseases and malnutrition, prevention of diseases and health education, basic human anatomy and physiology, microbes and parasites, infectious diseases and endemic diseases, essential drugs.

Students were given a grade in every area of testing in addition to an evaluation grade of attitudes and behavior. Any grade under 50 was considered a failing grade, and any trainee with such a grade was not allowed to pass even if his average grade was above 60. Then, every student was given an average grade that was evaluated as follows:

- 90 to 100 excellent
- 80 to 90 very good
- 65 to 80 good
- 50 to 65 pass, provided the trainee had no failing grade.

Trainees performed evenly in all areas of testing, and there was no major discrepancy between one subject of testing and the other.

There are however differences in the overall performance of the different centers. Evaluation of the average trainees results in the different centers can be summarized as follows:

HTC/evaluation grade	excellent	very good	good	pass	fail	T
Harib	0	4	18	4	7	35
Al Huzmah	0	2	21	3	9	35
Razeh	0	2	15	2	1	20
Kutaf	0	0	3	9	7	19
Aflah Al Sham	1	7	14	0	2	24
Al Shaghadirah	1	5	15	4	8	33

As can be noted, Aflah Al Sham and Razeh HTC performances are the best and the most consistent. Apart from 2 failures for Aflah Al Sham HTC, and 1 failure and 2 pass for Razeh HTC, all students received either a good or very good evaluation. This is surprising if one considers the limited HTC facilities in Aflah Al Sham, and it is a good illustration that the most important determining factor in the issue of training is the human factor rather than physical resources and center facilities. Both the trainee motivation and qualifications, and the T/Sers motivation and performance are of utmost importance in predicting the outcome of training. If one looks at the evaluation grade in terms of attitudes and behavior, one notices that most Aflah Al Sham trainees received very good grades. This concurs with the trainers' and consultant's perceptions during process evaluation concerning Aflah Al Sham trainees motivation and interest in training.

Kutaf performance was the least efficient, as was expected from the process evaluation which identified major constraints in Kutaf HTC: lack of interaction between T/Ser and trainees, lack of commitment of PHCWs to the training activities, and insufficient HTC facilities and services.

The large number of failures observed in Harib, Al Huzmah, and Al Shaghadirah HTCs is partly due to the large number of PHCWs being trained together; some of whom entered the course after the initial selection was made. This opens a debate about the optimal number of trainees per class and the criteria for PHCWs selection. Ideally, the number of PHCWs per training class should not exceed 15, and this was the number that was initially planned. However, pressure from the local authorities, namely LCCDs, led to include more trainees per class. Criteria for student selection should be strict, and selection should be done by competent authorities including MOH and HMI representatives.

b. Final testing of female trainees:

In Harib HTC, all FPHCWs received excellent evaluation, and all completed the required number of deliveries before training was finished. The success of training was due to a good initial trainee selection, as well as to the competence of the FT/Ser and the continuity of training. Training was successful despite limited HTC facilities.

In Aflah Al Sham HTC, results were also good despite the difficulties that were encountered during training: selection of candidates that were too young (results of these were poorer than those of the other trainees), insufficient HTC facilities, interruptions during the course of

training, and the change of FT/Sers twice during training. The choice of Abs HTC for practical training was not the best, in view of the small numbers of deliveries that are done in the center. No trainee was able to perform more than 5 deliveries on her own. The only trainee who failed did not move to Abs HTC, and hence did not acquire practical training on deliveries. Her performance was poor in this respect.

2. MT/Sers training evaluation:

Every MT/Ser who was involved in the PHCWs course was given a questionnaire to complete (see Appendix 4). Answers to this questionnaire were analyzed.

a. Course objectives:

Most PHCWs acquired the theoretical knowledge that is required of them to a large extent. They also acquired clinical skills, but to a lesser extent. This is partly due to the fact that there was more time devoted to theoretical classes than to practical training in the center and the community, with often little link between theory and practice. The large number of trainees and the limited physical and human training resources were also an obstacle to proper practical training. Most T/Sers mentioned that PHCWs still need to get additional practical training in the following areas: first aid, aseptic techniques, suturing.

There was a large discrepancy in the trainees ability to perform as health educators. During the process evaluations, it was found that in their training course, many MT/Sers focused more on clinical issues and curative medicine than on prevention and health education. Two factors probably contributed to this fact: The MT/Ser background is clinical(nurse or medical assistant), and most health centers looked like curative centers and lacked proper MCH and preventive activities.

T/Sers showed awareness of this deficiency and noted that PHCWs need more training in communication skills, health education, field visits, and environmental health.

b. Curriculum content:

All T/Sers found the curriculum content easy enough for the PHCWs to understand except for the part concerned with psychiatric diseases (one MT/Ser mentioned that this part needs to be simplified). They found it comprehensive and inclusive of all important subjects. Nevertheless, two of the T/Sers suggested to include delivery in the MPHWCs curriculum. One also suggested to give more details about common diseases like hypertension, diabetes, and about infant care. No T/Ser suggested to cancel part of the curriculum. All its material was found to be useful.

c. Training materials and resource books:

T/Sers mentioned that the training materials were insufficient. Audiovisual materials like posters, slides, and films were specifically lacking. The posters on human anatomy were all labeled in english. During training, they also lacked reference books and copies of the curriculum to distribute to PHCWs.

The following reference books were used by T/Sers:

- Where There is No Doctor
- First aid
- Advantages of breastfeeding
- Safety principles in family planning
- References on environmental health

- Facts for life
- Books on immunization
- Book on child growth
- General nursing
- Basic human anatomy and physiology
- Internal diseases
- Public health and communicable diseases
- child nursing

d. Teaching methodology:

The most common method used by the T/Sers was lectures with or without discussions. They also used, to a lesser extent, role play, production of audiovisual aids, and case studies. One T/Ser mentioned that he would often let one of the trainees prepare a lecture on a specific subject. Direct field observations followed by discussions was also mentioned. Films and slides could not be used because they were not available. Paper supplies were also insufficient so that the trainees could not produce posters.

e. Course structure and organization:

T/Sers could not follow the course work plan that was designed during the TOT workshop because of the large number of students, the limited center facilities, and logistic problems. As a result of that, the time that was spent on the different activities varied from one center to another. In all centers, PHCWs trained for a total of 13 months. All but Razez HTC trainees had 9 to 10 months of theoretical training, and about 3 months of practical training. T/Sers felt that the time devoted to practical training was insufficient, and some of them felt that the time devoted to theoretical training was too long. Except for one T/Ser who felt that the overall training period was too long, the others felt it was adequate. In Razez HTC, they spent an equal amount of time in theoretical and practical training because of better center facilities. This was already noted in the process evaluation.

Trainees of all centers had 2 to 4 weeks of field work and outreach activities. These included:

- Checking on food quality in the market, making sure that it was not outdated.
- Information campaign to warn people about the dangers of outdated food.
- Information campaign about proper garbage disposal.
- Field survey about sources of water and garbage disposal.
- Checking on the quality of restaurants.
- Field trips to places of endemic malaria and bilharzia.
- Cleaning campaign.
- Field trips to health units to get initiated to future work.

Suggestions to improve the course organization included: devoting more time to practical training, alternating periods of theoretical and practical training, providing logistic facilities, and ensuring cooperation of the different people involved in the training organization like T/Sers, HTC directors, and governorate health office.

f. Qualifications of the HTCs:

Most T/Sers felt that the HTCs facilities were limited for the following reasons:

- Shortage of professional staff both medical and administrative
- Shortage of trainers
- Insufficient number of patients

- Lack of essential equipment and supplies like generator, X-ray, delivery room, and medications
- Lack of transportation facilities
- Poor living conditions

Despite this fact , many T/Sers thought that the choice of these HTC's was adequate because they serve a large population of needy people who are lacking essential health services. The choice of these centers facilitated the recruitment of PHCWs from the surrounding area.

g. Trainee selection:

There was a discrepancy in the adequacy of trainee selection in the different training centers. Suggestions to improve PHCWs selection included the following:

- Selection should be made with the cooperation of governorate health office, MOH, HMI, T/Sers, LCCDs, local directorate, and influential people in the community.
- PHCWs should be recruited from the areas surrounding the health units.
- Criteria for selection should include behavior and attitudes, motivation, age, and school level.

h. Future T/Ser task:

Four of the T/Sers will work in PHCWs supervision, two were posted in the health office for administrative tasks, one was posted in a hospital, and one will be in charge of the health education department in the governorate.

B. Specific:

1. Saadah governorate:

a. Progress of training since consultant's last visit:

- Male training: MPHWCs from both Kutaf and Razeh HTC's completed their theoretical as well as practical training in Al Jumhuri and Al Salam hospital in October 1991. They were tested by a team from MOH training department and HMI. Results were unsatisfactory, and the examining team decided to extend their practical training for 2 more months. After these 2 additional months of training, students were tested again. See results of their final examination in Appendix 1.

- Female training: Until November 1991, FPHCWs training progressed well in Razeh HTC. In November 1991, the Sudanese FT/Ser in charge of training left for personal reasons. Training stopped for one month until the project contracted another Sudanese FT/Ser who resumed the course in January 1992. There are now 10 FPHCWs training in the center. Two professional midwives from MOH MCH department went to Razeh on March 1st to evaluate the trainees. They received good evaluations in all areas of theoretical knowledge, but their performance was insufficient in delivery practice on the doll. In general, the practical training they had in the center was insufficient in maternal care because very few women come to the center for pre or postnatal care , or for deliveries. After Ramadan, the trainees will move to Saadah Al Jumhuri hospital and Al Salam hospital to get practical training in deliveries and MCH care.

b. Preparations for posting PHCWs

The newly graduated MPH CWs from Razeh HTC will be posted in 13 units except for one MPH CW who will be posted in Haydan health center. All but 3 units will have 2 MPH CWs posted in them. 4 of these units are fixed, while the others are temporary units either in a school or in a facility provided by LCCDs.

Concerning the MPH CWs who trained in Kutaf HTC, 9 will be posted in 9 different units, and 3 will be posted in health centers. Four of these health units are fixed while 5 are temporary. Health office in Saadah requested the postponement of the military service of the freshly graduated PHCWs for 2 years. As soon as the approval comes, the PHCWs will be ready to graduate and be posted in their place of work.

c. Management and supervision plan of the PHCUs:

The health office in Saadah designed a management and supervision plan that will be implemented from Saadah health office. There will be no supervising health center. It was also decided to combine supervision of EPI and PHC services. The governorate was divided in 3 main divisions, and one person was designated to be in charge of EPI and PHC supervision in every division. Two of the supervisors that were designated were trained in supervision, and one was trained in health statistics. It takes about 10 to 15 days for the supervisor to make a round trip to the health units and centers included in his area. He will do a monthly visit to these units and centers during which he will distribute supplies and essential drugs, monitor EPI activities, supervise PHCWs, and gather reports and statistics.

d. Distribution of health facilities in Saadah governorate:

Total number of inhabitants: 500,000.

District	hospitals	health centers	health units
Saadah	1		
Sahar	1		2
Al Safra		4	
Kutaf, Al Bukh		3	4
Al Hashwah		1	1
Majaz			2
Bakem		1	
Kata			2
Manbah		1	
Ghamer			1
Razeh		1	1
Shada			1

District	hospitals	health centers	health units
Malahit			1
Haidan		1	3
Sakin	1		2
Total	3	8	25

e. Distribution of health staff in Saadah governorate:

Qualification	number	place of work	district
MT/Sers	4		
1. Mohamad Al Aizur		Al Jumhuri hospital	Saadah
2. Mohamad Al Ahdal		Health office	Saadah
3. Mansur Nasser Al Surabi		Health education department	Saadah
4. Tawfic Al Shami		Health office	Saadah
Midwife FT/Ser	1	Al Jumhuri hospital	Saadah
Male professional nurses		hospitals 2 health center 1	Saadah
Male practical nurses	2	hospital 1 health center 1	Saadah
Medical assistants	4	hospitals 3 health center 1	Saadah
Female profesional nurses	0		
Professional midwife	1	see midwife FT/Ser	
MPHCWs	51	hospitals 7 health centers 12 health units 32	
FPHCW	1	married and left work	
Yemeni doctors	5	Razeh HC 1 Haidan HC 1 hospitals 5	Razeh Haidan
Foreign personnel	31	hospitals, HCs, and PHCUs	
Medical doctors	9		
nurses	22		

f. **Assessment of the future training needs:**

The Health office in Saadah is not planning to train any more MPHCWs. There are now a total of 51 MPHCWs in the governorate distributed in the hospitals, health centers and health units. Instead of starting a new training class, a refresher course could be given to these PHCWs. This course could be given in Saadah in the Al Jumhuri or Al Salam hospital.

Supervision of these MPHCWs should also be reinforced, and the limiting factor to improvement of supervision is the small number of T/Sers in the governorate, and the fact that they are all from Saadah. There are only 4 MT/Sers, one is working in Al Jumhuri hospital, one is responsible for health education department, and two will work in supervision. The health office was requested to identify possible candidates for a course in training and supervision in HMI Sana'a so as to increase the number of MT/Sers in the governorate. There are 7 potential candidates, 4 medical assistants, and 3 certified nurses. The health office will select 5 of these. DG of health office also suggested that some experienced MPHCWs could get some training and be promoted to become T/Sers. This idea will be debated at HMI.

In view of the shortage of personnel in the governorate, the only strategy that will improve PHC services in the field of management and supervision, is to increase the pool of qualified professional staff like medical assistants and nurses in the rural areas. Some of the good MPHCWs with secondary school certificates could be candidates for a 3 year training course. This course could either take place in HMI Sana'a or HMI Saadah if it is ready to receive students soon. For the time being, the governorate is relying mostly on foreign doctors and nurses.

Concerning the female personnel in the governorate, there is a severe shortage of female staff at all levels. There is only one FT/Ser who is working in MCH care in Al Jumhuri hospital. There are no other professional midwives or female nurses. There was one FPHCW who recently left her work because she married. 10 FPHCWs are being trained in Razeh HTC. Some of these could be sent to HMI Sana'a to get a 3 year training in midwifery.

In Haidan, there are 20 new female candidates who are willing to train as FPHCWs. A course could be planned for them in Haidan health center.

2. **Mareb governorate:**

a. Progress of training since consultant's last visit:

- **Male training:**

After the consultant's last visit, MPHCWs from Harib went to Sana'a and the HMI and had practical training in Rawdah HTC. MPHCWs from Huzmah had practical training in Marib and Waset hospitals. After two and half months of practical training, students were tested by a team from HMI and MOH training department. Their performance was insufficient, and it was decided to extend their practical training for two more months. They were tested again in December 1991. Results of final evaluation of MPHCWs is shown in Appendix 1.

- **Female training:**

Six FPHCWs from Harib completed their training in October 1991. Each woman delivered on her own at least 15 deliveries. A team from HMI and MOH MCH department tested them for 5 days. They all received excellent results. See annex 1 for results of final examination. A FPHCW from Huzmah who obtained her training few years ago, but has not completed her delivery experience, completed it this year and she was tested with Harib trainees. She also received excellent results.

Both male and female PHCWs had their graduation ceremony on February 6.

b. Preparations for posting PHCWs:

After graduation, the MPH CWs went home to await employment. As soon as the MOH yearly budget will be established, they will go to the place of work that is assigned to them. All MPH CWs will be posted in health units, except 3 who will be posted respectively in Harib HTC, Huzmah HTC, and Kaalan health center. In 6 health units, there will be only one MPH CW; in one health unit there are 4 MPH CWs assigned; and all the other units will have 2 MPH CWs. Four of the units are already permanent while the others are temporary units that were rented by LCCDs or provided by the people.

All FPHCWs will be posted in Harib HTC, and will be responsible for running the MCH unit. The unit has not been established yet. Since graduation, FPHCWs are working in the center but haven't been employed yet.

c. Management and Supervision plan of PHCUs:

The health office in Mareb designed a supervision plan that allows for optimal use of facilities and human resources in the governorate:

(1) It was decided to combine supervision of EPI and all other PHC activities including diarrheal diseases and malnutrition care, MCH care, infectious disease, and essential drugs.

(2) To facilitate supply and supervision, the governorate was divided in 2 divisions. Each division is in turn divided in sectors including health centers, health units, and hospital if any. The first division includes 4 sectors, and the second 5 sectors.

(3) Every division is supervised from the health office by the division supervisor. The division supervisors have the following responsibilities:

- They give monthly reports on PHC activities to DG of health office and PHC director.
- They supervise the sectors included in their division.
- They choose health centers and health units to visit in a way that they do at least one visit per 3 months to every unit. They keep a record of their visits.
- They gather the monthly reports from the sector supervisors. They analyze them and gather information that they submit in their monthly report together with the record of their field visits.
- Every 3 months, they submit an evaluation report of the health centers and the health units to the DG of health office and PHC director. They give recommendations to improve the services provided by these centers and units.
- At the beginning of every trimester, they design a 3 months plan about PHC activities and field visits that they submit to the DG of health office and PHC director.

(4) Every sector is supervised by a sector supervisor.

The sector supervisors have the following responsibilities:

- They submit monthly reports to PHC directors and division supervisor.
- They perform direct supervision on the health centers and health units included in their sector.
- They do monthly field visits to every health center and health unit, and keep a record of their visits.
- They should provide monthly supply to every center and unit according to their supply file.

- They gather the monthly reports from HTC directors and PHCWs working in health units. They analyze them and gather information that they submit in their monthly report to PHC director and division supervisor together with the record of their field visits. They give personal evaluation about the functioning of health centers and health units and gives recommendations for improvement of their services.
- In the beginning of each month, they design a monthly plan for PHC activities and field visits that they submit to PHC director and division supervisor.

The two persons that were designated to be division supervisors are PHCWs but they obtained no training in supervision. The sector supervisors are all HTC directors but they do not have professional qualifications. They only acquired some practical nursing experience by working in the center.

The governorate is short of executive level professional staff. There is a total of 4 MT/Sers in Marib. One is the project coordinator, another is working in the health office, and two are health center directors.

FPHCWs supervision is even more problematic because there are no FT/Ser, professional midwives, or professional nurses in the governorate. The only alternative is that they get supervised from Sana'a, or that the project provides them with a FT/Ser.

e. Distribution of health staff in the governorate:

Qualification	number	place of work	district
MT/Sers	3		
1. Shami Daud		Health office	Mareb
2. Ali Ibn Ali		Health office	Mareb
3. Hussein Muftah		Jabal Mrad HC	Jabal Mrad
FT/Ser	0		
Male professional nurses	3	Health centers	
Male practical nurses	2	Health centers	
Medical assistant	1	see MT/Ser 1	
Female nurses	0		
Professional midwives	0		
MPHCWs	78	Health office 2 Health centers Health units	Mareb
FPHCWs	27	Harib HTC 6 Home 21	Harib 10 Waset Juba 10 Mareb 1

Qualification	number	place of work	district
Foreign personnel	52		
Medical doctors	4	Hospitals	
Nurses	48	Hospitals,HCs, PHCUs	

f. Assessment of future training needs:

The health office is not planning to train any more MPHWCs in the governorate. There are already a total of 78 MPHWCs distributed over the 17 health centers and 42 units. Nevertheless, the governorate is in need of professional staff including professional nurses, medical assistants, technicians, and MT/Sers. There are 3 newly graduated male nurses from the rural areas who are already posted in health centers in their respective areas. There is no HMI in Marib, so that potential candidates will have to go to Sana'a HMI to train. The only logical strategy for future training is to improve the pool of professional staff to fulfill the deficiency in management and supervision that now exists. The governorate health office relies now on foreign nurses and doctors (total of 52, 4 of which are medical doctors), all working in curative care.

Concerning female training, the governorate is in need of both FPHCWs especially from rural areas and health units, and professional staff like professional midwives and nurses. There are now a total of 27 FPHCWs in Mareb governorate: 10 in Harib and 10 in Waset Juba are working at home, 6 newly graduated in Harib HTC will work in Harib center, and 1 from Al Huzmah will work in the center. There are 4 groups of new FPHCWs candidates that were selected from the health units (1 or 2 from every unit) : one group in Al Huzmah, one in Juba, one in Sarwah, and one in Rahabah.

3. Hajjah governorate:

a. Progress of training since consultant's last visit:

- Male training:

MPHCWs from Aflah Al Sham HTC completed their practical training in Harad hospital, and those from Al Shaghadirah HTC in Hajjah hospital. They were tested by a team of HMI and MOH training department, and results were unsatisfactory in general. Training was extended for two months, and MPHWCs were tested again in December 1991. Results of final examinations are summarized in Appendix 1.

- Female training:

(1) Aflah Al Sham HTC: FPHCWs continued training in Abs HTC until September 1991. During their stay in Abs, each FPHCW delivered about 5 deliveries on her own. Then, they went back to Aflah Al Sham, and continued training until February 1992. In November 1991, their FT/Ser left for personal reasons, and the project contracted with another Sudanese FT/Ser. On February 18, 1992, a team from MOH MCH department and HMI went to Aflah Al Sham to test the trainees. Results of final examination are shown in Appendix 1.

(2) Al Shaghadirah HTC: Ten FPHCWs are being trained in Al Shaghadirah HTC, a project contracted with a Sudanese FT/Ser, and she trained the FPHCWs for 6 months. She covered all areas of theoretical training, and started practical training in the HTC. She is also doing home visits and health education with the trainees. She now is planning to move with the trainees to Hajjah so that they get more intensive practical experience on deliveries. A team

from MOH MCH department and HMI went on February 22, 1992 to perform midterm evaluation of the trainees. They all received very good evaluations, and even though two of the trainees joined the class after the initial selection was made, it was decided to keep them in the course.

b. Preparations for posting PHCWs:

Thirty temporary units were either rented by LCCDs, or provided by the people because the fixed units were not yet built. Most MPH CWs are already posted in their respective units. There is either one or two MPH CW in every unit. The newly graduated FPH CWs from Aflah Al Sham will be posted either in temporary units or in the HTC. There is now an equipped delivery room in the center. The part of the center that was reserved for administration and MPH CWs classroom will be transformed into an MCH unit. The consultant recommended that the project supports enlargement of the HTC to accommodate MCH services so that the newly graduated FPH CWs could work in it. Mrs. Vivian Gary from USAID approved the idea. DG of Hajjah health office sent an official note to the project COP requesting the project support to enlarge the HTC building in the aim of opening a complete MCH section that will provide all MCH services including prenatal care, post natal care, family planning, well baby care, immunization, diarrhea care and ORT, nutrition and growth follow up care, as well as various health education activities. This unit will be run by the FPH CWs. These FPH CWs will in turn be supervised by the FT/Ser who is posted in Hajjah.

Peace Corps is planning to send a team of health professionals to Aflah Al Sham. On February 28, a nurse midwife and a lab technician went to Aflah Al Sham to work as volunteers for two years. Prior to their trip, the consultant discussed with the midwife the role she could have in supporting the newly graduated FPH CWs in their future task, especially in assisting them with deliveries.

c. Management and supervision plan of the PHCUs:

The 70 health units that are opened are at present supervised from Hajjah health office and Abs HTC. Two MT/Sers working in Hajjah health office are responsible to supervise health centers and PHCUs included into 3 main divisions. Two other MT/Sers working in Abs HTC are supervising the rest of PHCUs and centers. A new plan for supervision was designed whereby Al Shaghadirah and Aflah Al Sham HTCs will also become supervising centers for the surrounding units. There is one MT/Ser working in Al Shaghadirah HTC, and another one who is working in Harad hospital who will be moved to Aflah Al Sham. Transportation facilities are available, but this new supervision plan was not yet implemented because the budget allocated for fuel expenses is still insufficient. The MT/Sers are supposed to perform regular field visits to the health centers and units to check on their activities and supplies. During their field visits, they fill special forms that they later submit to PHC director in Hajjah health office.

(1) HTC Supply and supervision T/Ser report:

T/Sers names: 1. _____ 2. _____

Directorate: _____ District: _____ Village: _____

Name of health center: _____

Name of director: _____ Number of staff: _____

Date of visit: _____

Type of activity/ poor fair good very good excellent

- maintenance of the building
cleanliness
attendance
files and reports
health education
MCH care
diarrhea care
nutrition
environmental health
supervision
training
relation with people
EPI
cold chain

Types of vaccines available:

- 1- _____
- 2- _____
- 3- _____
- 4- _____
- 5- _____

Quantity of vaccines that were used:

- 1- _____
- 2- _____
- 3- _____
- 4- _____
- 5- _____

Types of medications that were used:

- 1- _____
- 2- _____
- 3- _____
- 4- _____

Quantities:

- _____
- _____
- _____

(2) Evaluation form of health unit EPI and PHC activities:

Name of or unit: _____ worker name: _____ date: _____

1. Are the statistics in the general record file consistent with the daily and monthly report?

2. Is there a copy of the monthly statistics in the health unit?

3. Is there a time table scheduling working days inside and outside the unit?

4. Cold chain:

- Is the refrigerator temperature 4-8 degrees?
- Are there enough boxes?
- Is the ice less than one and half cm?
- Are the vaccines grouped inside the refrigerator according to their types?
- Is there a monthly temperature recording form that is filled all through the month?
- Is the daily storer used during daily vaccination sessions?
- Are the available vaccines safe and do they have a label?

5. Supplies:

- Are all the vaccines available?
- Are the available vaccines consistent with the record of their use?
- Is there a spare gas cylinder?

6. General cleanliness:

- Is there any garbage on the ground?
- Are the used needles and IV sets dropped in a box inside the unit and then buried in a hole outside?
- Are the supplies and equipment of the unit kept clean by the PHCW?
- Are the outdated drugs kept far from the others?
- Are the drugs stored according to their families?

7. PHC and recording activities:

- Are the patients reported in the right way in the patients record?
- Does the PHCW refer patients from the unit to the center, and does he keep a record of his referrals?
- Does the PHCW record births and deaths?
- Is there a copy of the disease surveillance report in the unit?

d. Distribution of health facilities in Hajjah governorate:

Total number of inhabitants: 1.2 millions

District	hospitals	health centers	health units
1. Hajjah	1		2
2. Mabian		1	3

District	hospitals	health centers	health units
3. Al Shaghadirah		1	1
4. Bani Al Awam		1	3
5. Wadrah			3
6. Al Jamimah			3
7. Kahlan Afar		1	1
8. Al Mazabah			4
9. Hajjah Al Sharaki			5
10. Najrah			3
11. Kaidnah		1	3
12. Al Mahabshah	1		2
13. Al Maftah			1
14. Kahlan Al Shark			3
15. Aflah Al Sham		1	3
16. Aflah Al Yemen		1	2
17. Al Shahel		1	2
18. Kafel Shamer		1	1
19. Hairan			1
20. Abs		1	2
21. Harad	1		1
22. Midi		1	1
23. Kasher		2	7
24. Washha		1	1
26. Bakil Al Mir			4
27. Al Madan		1	
28. Shaharah		1	1
29. Habur		1	

District	hospitals	health centers	health units
30. Al Salm			3
31. Shars			1
32. Hizan Al Mahrak		1	1
33. Al Taur Bani Mish		1	1
Total	31	18	70

e. Distribution of health staff in the governorate:

Qualification	number	place of work	district name
MT/Sers	6		
1. Mohamad Abdallah Hajan		PHC department	Hajjah
2. Ibrahim Mohamad Al Kahlani		PHC department	Hajjah
3. Mohamad Abu Hadi		AL Shaghadirah HTC	Al Shaghadirah
4. Mohamad Ahmad Al Bashari		Harad hospital	Harad
5. Taleb Kassem Al Ahdal		Abs HTC	Abs
6. Abdallah Ali Bahaeddine		Abs HTC	Abs
FT/Ser	1	MCH Hajjah hospital	Hajjah
Male professional nurses	10	hospitals and health centers	
Medical assistants	5	health centers	
Female professional nurses	0		
Professional midwife	1	see FT/Ser	
Female practical nurses	8	health centers	
MPHCWs	123	health centers 33 health units 90	
FPHCWs	52	health centers 41 health units 11	
Yemeni doctors	9	Hajjah hospital 4 Harad hospital 1 Mahabishah 3 Shaharah HC 1	Hajjah Harad Mahabishah Shaharah
Foreign personnel	57		
Medical doctors	25	hospitals and health centers	
Nurses	30	hospitals, HCs, PHCUs	
X-ray technicians	2	Abs and Hajjah hospitals	

f. Assessment of future training needs:

Hajjah governorate has relatively more higher level male personnel than in Saadah and Mareb governorates, partly due to the presence of HMI in Hajjah. There is a 3 year nursing program in HMI that is attended by males from the different rural areas and by some females. There are housing accommodations in HMI for trainees who come from distant areas.

There is now in the governorate a total of 10 qualified nurses and 5 medical assistants in addition to 10 Yemeni medical doctors, who are distributed in hospitals and health centers. There is also one FT/Ser running the MCH unit in Hajjah hospital, and 8 female nurses who obtained one year training in HMI and are working in hospitals and health centers. In addition, there are females training in HMI as professional nurses, and two females training as professional midwives, one in Hodeidah HMI, and the other in Sana'a HMI. The female training in Sana'a entered the institute this year, while the one training in Hodeidah will finish her training at the end of this year. She could be a useful resource to train and supervise FPHCWs in the governorate.

Nevertheless, the governorate still relies mostly on foreign professional staff, including Russians, Egyptians, Sudanese and Somali distributed among hospitals, health centers and health units.

Like in the other project governorates, the long term health office strategy should aim at training more professional staff to fulfill the needs of the governorate. In this respect, Hajjah HMI could play a major role in training personnel. DG of health office in Hajjah is planning to start a midwifery program in HMI next year, and is requesting the project to support this activity.

Other useful activities in which HMI could get involved include training of MT/Sers, and plan refresher courses for T/Sers and PHCWs.

Concerning training of new PHCWs, the governorate has enough MPH CWs but still needs more FPHCWs. DG of health office suggested 3 new HTC s to train female classes: Al Taur, Al Madan, and Harad. These are areas where endemic diseases are prevalent and health services very limited.

4. Hodeidah governorate

a. Selection of FPHCWs

A total of 60 FPHCWs were selected by a team from health office MCH and training departments, and Hodeidah HMI. They are all between 17 and 22 years old, and have at least completed elementary school. Most have completed middle school, and three of them will complete secondary school. Two of these, one from Marawiah and one from Haith are candidates to enter the HMI midwifery school once they finish the PHCW course. Some of the FPHCWs are married, and the consent of their husband to train was obtained after all the training constraints were explained to them. 15 females will train in each center. the females training in Tahreer HTC are from Hodeidah area. In the other centers, they were recruited either from the area surrounding the center or from distant health units. A dormitory will be arranged for the FPHCWs living far from the HTC s. Most females who were recruited are returnees, and this training will be an opportunity to reintegrate them in their community.

b. Selection of FT/Sers

After reviewing the list of FT/Sers, who acquired some training in PHCWs training and supervision, in addition to practical experience in this field, potential candidates to be in charge of training and their assistants were identified. Information about their qualifications and training experience were gathered during the workshop (see FT/Sers evaluation sheet Appendix 6). Since there are professional medical staff in Hodeidah governorate, the priority was given to recruit Yemeni FT/Sers rather than Sudanese. Only one Sudanese was retained to train in Marawiah HTC. The other FT/Sers and training assistants were chosen from the pool of Yemeni FT/Sers in the governorate. It was elected that the FT/Ser in charge of training should have a midwifery background, while her assistant could have a nursing background. For the FT/Ser that are in the civil service, they could either be released from MOH for one year, and be contracted by the project, or remain in their place of work and be recruited by the project for overtime work to assist in training.

c. HTCs facilities

- Tahreer HTC:

Tahreer HTC is basically an MCH center offering both preventive and curative services, as well as delivery assistance. It was opened in 1963, and since 1985 it has worked both as a training and supervising center. Supervision of MPH CWs working in the rural units is directed from the center. FPHCWs are being trained in the center but none are currently supervised from the center. The center is well equipped, except for the training materials which are insufficient, and often in poor condition from overuse. There are no reference books in the center. The following rooms are included in the center: Immunization room, laboratory, pharmacy, prenatal follow up and family planning, delivery room, growth follow up room, nutrition and health education room, consultation room, surgery room, in addition to the classroom and practical training room. There is a good patient load coming to the center every day: 20 to 50 children come for immunization every day, 20 to 40 females for prenatal follow up, and about the same number of babies for well baby care and growth follow up. The number of deliveries is restricted to 4 to 5 deliveries per month. One reason behind the small number of deliveries is the fact that the center closes at 1 p.m. The health office is planning to do an afternoon and night shift in the center to cover delivery services properly. The following staff are working in the center: a male medical doctor who is also the HTC director, a female medical doctor, 2 professional midwives, one female nurse in the surgery room, and 3 nurses specialized in community health. One of these nurses is in charge of prenatal follow up and family planning, another is responsible for growth follow up of children, and the third takes care of health education for mothers.

- Marawiah HTC:

Marawiah health center started working 5 years ago as a curative center serving a population of about 100,000 people including the surrounding rural areas. It is the first time that it is involved in a training activity, and therefore it has no training materials and no reference books that could be used as resources in the training course. In addition, since it was designed to be a curative center, it lacks all materials and equipment for MCH care and delivery. The center includes the following rooms: Immunization room, Women's consultation room, men's consultation room, and surgery room. Recently, the Sudanese FT/Ser opened a room for prenatal follow up and family planning. There is a large load of patients coming to the center. Their number varies from 60 to 120; half of them are children. About 10 to 20 children come every day to the center for immunization. The most common causes for consultations are infectious diseases including respiratory diseases, diarrhea, malaria; and various obstetric and gynecologic diseases. There are about 5 deliveries per month in the center. The following staff are working in the center: 2 Yemeni male medical doctors one of who is also the HTC director, one Sudanese male doctor, one Sudanese female doctor, in addition to one practical

nurse. There are good housing facilities in the HTC building both for the FT/Ser and the FPHCWs.

- **Zaydiah HTC:**

Zaydiah HTC was established in the 1970s and was meant to be a pilot center offering complete MCH care in addition to diagnostic and curative facilities. The population it serves is about 30,000 people. The building is old and needs renovations, and a lot of the furniture and equipment initially present is either broken or in a bad maintenance state. The few training materials that are in the center were borrowed from Tahreer HTC where FPHCWs are training at the present time. Zaydiah HTC started working as a training center in the early 1980s. Initially, MPH CWs were trained in the center and then training of FPHCWs started. Three groups of FPHCWs were trained in the center, one in 1985, one in 1987, and one in 1989. Two of these FPHCWs are working in the center, and 2 in health units. There are 19 health units connected to the center, and as mentioned only two of them have a FPHCW. In all the units, there are MPH CWs. Zaydiah HTC in addition to being a training center is also a supervising center. There are 3 MT/Sers who are in charge of health unit supervision from the center. A FPHCW who secured some additional training in FPHCWs training and supervision was initially responsible to supervise FPHCWs. Since 1990, she stopped supervision activities, and her responsibility now is restricted to MCH care in the center. The following rooms are included in the center: male consultation room, female consultation room, surgery room, prenatal care room, delivery room, growth follow up room, immunization room, X-ray room, laboratory, and pharmacy.

Despite the presence of an MCH unit in the center, the services provided to mothers and children are limited and very little health education is given to them. Approximately 5 to 10 women come daily for prenatal follow up, and about the same number of babies come for growth monitoring mostly referred from the vaccination room. The FPHCWs working in the center perform about 20 deliveries per month, mostly home deliveries. Between 20 to 40 children are vaccinated daily. The total patient load of the center is about 100 daily, most patients seeking curative services. The following staff are working in the center: one Sudanese male doctor, one Sudanese female doctor, one X-ray technician, one laboratory technician, 3 Yemeni male nurses, 2 FPHCWs.

Haith HTC:

Haith health center was established in 1979 but never worked either as a training or a supervising center. It serves a population of about 140000 people and the surrounding units are supervised from Zabid HTC. The building is new and big and was conceived to be a rural hospital including operating room and in patients ward. Despite this fact, its equipment is lacking essential facilities like a delivery room, basic MCH equipment, autoclave, and laboratory facilities. Some of its equipment is stored in a room and needs to be distributed in the functioning rooms. The center has a few training materials like posters and a slide projector, but no reference books.

The following rooms are included in the center: consultation room, emergency room for males, emergency room for females, surgery room, immunization room, ORT room, laboratory to test for malaria and tuberculosis only. Occasionally, females are being delivered in the emergency room which is not equipped for this purpose. The main services offered by the center are curative, apart from immunization. There are practically no MCH services and no preventive activities. There are about 70 patients who seek medical care in the center every day. Twenty to 40 children are receiving immunization daily. The following staff are working in the center: one Yemeni male doctor, 2 Sudanese male doctors, 6 male nurses, 2 laboratory technicians, 2 TBAs who were trained in Zabid HTC. These TBAs do about 20 home deliveries per month.

- **Zabid HTC:**

Zabid HTC was established by the Swedish project as a pilot training and supervising center. It has complete MCH services, a well equipped delivery unit including 2 delivery rooms, a room for sterilization of instruments, a labor room that is also a post delivery room. Three qualified midwife FT/Sers are running the MCH and delivery services. The patient load is large, and includes the deliveries in the center. Zabid HTC has a complete set of training materials including models, posters, a slide projector and slides, and videos. It also has a library with various health reference books and other books and pamphlets. Zabid HTC could be used as a resource in our training. One of the FT/Ser working there will probably be in charge of training in Haith HTC.

d. Training supervision plan:

HTCs supervision is the responsibility of PHC and MCH departments in Hodeidah health office. MCH department has the double responsibility of supervising the HTC facilities and services, and the PHCWs training. The supervision plan of these HTCs was discussed with Asia Shaybani, MCH director. She will chose two of the graduated qualified midwives from HMI to assist her in both HTC and training supervision. She and her assistants will have regular visits to the center, once weekly in the first two months, and then once every two weeks. During these visits, they will check HTC facilities, quality of services, supplies, in addition to progress of training, FT/Ser performance and teaching methodology, students files, and the living conditions of FPHCWs. In addition, the MCH director will have a monthly meeting in the Hodeidah health office with all the FT/Sers to discuss with them their progress of training to date, lesson plans, students performance, and the monthly schedule to be followed for the coming month.

e. TOT workshop:

Date: Sunday, 23 February to Saturday, 29 February.

Place: Conference room in the Al Daran hospital.

(1) Aims and objectives

i. General:

- Prepare the start up phase of training
- Improve the T/Sers skills and teaching methodology

ii. Specific:

- Learn how to use the FPHCWs curriculum
- Learn how to design a yearly plan for the FPHCWs course
- Improve different teaching methods
- Learn how to use training materials and resources
- Learn how to relate theory and practice

(2) Workshop participants:

Name	Place of work	Task	Degree
Suad Majid	Zabid HC, Zabid	Midwifery	Midwifery + PH
Saida Saleh	Zabid HC, Zabid	Midwifery	Midwifery + PH
Alam Saleh	Zabid HC, Zabid	Midwifery	Midwifery + PH
Mariam Kameranani	DRP, Dhamar	Training PHCWs	Midwifery + PH
Kifaya Al Majid	HMI, Hodeidah	Training MWs	Midwifery + PH

Name	Place of work	Task	Degree
Rukiah Al Kuzi	Hodeidah	Training PHCWs	Nursing+ PH
Fatmeh Al Wahab	HO, Hodeidah	MCH	Midwifery
Mariam Seif	Tahreer HC, Hodeidah	MCH	CH + nutrition
Suad Abdallah	HO, Hodeidah	HE department	CH + nutrition
Fatmeh Abkar	Tahreer HC, Hodeidah	Midwifery	Midwifery dipl
Latifeh Al Laya	HMI, Sana'a	Midwifery	Midwifery dipl
Fatmeh Al Mumen	Marawiah HTC	Training PHCWs	Midwifery+ PH

(3) Lecturers:

Name	Place of work
Abdel Wahab Al Kohlani	HMI, Sana'a
Zahra Numan	HMI, Hodeidah
Asia Sharaf Al Shaybani	HO, MCH, Hodeidah
Ahmad Ahmad Wahban	HO, Hodeidah
Najwa Al Kusseifi	REACH, Sana'a
Madeleine Taha	REACH, Sana'a
Fatmeh Ishak	MCH, Sana'a

(4) Workshop schedule:

Day	Subject	Lecturer	Time
2/23/92	Opening	DG health office	10 min
		PHC director	10 min
		COP REACH	10 min
	Workshop aims and objectives	Ahmad Ahmad Wahban	30 min
	HTC facilities and human resources	Madeleine Taha Asia Shaybani	60 min
	BREAK		20 min
	FPHCWs curriculum	Abdel Wahab Kohlani	50 min
	Distribution of FPHCWs curriculum and yearly plan worksheet to participants		90 min
	Home assignment: start designing the yearly plan		
2/24/92	Discussion of the yearly work plan	Abdel Wahab Kohlani	120 min
		Asia Shaybani	
		Zahra Naaman Madeleine Taha	
BREAK		20 min	
	Finalization of the yearly work plan		120 min

Day	Subject	Lecturer	Time
2/25/92	Teaching methods used to treat theoretical subjects	Najwa Al Kusseifi Ahmad Wahban	120 min
	BREAK		20 min
	Group dynamics about teaching methods		90 min
	Home assignment: prepare individually a topic as an application of teaching methods		
2/26/92	Training methods used in practical training in HTC's	Asia Shaybani Zahra Naaman	120 min
	BREAK		20 min
	Group dynamics about practical training methods		90 min
2/27/92	Presentation of the different topics by participants	Najwa Kusseifi Ahmad Wahban	180 min
	Final evaluation		30 min
2/29/92	Meeting with HTC directors, DG of health office and PHC director		
	Conclusion and distribution of certificates		

(5) Yearly work plan:

- First month: General FHC concepts (introduction, job description of FPHCW, personal and food hygiene, water and sanitation, environmental health, health education...), basic human anatomy and physiology.
- Second month: Genitourinary system of males and females, puberty, pregnancy and prenatal care; practical training in the center on prenatal care.
- Third and fourth months: normal and abnormal delivery; theory and practical training on the doll.

- Fifth month: practical training on deliveries in the center and at home. postnatal care, infant care, family planning, gynecologic infections.
- Sixth month: Continue practical training on deliveries. Child care, nutrition and growth follow up, diarrhea and ORT, immunization.
- Seventh month: Practical training in the center. First aid, essential drugs, endemic diseases.
- Eighth month: Practical training in the center in the different sections.
- Ninth and tenth months: Practical training on deliveries in hospitals.
- Eleventh month: Initiation of FPHCWs to their future work in the health unit; management issues, record system.
- Twelfth month: Revision.

VII. CONCLUSIONS

1. A total of 166 MPHWCWs were trained for a total of 13 months in Al Shaghadirah, Aflah Al Sham, Al Huzmah, Harib, Razeh, and Kutaf HTCs. Trainees were tested by a team from HMI and MOH training department in December 1991. 137 MPHWCWs passed the final examinations, and 29 failed.
2. Six FPHCWs were trained in Harib HTC by a Sudanese FT/Ser for a total of 12 months. After completion of training and fulfillment of the required number of deliveries, FPHCWs were tested by a team from HMI and MOH MCH department, they all obtained excellent results.
3. Thirteen FPHCWs trained in Aflah Al Sham HTC for a total of 16 months. The FT/Ser changed twice, and every time she changed, training was interrupted for about 2 weeks. During the training period, every FPHCW performed 3-5 deliveries on her own. A team from HMI Hajjah and MOH MCH department tested the trainees. Twelve of them passed, and one failed because she was poor at delivery experience.
4. Ten FPHCWs have been training in Al Shaghadirah HTC for the past 6 months. Their FT/Ser is a Sudanese midwife who was contracted by the project. Training is progressing well so far. The team from HMI and MOH MCH department evaluated them, and all trainees received very good evaluations. Just after Ramadan, it was agreed that the trainees and their supervisor will move to Hajjah hospital to get practical training in delivery and MCH care.
5. Ten FPHCWs are training in Razeh HTC since April 1991. In November 1991, their T/Ser left for personal reasons and training stopped for one month. Training was then resumed when the project contracted with another Sudanese FT/Ser.
6. Most MPHWCWs are already posted or will soon be posted in temporary units that were provided by LCCDs or by the community. These units are not yet equipped because the project was late in ordering their furniture and equipment. Some of the MPHWCWs will be posted in permanent health units, and some in HTCs. Most health units in the governorates will be staffed with one or two MPHWCWs. In a great number of these, there is also a male foreign nurse working.

7. All FPHCWs from Harib HTC and most FPHCWs from Aflah Al Sham will work in their respective center to run the MCH unit. However, in both centers, the MCH unit has not been readied yet. Five of Aflah Al Sham FPHCWs will work in temporary units.
8. In every governorate, the health office designed a supervision plan in a way to achieve optimal use of its human resources. Major constraints to implementing a satisfactory supervision plan are logistic problems and the limited number of T/Sers in the governorate. Supervision of FPHCWs will be the most difficult because of shortage of FT/Sers in the governorates (one in Hajjah, one in Saadah, and none in Mareb).
9. In all governorates, there is shortage of qualified Yemeni staff. This results in a deficient management and supervision system, and has a negative impact on the quality of services in the referral centers.
10. The goals and objectives aimed at by training PHCWs has partially been achieved. More MPHWCs than was initially planned for were trained, and no needs assessment was made prior to deciding how many and from where PHCWs should be trained. This resulted in having in some units two or more MPHWCs. Recruitment of FPHCWs was partially successful as some females from health units could be recruited in addition to females from the area surrounding the health center. In some centers after training finished more females from rural areas requested to train as FPHCWs.

After FPHCWs graduate, they will be able to run the MCH services in their respective centers, and this is a great achievement for the provision of basic services in their area.

11. The major problems that were identified during training can be summarized as follows:
 - Inappropriate trainee selection: Trainee selection was made without the participation of T/Sers and often without the involvement of MOH and HMI. Criteria for PHCWs selection were not strictly followed. This sometimes resulted in selection of candidates who were either too young, or without sufficient education. The number of PHCWs per class was also too large.
 - There was initially only one T/Ser in charge of training, and in most centers he had no previous experience in training. Even though the project contracted for two months with an experienced T/Ser to assist in training, this assistance was insufficient. For better results, there needs to be two T/Sers per class.
 - The Sudanese FT/Sers contracted by the project were not all experienced in PHCWs training. In addition, two of them broke the contract before training was finished. In general, they were also confused as to whom they should report, the project or the health office in the governorate; and this created some problems between them and the health offices.
 - The role of the HTC director in the training process was not clearly defined. This created problems between him and the trainers and trainees.
 - Inadequate HTCs services: Most centers lacked essential MCH services and health education activities. There was some improvement in the centers' services as the training progressed, but they are still insufficient.
 - Lack of essential training resources and materials:
 - Copies of the curriculum were not distributed to the students.
 - Female curriculum has not yet been finalized.

- Reference books and pamphlets were distributed to the centers when training was almost finished.
 - Slides and films have not yet been ordered.
- Training supervision from the health office was insufficient, partly due to logistic problems and shortage of professional staff.

VIII. RECOMMENDATIONS

A. Suggestions to improve the quality of training:

1. Selection of PHCWs should be done by MOH and HMI in conjunction with the health office in the governorate. Prior to selection, the number of PHCWs to be trained and the areas from where they should be selected should be defined according to a needs assessment study. This needs assessment can be done by the central MOH in conjunction with the health office in the governorate. After defining the number of trainees and their home place, LCCDs and the people from the community are asked to present candidates from which competent authorities will select PHCWs. Criteria for selection concerning age, school level, commitment to training and future employment, general behavior and attitudes, should be well defined. The number of PHCWs per class should not exceed 15.
2. Selection of HTC should be according to a criteria set by the MOPH that indicates the staffing and health service delivery standards required to meet the needs of the students and improve the utilization of services by the community. The health training center should be involved in both preventive and curative activities. This should include complete MCH services.
3. Two T/Sers should be involved in training a class of PHCWs. The health center staff in addition to other professionals from the governorate health office could also get involved in giving some classes on specific subjects.
4. In the course plan, the T/Ser should devote more time to practical training, and try to link theory to practice and vice versa.
5. HTC director's responsibilities and participation in the training process should be defined.
6. Training supervision from the governorate health office should be reinforced. Participation of HMI in training supervision could have a positive impact on the quality of training. Training supervision of FPHCWs could be done by central MOH MCH department in the governorates where there are no FT/Sers or professional midwives.
7. Involve the health education department of the governorate in the training process.

B. Provide support and supervision of the newly graduated PHCWs. This is the governorate health office responsibility. The project should support it by:

- Providing funds to enlarge Aflah Al Sham HTC with the aim of accomodating complete MCH services that will be run by the graduated FPHCWs.
- Contracting with a FT/Ser who will support and follow on the graduated FPHCWs in the governorates where there is no FT/Ser.

C. Project should support training of new classes of FPHCWs selected from the rural areas. All governorates have already selected new groups of female candidates willing to train as PHCWs.

The health offices have also identified the HTC's where these females could be trained: Haidan HTC in Saadah governorate; Al Taur, Al Madan, and Harad centers in Hajjah governorate; and Al Huzmah, Juba, Sawah, and Rahabah health centers in Mareb governorate.

D. Project should support training of professional staff (nurses, medical assistant, MT/Sers, midwives, FT/Sers) in the governorates especially in the rural areas. Candidates should be selected from the graduated PHCWs.

E. Project should support in service training of personnel in the governorates, and refresher courses for the PHCWs.

F. Project should support HMI programs in Hajjah and Saadah by:

1. providing technical assistance to set up the program
2. contracting with FT/Sers to be in charge of the midwifery program training in Hajjah HMI
3. providing training materials and resource books.

IX. FOLLOW UP ACTIONS REQUIRED

A. Consultant will come back in November 1992 or February 1993, after Ramadan, to assess progress of training in Hodeidah governorate, and follow-up on her recommendations in the other three governorates.

B. DG of health offices will follow-up on the employment and housing in Mareb of the newly graduated PHCWs. To date USAID/Sana'a has not authorized the off-shore and local purchase of furniture.

C. Project will provide equipment and materials to the HTC's and the health units.

D. HMI will finalize and distribute the revised FPHCW curriculum.