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EXTERNAL EVALUATION

OF THE

TIHAMA PRIMARY HEALTH CARE PROJECT (279-0065)

MARCH 8, 1987

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EXTERNAL EVALUATION TEAM MEMBERS

Chris Hermann, AID/W/PPC/CDIE, Evaluation Specialist, Team Leader

Richmond Allen, Economist

Bruce Kratka, Institutional Development Specialist

Elmira Gilbert, Program Assistant, USAID/Yemen

Mansour Shamiri, Program Assistant/Evaluation Officer, USAID/Yemen

Abbas Zabarah, M.D., Director, Primary Health Care, MOH

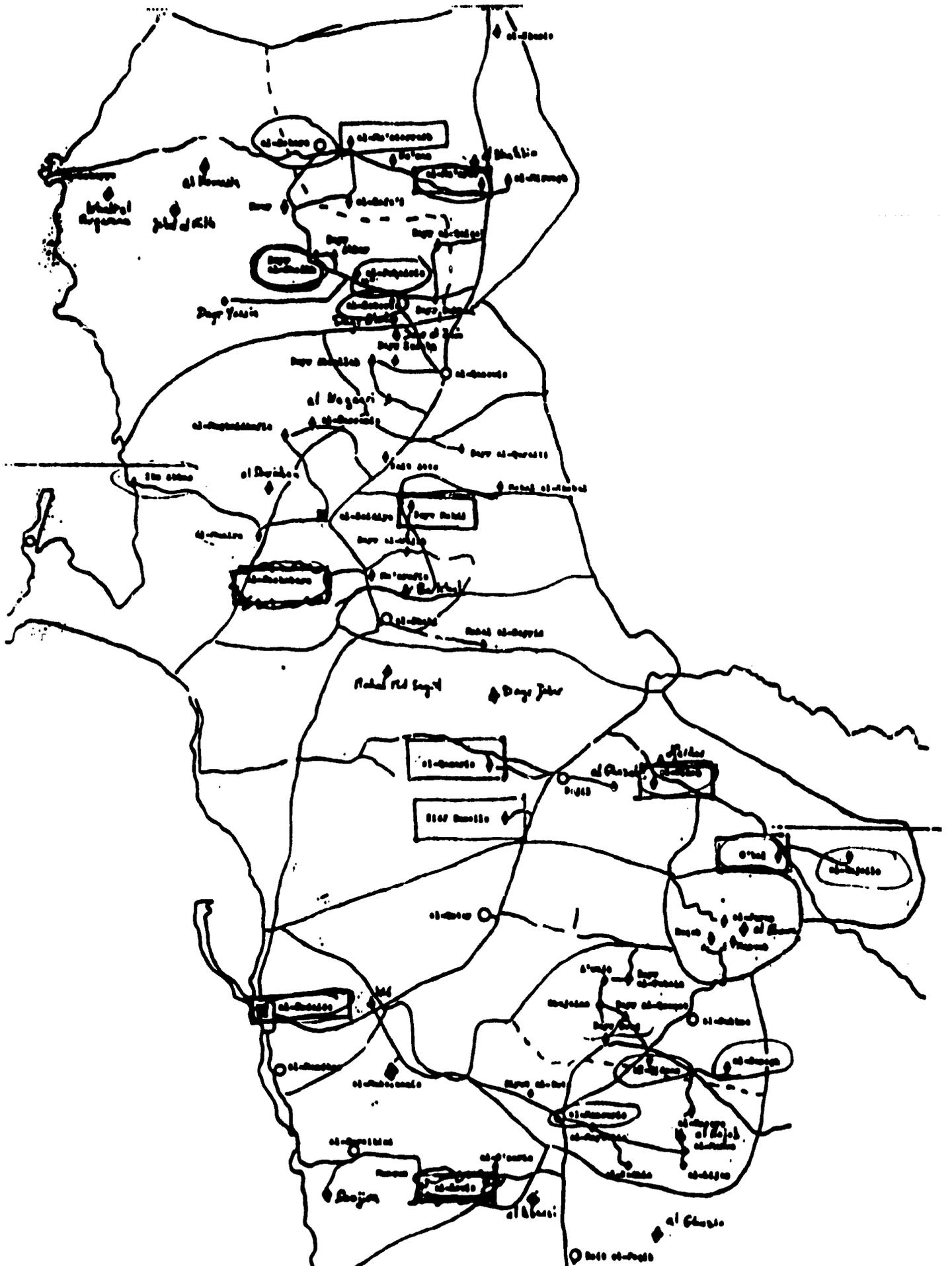
Ahmed al Kholami, Planning Directorate, MOH

Abdul al Hadee Mosen, Office of Technical Cooperation, CPU

Monammed Zonra, Evaluation Office, CPU

LIST OF ACRONYMS

AID	Agency for International Development
CPO	Central Planning Organization
CY	Calendar Year
DPT	Diphtheria Pertussis Tetanus
EPI	Expanded Program of Immunization
FPHCW	Female Primary Health Care Worker
FY	Fiscal Year
GDP	Gross Domestic Product
GM	Growth Monitoring
HC	Health Center
HMI	Health Manpower Institute
IHC	Integrated Health Center
LBA	Local Birth Attendant
LCCD	Local Council for Cooperative Development
MCH	Maternal Child Health
MOH	Ministry of Health
MPH	Masters of Public Health
MSH	Management Sciences for Health
NIPA	National Institute for Public Administration
ORT	Oral Rehydration Therapy
PACD	Project Assistance Completion Date
PHC	Primary Health Care
PHCU	Primary Health Care Unit
PHCW	Primary Health Care Worker
PHS/BHS	Primary Health Service/Basic Health Service of the Ministry of Health
TB	Tuberculosis
TBA	Traditional Birth Attendant
THC	Training Health Center
TPHCP	Tinama Primary Health Care Project
T/S	Trainer/Supervisor
USAID	United States Agency for International Development
UNICEF	United Nations Children's Fund
U.S.	United States
YARG	Yemen Arab Republic Government
YR	Yemeni Rial



Tihama Primary Health Care Project Sites
February, 1987

Units, including Training Health Center in Hodeidah,
in b... e visited during this evaluation.

EXECUTIVE SUMMARY

PROJECT EVALUATED: TINAMA PRIMARY HEALTH CARE PROJECT (279-0065)

The principal objective of the Tinama Primary Health Care Project (TPHCP) is to support the development of primary health care services in the Tinama. The Project was authorized in 1980 and amended in 1982, extending the Project to June 30, 1987, the Project Assistance Completion Date (PACD) with total AID funding of \$11.5 million. The purpose of this evaluation is to determine whether the PACD of TPHCP should be extended and, if so, in what form.

OVERALL PERFORMANCE

Findings

As of February, 1987, TPHCP has made significant progress toward Project objectives, which is particularly noteworthy, given earlier (1980-85) implementation problems.

The Project is roughly one year behind schedule. Fifty-five Primary Health Care Units (PHCUs) are in operation and one more is expected to re-open in the coming months. Training objectives for Primary Health Care Workers (PHCWs) will have been met by June, 1987, making a total of seventy-two units possible. However, sixteen PHCWs will have just completed training by the PACD and will not have established their units by that time. Moreover, the first year of operation requires considerable supervision and support, also precluded by the PACD.

The majority of existing PHCUs function at acceptable levels. Their services are useful, effective and valued by rural communities. However, the performance of a significant percentage - perhaps as many as one-third - is sub-standard and needs improvement.

Progress has been made in developing management systems in support of the PHCUs, but this work is not yet complete.

An adequate test of whether TPHCP represents a model for replication or adaptation in other parts of the country is evidence that the MOH can support the costs of the PHC system established through the Project. Current YARG budget constraints make it very unlikely that the MOH could assume all costs of TPHCP immediately. The national policy of free medical services prevents imposition of user fees, which in turn limits the YARG/MOH's ability to expand and sustain PHC nationwide.

Conclusions

Termination of TPHCP in June, 1987, would produce an unsatisfactory End of Project Status. Services would probably degenerate quickly. Additional time is needed to strengthen PHCU operations and management systems, and to support new units to be opened by PHCWs currently in training. Further expansion beyond a maximum of seventy-two units is unwarranted; there is not sufficient justification for replicating the TPHCP approach elsewhere.

Recommendations

Extend TPHCP for two years at reduced funding levels to achieve project objectives and ease the transition to full MOH operation and funding. Reduce technical assistance to three advisors during the first year, and one, if possible, in the second year. Complete or terminate TPHCP's Sana'a based activities by June 30, 1987. Phase out U.S. support of salary supplements during the extension. Direct Project activities to strengthening the PHCU system, and limit the number of units to a maximum of seventy-two. Policy dialogue at the highest levels of government is needed to encourage policy reform concerning user fees for medical services. Evaluate TPHCP in December, 1988.

ECONOMIC ANALYSIS

Findings

Since the 1981 collapse of oil prices, Yemen's macro-economic situation has worsened. Correspondingly, real expenditures by the Yemen Arab Republic Government (YARG) and the Ministry of Health (MOH) have declined sharply - estimated at twenty-eight percent during 1982-85. Although Primary Health Care/Basic Health Services (PHC/BHS) may have increased its share of the MOH budget during this period, it is likely that PHC/BHS spending also declined. Without user fees to augment YARG revenues, no expenditure upturn is foreseen before 1989 when oil production begins.

Despite decreased MOH expenditures, TPHCP has continued to expand. The present concentration of PHCUs in the Project area is far greater than in other Governorates. In other regions, the rural population served per PHCU is 3.6 times greater than that of the TPHCP catchment area. Given TPHCP's payment of salary incentives to most Health Center personnel, the Project's share of total PHC expenditures is greater still than is indicated by the number of health units alone. By the end of 1987, even assuming the MOH realizes its very ambitious goals for additional PHCUs this year, TPHCP, which serves nine percent of Yemen's rural population, would account for 21-22% of all PHC expenditures.

Assuming AID's assistance ends as scheduled, MOH spending for the Project would have to increase by 78 to 105% (in 1986 Yemeni Rials), depending on whether UNICEF or another donor continues to fund most drug purchases.

Conclusions

The greater concentration of PHCUs in TPHCP's catchment area means that a higher proportion of rural people receives health care than elsewhere; there are greater benefits as well as greater costs. However, from the point of view of the MOH facing severe budgetary constraints, the Ministry would probably be inclined, at best, to maintain the Project as is, while catching up to TPHCP's level of coverage in the rest of the country. It is doubtful that the MOH can assume full Project costs if U.S. assistance ends as scheduled. The MOH's ability to assume full funding might increase after 1989, but expansion beyond seventy-two units is certainly not warranted.

Recommendations

Continue TPHCP funding at reduced levels for two years. Phase out U.S. contribution to salary supplements by January, 1989. Provide partial funding for drug purchases as a stop-gap measure with the condition that the MOH improve its logistical management of the purchase. Undertake policy dialogue at the highest levels concerning development of a system of user fees for health services.

MANAGEMENT SYSTEMS

Findings

While progress has been made, management systems are not operating at acceptable levels to provide adequate support to PHCUs. In 1985, a two-year Project workplan was developed. More detailed workplans were developed for each management component. Manuals are being produced for the management and operations of TPHCP.

TPHCP's management information system functions erratically. Operational data are either not recorded or are reported irregularly by many PHCWs. A more effective reporting system will soon be implemented by TPHCP; computerization of the system will produce periodic summary statistics of PHCU operations.

TPHCP's transportation system is providing adequate scheduling of vehicles needed for staff travel and operates an effective maintenance and repair program. The logistics system is functioning well, with the exception

of drug supply to PHCUs. Project staff report that 30-35% of the drugs and materials listed for PHCU use are unavailable from the MOH and delivery is many times delayed. Accurate records of drugs and vaccines are not maintained by all PHCWs.

An extensive program of supervisory visits to PHCUs has been developed. Actual supervision falls short of this plan; visits are made less frequently than scheduled and the skills of the supervisors need to be improved. Supervision of the trainer/supervisors (T/S) is also weak.

Management of health services also needs improvement. Preventive health care and, in particular, health care for women and children, e.g., immunization, growth monitoring, oral rehydration therapy (ORT), and family care/Maternal Child Health (MCH), are weak.

Long-term training is nearing completion; two individuals will have received MPH degrees. Thirty-eight man-months of short courses and study tours abroad have been completed. Five management courses have been conducted for middle and senior level MOH managers. Pre-service training will be completed by June, 1987.

There is no counterpart for the management of health services and the Project currently employs seven persons who are not MOH staff. The slowness of the MOH to process employees, either new hires or assignment of MOH staff, has been problematic for the Project.

Conclusions

TPHCP management systems need further development. Project staff at all levels need to improve further their skills, knowledge and professional performance. Strengthening Project operations could be accomplished with fewer technical advisors during the extension period. Future training should emphasize in-service and on-the-job training in Yemen. Any short-term training outside of Yemen should be conducted in an Arabic speaking country. Considerably more attention needs to be directed to improving preventive health care services, and especially services directed to women and children. The MOH needs to deal more expeditiously with staffing and personnel issues. The Project should provide partial funding for the purchase of drugs needed by the PHCUs during the extension.

Recommendations

Reduce technical assistance to three advisors in the first year of the extension and then to one or two in the second year, depending on progress made in the preceding year.

Develop a workplan for the extension period. Review training needs for all Project staff (including Health Center staff, T/Ss and PHCWs) and conduct short-term, in-service and on-the-job training as required. Strengthen the supervision system, i.e., improve T/S skills, increase the number of visits, supervise the supervisors, and broaden T/S work assignments to include promotion of community action, women's programs, and child health care. Fill all vacant MOH staff positions, including those currently held by Project employees. Establish a procedure to reimburse the MOH for 50% of costs for needed drugs in the first year and 25% in the second year. Make reimbursement conditional on the MOH's proper handling and expeditious delivery of the drugs to the Project.

SERVICE DELIVERY OF THE PRIMARY HEALTH CARE UNITS

Findings

The majority of PHCUs are functioning adequately, i.e., they are providing useful and effective curative and preventive services (more of the former than the latter), which are valued by the communities where they are located. Management of facilities, equipment, supplies and patient records in these PHCUs is acceptable. There is a growing acceptance of PHC services in the communities, but considerably more education and information must be provided to overcome prevailing attitudes about health care.

Further indications of progress in developing the TPHCP system include: low turnover rate of PCHWs, marginal improvement in monthly activity reporting (though still problematic overall), increasing awareness of community health problems in rural areas, an increasing number of presentations on public and personal health issues at schools and mosques, more regular requests for drugs by PHCWs, recruitment of eight women to the program, increased interest in PHCW training, and dissemination of ORT information to an increasing number of women.

A significant percentage of PHCUs - perhaps as many as one-third - are performing at sub-standard levels. Problems include irregular hours, poor motivation, inadequate knowledge of necessary skills, neglect of preventive health care services, and generally poor management of the PHCU. These problems are compounded by weaknesses in the supervision system.

In addition to these problems, other weaknesses include: lack of female PHCWs and LBAs to provide services to more women and children, a poor referral system, continued difficulties with the child growth monitoring program,

slow progress with the immunization program, a limited range of PHC preventive services (e.g., no nutrition education), low salaries for PHCWs, little or no financial assistance for PHCWs from the Local Councils for Cooperative Development (LCCDs) (indicating low support), unavailability of drugs, and poor cooperation among PHCWs and other sources of medical services.

Conclusions

A period of consolidation and strengthening of TPHCP, rather than further expansion, is needed to improve the overall performance of the PHCU system. This shift in emphasis should be designed to assure sustainability of TPHCP accomplishments.

Recommendations

Limit the number of PHCUs to a maximum of seventy-two units during the extension period. Identify PHCWs whose performance is sub-standard; increase supervision, support and training for these PHCWs; replace only those who fail to improve. Concentrate on in-service and on-the-job training. Improve coordination of PHCW activities with other sources of medical services. Strengthen the supervision system with more training and increase T/S involvement with promotion of preventive services, community action and women's programs.

1. PROJECT HISTORY AND CURRENT STATUS

The major objective of the TPHCP is to support the development of primary health care services in the Tihama region of Yemen. Technical assistance, commodities and training are provided through TPHCP. The Project will train seventy PHCWs, thirty-five Local Birth Attendants (LBA) and six mid-wives. Though not explicitly stated as a Project output, the purpose of training seventy PHCWs is to establish an equivalent number of Primary Health Care Units (PHCUs). To the extent that women can be recruited for training, the PHCUs will include an LBA or a female PHCW. Through the Project, the PHCUs are provided basic equipment and other materials; drugs are supplied through the MOH by UNICEF. The PHCWs are to provide both preventive and curative services.

The Project was authorized in 1980 and initially implemented by Catholic Relief Services. Unresolved implementation problems during the first two years of TPHCP led to a Project Amendment and change of contractors. The 1982 Amendment extended the Project Assistance Completion Date (PACD) to June 30, 1987, with total AID funding of \$11.5 million. Management Sciences for Health was selected as the contractor for TPHCP and began implementation activities in late 1983.

Implementation problems continued and by early 1985, it was apparent that consensus on TPHCP objectives and cooperation among the contractor, AID and the MOH were lacking. An external evaluation in mid-1985 found that progress toward Project objectives had been made, but that outstanding management issues needed resolution. A workshop held for this purpose proved successful. The evaluation also re-focused TPHCP activities on Project objectives which could be achieved by June, 1987. Considerably more emphasis was placed on the management systems necessary to support the operations of the PHCUs. The evaluation made no recommendation for an extension of the PACD.

As of February, 1987, TPHCP has made notable progress toward achieving its overall objectives. MOH, MSH and AID management staff have made a concerted and effective effort to overcome earlier problems. The major output of TPHCP is the establishment of fifty-five PHCUs, and one is expected to re-open in the coming months. Sixteen more PHCWs will complete their training by June, 1987. Therefore, TPHCP could establish a maximum of seventy-two units based on training completed by the PACD.

Though training objectives will have been met, an equivalent number of PHCUs (i.e., seventy-two) will not

have been established. Moreover, the first year of PHCU operation requires considerable supervision and support, also precluded by the June, 1987, PACD. Progress has been made toward developing necessary management systems for TPHCP and training Yemeni counterparts; however, this process is not yet complete.

The primary purpose of this evaluation, therefore, is to determine whether an extension of TPHCP is justified, and, if so, in what form and at what level of support.

2. OVERALL PERFORMANCE

Findings

As of February 1987, the Project is roughly one year behind schedule. A total of seventy-two PHCWs will have been trained by June 1987, but an equivalent number of PHCUs will not be in operation by the PACD. At present, an effort is being made to hurry the implementation process as much as possible to approximate Project objectives. The fact that the Project is somewhat behind schedule is not a criticism of present management; rather, it is remarkable that the Project has been able to accomplish what it has given the seriousness of earlier management problems.

The majority of the existing PHCUs appear to operate at an acceptable level. But a significant percentage, perhaps as many as one-third, are functioning at substandard levels; hence, here is considerable room for improvement in many of the existing PHCUs. Management systems in support of these units are also weak.

There is no evidence which suggests that TPHCP constitutes a viable model to be replicated elsewhere in Yemen. An adequate test of this proposition is whether the MOH is willing to assume the budgetary demands of TPHCP as AID assistance is reduced. This would represent a major increase in MOH expenditures for PHC in the Tihama, approximately a 78% increase over 1986 expenditures.

National policy prevents the establishment of even minimal user fees. Given current YARG budget constraints, revenues for PHC are lacking, thus, limiting the possibility for establishing a sustainable PHC system nationwide.

Conclusions

Termination of the Project as planned in June, 1987, would result in an undesirable End of Project Status. It is very likely that services and operations would quickly degenerate. Additional time and support are needed to

assist the new PHCWs in establishing PHCUs, to strengthen the operations of all existing units, and to consolidate and strengthen necessary management systems. Given the MOH's limited budget, further expansion of the system beyond seventy-two units in the next two years is unwarranted. Nor is there any justification for replicating, even with adaptation to differing local conditions and health needs, the TPHCP approach. Moreover, the lack of user fees seriously undermines efforts to expand PHC nationwide.

Recommendations

Continue TPHCP funding for two years at reduced levels to achieve Project objectives and ease the transition to full MOH operation and funding. Specifically, three advisors based in Hodeidan should be provided for one year to continue training of Yemeni counterparts in the operation of TPHCP management systems. One advisor is needed to re-orient TPHCP training from pre-service to in-service training and to use trainer/supervisors to initiate or strengthen programs in community health action, women's programs, nutrition, ORT, expanded immunization and family care/MCH. Assistance for improving the supervision system will also be necessary. A second advisor should assist with information and evaluation systems, and with health services. A third advisor is needed for logistics and transportation systems.

During the second year of the extension, reduce the number of advisors to no more than two and preferably one, depending on progress made during the first year in transferring management skills to Yemeni staff.

After June, 1987, terminate Sana'a-based Project activities in the MOH and eliminate future project funding for the MSH office in Sana'a as part of the reduction of TPHCP.

Focus Project activities on strengthening the operations of the seventy-two PCHUs and do not establish through the Project additional PHCUs beyond that level during the extension period.

Continue Project funding for salary supplements at twenty-five percent through December, 1987, then reduce to 15% through December, 1988, and eliminate all salary supplements thereafter.

Initiate discussions at the most senior levels of the YARG concerning the necessity of instituting user fees for PHC services led by the U.S. Ambassador and the USAID Mission Director. Encourage the international donor community in Yemen to promote and support this reform.

Conduct an evaluation of the Project eighteen months after the extension to determine whether the MOH is providing adequate funding for the seventy unit system. Changes which might have occurred in national health policy (or progress toward such changes) and the results of the evaluation should clarify whether future AID assistance in the sector is warranted.

3. ECONOMIC ANALYSIS

The TPHCP was launched in 1980, close to the end of the 1975-82 boom period. The period began with the upsurge in oil prices in 1974, which led in turn to soaring remittances from the (roughly) one quarter of the Yemeni labor force who found work in Saudi Arabia. In response to the remittance inflow, imports and YARG spending surged, and real GDP rose at a rate of 7 percent per annum. Government spending on services increased from 11 percent of GDP in 1975 to 26 percent of GDP in 1983. Spending on health services kept pace: from 0.43 percent of GDP in 1975, to 1.00 percent in 1983. Even at the 1983 level, however, total spending on health - investment and current expenditures combined - amounted to only 2.4 percent of GDP, a low ratio even by developing country standards.

Since 1983, in belated response to the oil price collapse in 1981, imports and YARG spending have been drastically reduced; the Yemeni Rial (YR), which had been pegged at YR 4.5:\$1.00 since 1971, has declined to 11.86; GDP per capita has marginally declined, and price inflation has risen rapidly. The outlook is for further retrenchment until at least 1988, when the country will begin to ship its first oil from the on-going Hunt Oil Company development. Initial annual revenues are estimated at \$400-450 million (which can be seen in the context of a 1986 import bill of about \$800 million), depending on world oil prices. While revenues of this magnitude will permit some upturn in imports and Government spending, there will not be a return to the free-spending days of 1975-82.

The downturn in the economy and its future course, taking into account the prospect of oil revenues, have obvious implications for the ability and willingness of the YARG to assume the increased Project expenditures implied in a termination of U.S. funding. In Section 3.1, we examine the trend of YARG and MOH spending during 1982-86.

3.1 Budgetary Expenditures: YARG and MOH

The MOH does not budget separately for PHC as such, nor can the expenditures on PHC be determined ex post from the

available data. Some indication of the resources available for PHC may be had from the expenditures by MOH as a whole. Table 1 shows the trend of spending by the YARG and MOH for the period 1982-86. In this compilation, YARG expenditures comprise budget chapters 1-5 only, i.e., omitting the "Unclassified" and "Various" categories which cover mainly the military and service on the country's internal debt.

TABLE 1

**YARG and MOH Expenditures, 1982-86
(YR Millions)**

	<u>YARG^{a/}</u>	<u>MOH</u>	<u>MOH as % YARG</u>
1982	7,089	467.0	6.59
1983	4,984	434.1	8.71
1984	4,711	426.4	9.05
1985	6,798	446.8	6.57
1986	7,627 ^{b/}	468.9 ^{c/}	(d)

Notes: (a) Chapters 1-5 only.
 (b) Estimate based on data for Jan-Sept.
 (c) Budget.
 (d) Calculation not meaningful.

Sources: MOH and Central Bank of Yemen

As can be seen, the MOH increased its share of YARG expenditures significantly during 1983-84. However, the MOH share fell back to the 1982 level in 1985, and was apparently well below the 1982 level in 1986, to judge by the available indications (estimated YARG expenditures up 12%, MOH budget up only 5 percent on actual 1985 spending). When allowance is made for inflation, both YARG and MOH spending have declined drastically, as shown in Table 2.

TABLE 2

**Real Expenditures, 1982-86^{a/}
(1982 = 100)**

	<u>YARG</u>	<u>MOH</u>
1982	100.0	100.0
1983	60.9	87.4
1984	58.8	80.7
1985	71.9	71.7
1986	59.3 ^{b/}	55.4 ^{c/}

Notes: (a) Nominal expenditures deflated by the GDP implicit price deflator. Annual inflation

rates are: 1983, 6.3 percent; 1984, 6.4 percent; 1985, 18.0 percent; 1986, 36.0 percent.

- (b) Estimate based on spending for Jan-Sept.
- (c) Budget.

Sources: MOH, Central Bank and CPO.

Findings

MOH as well as YARG expenditures declined by about 28 percent in real terms during 1982-85; and based on its 1986 approved budget, the decline in MOH spending may have reached 45 percent during 1982-86.

The decline in MOH spending may reflect, in part, a concomitant decline in donor support for the health sector, as detailed in a recent World Bank paper, 'Resource Mobilization in the Health Sector of the Yemen Arab Republic,'¹ though the extent to which donor support is reflected in the MOH data is not made clear. If the purely foreign currency portion of donor support (i.e., the salaries of foreign experts) is not included, then overall expenditures in the health sector have declined by more than the above figures suggest.

Conclusions

Given the apparently strong MOH commitment to the concept of PHC/BHS, it is quite possible that the latter has managed to increase its share of available MOH resources; (certainly this is true of the TPHCP). However, it seems more than likely that real expenditures on overall PHC/BHS have shared in the general decline, if perhaps to a lesser extent than overall MOH spending.

In the absence of a system of user fees, no upturn in YARG spending or spending on PHC can be expected before 1989 at the earliest. Expenditure trends thereafter will depend on the degree of success achieved in the exploitation of the YAR's oil resources and, of course, on world oil prices.

Recommendations

USAID and the U.S. Embassy should undertake a policy dialogue at the highest levels of the YARG aimed at development of a system of user fees in the health care area.

3.2 TPHCP in Context

As noted above, expenditure data for PHC in Yemen are not available. An indication of the Project's share of total

spending on PHC can, however, be had from the available data on numbers of PHCUs. The Project has 53 PHCUs, with another 19 expected to begin service in 1987. Comparable MOH data are hard to come by; the Ministry's figures for PHCUs currently in service may include (especially in the Sana'a Governorate) Rural Health Care Units, which are partly supported by the Local Councils for Cooperative Development; and their plans for units to be placed in service by the end of 1987 are ambitious, to say the least. Table 3 shows the MOH figures provided us, with no attempt on our part to adjust for possible over-statement. The same table shows the numbers of rural population for each PHCU (or Rural Health Care Unit, as the case may be). For these purposes, the Hodeidah Governorate has been divided to show separately: (a) the area, comprising approximately three fourths of the rural population of Hodeidah, served by the TPHCP; and (b) the remaining one quarter of the population residing in the Zabid, Hays and Bait Al-Faqin areas, which is served from Health Centers not attached to the TPHCP. With those areas omitted, the TPHCP catchment area accounts for about 9 percent of the rural population of North Yemen.

Findings

Even at the 55 PHCU level, the TPHCP has the highest concentration of health units of any Governorate in the country. In fact, no other Governorate of any size, i.e., excluding Al-Jawf with one percent of the rural population, comes remotely close. The average PHCU outside the TPHCP area serves 3.6 times the numbers of people served by a TPHCP unit.

At year-end, and even allowing for the Ministry's seemingly extravagant projections (from 219 units to 381-401 units country-wide), the numbers served by units outside of the TPHCP would still be 2 1/2 times that of a TPHCP unit. At that time, if the MOH projections are realized, the TPHCP would serve 9 percent of the rural population with from 18 to 19 percent of the PHCUs.

In expenditure terms, the TPHCP share of PHC resources is almost certainly greater than is suggested by the Project's share of PHCUs, if only because of the salary incentives apparently paid only by the TPHCP². In other respects, it is not clear whether TPHCP operations are more or less expensive than PHC operations elsewhere; (TPHCP apparently has more Health Centers per PHCU, but the relative costs of Health Centers vs. the mobile teams required for supervision purposes in their absence are not known). According to information prepared by Project personnel (see further Section 3.3), TPHCP salary supplements will

add 17.2 percent to Project costs at the full-scale operating level (5 Training Health Centers and 72 PCHUs). All other things being equal, therefore, TPHCP costs at the 72 PCHU level can be estimated as from 21 to 22 percent of all PHC costs in the YAR ($\frac{72}{381-401} \times 1.172 =$

.210 - .221); and again, this ratio will be higher to the extent MOH projections for additional units in 1987 are not realized.

Conclusions

Without question, the greater concentration of health units in the Project's catchment area means more intensive coverage of the rural population than in other areas (though whether the additional numbers of people reached are in proportion to the additional number of units is doubtful; one study has shown diminishing returns to additional PCHUs)³. We are not suggesting here that the TPHCP has done anything other than what was asked of it. However, from the point of view of a Ministry operating under extremely tight budgetary constraints, the preponderant share of resources devoted to the TPHCP is likely to become a strong argument for, at best, holding the line in Hodeidah, while moving to catch up in the relatively neglected areas of the country.

Recommendation

See recommendation in Section 3.3.

Table 3				
Rural Population Per PCHU, 1987				
	No. of PCHUs		Population per PCHU	
	As of Feb	end-1987	As of Feb	End-1987
Sana'aa/	55	85-105	27,182	17,588-14,238
Taiz	31	36	47,613	41,000
Hodeidah:				
TPHCP area	55	72	13,255	10,125
Other ^b /	10	10	24,300	24,300
Ibb	5	18	79,278	79,278
Dhamar	5	5	155,800	31,160
Hajjah	10	25	87,900	35,160
Sa'adah	15	45	22,400	7,467
Al-Mahweet	5	20	62,800	15,700
Al-Beida	5	5	66,800	66,800
Mareb	5	20	22,800	5,700
Al-Jawf	5	20	17,400	4,350
YAR	219	381-401	37,502	21,556-20,481
YAR, excl. TPHCP				
Catchment area	164	309-329	48,548	25,793-24,225

Notes: a. May include Rural Health Care Units
b. Estimated

Source: CPU for population data, MOH for PCHUs.

3.3 MOH Expenditures on TPHCP; Financial Implications of a U.S. Withdrawal

The available data do not permit a measurement of TPHCP expansion in financial terms, or at least not within the time allowed for this Evaluation. There is no historical record of the MOH share of Project expenditures, and the USAID share of local currency expenditures can be ascertained only by combing through ledgers which, for the most part, are not organized on a programmatic basis. Fortunately, Project personnel, with the assistance of the MOH/Hodeidah, have compiled an estimate of the MOH share of Project expenditures in 1986, by major program function, along with estimates of the costs that would be borne by the MOH assuming a termination of U.S. assistance on June 30, 1987, and further estimates based on expansion of the Project beyond the presently planned 72 PCHUs⁴

Findings

Table 4 summarizes the MOH share of Project costs in 1986, and the projected costs to the MOH, assuming the present expansion to five HCs and 72 PCHUs and termination of U.S. assistance on June 30, 1987. Assuming continued UNICEF funding of most drugs (those used at the PCHU level) and vaccines, operating costs would rise by 53.8 percent. If

<u>TABLE 4</u>			
Operating Costs For TPHCP			
(000 YR)			
	1986 (MOH Share)	Full Project Scale (in 1986 prices) ^{a/}	<u>% Inc.</u>
Salaries	3,616	4,074	
Incentives	344	1,189	
Drugs, med. supplies for HCs, THCs	383	383	
Oper. funds, supplies	76	249	
Vehicles, op/maint.	130	611	
Training	-	135	
Other main office exp.	-	356	
Subtotal(1)	<u>4,549</u>	<u>6,997</u>	53.8
Depreciation	-	1,105	
Subtotal(2)	<u>4,549</u>	<u>8,102</u>	78.1
Drugs, med. supplies for PCHUs ^{b/}	-	1,197	
Vaccines ^{b/}	-	55	
Total	<u>4,549</u>	<u>9,354</u>	105.6

Totals, excluding
salary incentives:

1. Assuming continued outside drug funding	4,205	6,913	64.4
2. Assuming MOH funding of drugs	4,205	8,165	94.2

Notes: Assumes expansion to 72 PCHUs and 5 HCs by 6/30/87.
Currently funded by UNICEF.

depreciation costs are taken into account, the increase would become 78.1 percent; and if the MOH were to assume the full cost of drugs, the increase would become 105.6 percent. The latter point needs emphasizing since: (a) there is no assurance of UNICEF funding beyond the mid-1989 expiration date of the current agreement; and (b) the Hodeidan Governorate is said to have already drawn its full quota of drugs under the present agreement. In fact, we were told of drug shortages at all of the PHCUs that we visited. Table 4 also shows full-scale Project costs assuming the salary incentives were to be discontinued. The increase on that basis would be 64.4 percent, assuming continued UNICEF (or some other donor) funding of drugs; 94.2 percent if MOH were to assume the full funding of drugs. It should be added that Project personnel feel the Project would collapse if the salary incentives were to be withdrawn.

As part of the same exercise, Project personnel projected TPHCP costs on the basis of a further expansion to 80 PHCUs in 1988, and 88 PHCUs in 1989. On this basis, total costs in 1986 prices are shown as rising by an additional 13.6 percent in 1988, and 14.1 percent in 1989.

Conclusions

Considering the extraordinary increase in costs to the MOH at a time of extreme budget stringency, the recent expansion from 55 to 72 PHCUs appears to have been unwise from the standpoint of Project sustainability. However, since the training to support the additional units and the integration of the additional THCs are well underway, the Evaluation Team feels that it has no choice but to acquiesce in a fait accompli.

By the same token, and considering also the relatively heavy concentration of PHC activity in the Hodeidan area, it appears doubtful that the MOH would assume the full costs of TPHCP operations on June 30, 1987. (Indeed, we were told that the MOH even now is in arrears on its share of salary incentives). Whether salary incentives, vehicle costs, or something else would be the first to be cut is impossible to say, but as thinly stretched as matters are now, any cuts would lead to a deterioration in Project services.

Given the conclusions stated above, the Evaluation Team considers any expansion beyond 72 PHCUs to be out of the question.

Although the MOH share of Project costs will increase even without a termination of U.S. assistance on the PACD, the increase would be more gradual; (the Evaluation Team

would not reduce the U.S. share of salary incentives until 1988). The continued U.S. presence and the more gradual transition should improve the chances of continued MOH funding (of its share) beyond mid-1987.

The prospect of an improving economic situation after 1988 provides a better chance that the MOH will be able to support full project funding by 1989.

Recommendations

Continue U.S. assistance to the Project for an additional two years. Continue to fund 25 percent of salary supplements through CY 1987, 15 percent through 1988, and zero thereafter.

Provide funding of a portion of the required drug supplies, on a one-time basis, sufficient to maintain full operations through mid-1989.

4. MANAGEMENT SYSTEMS

The following major TPHCP management systems have been examined at the Project Office, Health Center and PHCU levels of the Project.

4.1 Child Health Services

Child health services encompass PHCU attendance, immunization, growth monitoring (GM), oral rehydration therapy (ORT) and child spacing (Family Care/MCH). Reviews of these components show that although a high quality system has been created, there are still weaknesses in its implementation. Lack of progress toward Project goals is attributable to inadequacies in supervision, logistics and information systems, along with a lack of MOH coordination and differential community acceptance and employment of preventive health measures.

Findings

An excellent PHCW reference manual has been prepared and continuously revised which can be of great value to PHCWs in reinforcing their skills and knowledge. PHCU attendance continues to be dominated by males, a situation which the Project has sought to correct. According to Project reports and interviews with Project personnel and PHCWs, PHCU attendance by children and women of child bearing age is still quite low. Average monthly attendance at PHCUs for breastfed children and pregnant women decreased considerably from 1984 to 1985, although their numbers were already small fractions of the total attendance. There was a slight increase in females over

the age of 5, while attendance by males over 5 rose 15%. Experience has shown that children generally need medical attention for diarrhea and bronchitis, and child malnutrition is common. Project documents report inadequate progress in immunization thus far. At last year's 9% rate of increase, six additional years would be necessary to reach the target of 80% coverage. Coverage varied tremendously by PHCU as a result of PHCW and T/S performance, logistical and supply problems with EPI and differential community support. Public health education through village and home meetings in support of immunization, growth monitoring, ORT and environmental health has been minimal. It is the responsibility of high level MOH, EPI and Project staff, along with T/Ss, to solve logistical problems involving immunization.

Growth monitoring has been abandoned as a result of poor community assistance during immunization clinics and among parents; there is either fear, disinterest or a lack of faith in its usefulness. While there is some acceptance of GM when it occurs during home visits, GM is not regularly discussed in community meetings and PHCWs are unaccustomed to plotting the GM charts. ORT continues to be passively administered; PHCWs and T/Ss claim that mothers have no faith in its benefits. In general, PHCWs do not attach great seriousness to diarrhea as a threat to community health, though some PHCWs pay lip service to its importance. The effectiveness of child health services has also been affected by weak supervision of PHCWs; supervision at all levels has not been up to standards. It is clear that although the PHCWs are adequately trained, they lack the supervision, direction, monitoring and on-the-job training necessary for them to pursue preventive health activities adequately. While the supervision system is complete and comprehensive, it is not closely observed by those in supervisory positions. In community relations and public education, supervision is generally lax, providing little direction and support for the PHCW. Thus, contact between the PHCW and the community has fallen short of what is needed to promote understanding, acceptance and cooperation among villagers regarding preventive health activities. Above the theoretical classroom level of PHCW training, no Project attention has ever been paid to child spacing due to its delicate nature and the lack of an articulated YARG policy in this regard. In most cases, the Project staff has already identified the above constraints to child health services implementation.

Conclusions

PHCUs have reached a point at which they perform valid curative services and are considered legitimate and

worthwhile by their communities on that basis. While actual PHCU attendance is appropriate, the patient load is principally male. Emphasis on curative services continues to impede development of adequate preventive health care. This has obvious negative effects on community members at highest risk. It has been assumed that the number of children clients would be larger if a female PHCWs were employed, but this cannot be tested as LBAs do not work in this capacity.

Immunization, GM and ORT require much strengthening and consolidation if they are to create a positive impact on child health. A focused program for each of these child health components is needed. A recently developed GM program will be implemented soon and its status should be closely monitored.

Notwithstanding logistical and supervision difficulties, the findings suggest that a lack of community understanding, acceptance and support of preventive health is the overriding constraint to implementation of child health services. Prevailing health attitudes run contrary to those of the PHCW as health promotor. Given the difficulty of recruiting a cadre of female health workers and the generally poor performance of child health services thus far, it is evident that the PHCW's preventive health care activities must be made more effective as soon as possible. The PHCW's potential contribution to improving health status through child services and public health can occur only if the community is educated in this regard. Community action and public health education can raise the consciousness of community leaders and community members at large so that a village doctrine of health develops. With a full campaign for community health education, better integration of the preventive health component of the PHCU into the community is possible. Once reasonably versed in preventive health issues, the community is more likely to support PHCW assistance and measures designed to improve child health care.

Recommendations

Strengthen on-the-job and in-service training for PHCWs, T/Ss and Project counterparts in preventive health care activities. Particular emphasis should be given to providing services to women and children by their active recruitment; for example, pregnant women can be approached and referred to the area Health Centers for pre- and post-natal care. To support this, PHCW schedules should be arranged for 3 hours of PHCU duty, with the remainder of the work day spent in home and school visits.

Develop cooperation and coordination between the PHCWs and TBAs who now operate in the various communities. TBAs should be contacted by Project personnel and encouraged to refer their problem pregnancy cases to the Health Center and to encourage female patients to take advantage of immunization and GM services offered at the PHCU for their children.

Intensify supervision, training and monitoring at all levels; such training should focus on skills needs, supervision of skills, and community development activities. PHCWs require assistance from T/SS, Project staff and counterparts if they are to be successful both at mounting preventive health programs and providing regular health care services. The Project Director should contribute to this effort by functioning as a liaison between the Project and the community and by approaching the LCCD at the Hodeidan and naniya levels for formal, though perhaps not financial, support. The MOH/Hodeidan should coordinate more effectively with EPI so that the full potential of immunization is not wasted due to logistical problems. The Project should encourage the MOH to articulate a policy in favor of child spacing, with services available at the Health Center and PHCU levels as appropriate.

4.2 Supervision

Findings

The Project draft supervision manual is comprehensive and thorough; instructions are simple and easy to follow. General job description for supervision are available, and standard operating procedures established for each level of supervision. The four tiers of supervision should adequately provide for detection and correction of problems in PHC at each level. A draft Teachers' Manual for Trainers/Supervisors is likewise well prepared and covers all aspects of preventive health care activities, along with teaching methods for each topic.

The supervision manual calls for specific coverage of activities, among them, meeting with community leaders, observation of the PHCW's performance of technical duties, review and discussion of daily activity sheets, a study of the patient register and drug supply records, an observational tour of the community in which the conversations with villagers occur, and finally, an assessment of the PHCW's performance.

Efforts by the evaluation team to observe supervisors during three regular and one immunization visits were unsuccessful, as in all cases the T/SS had departed before

the team's arrival. This suggests that the T/Ss in question did not follow the standard procedures for supervision laid out in the supervision manual; in most cases, the PHCWs' descriptions of the T/Ss supervision substantiated a general perception that T/S supervision is not carried out according to regulations. Although a regular supervision visit should take 3 to 4 1/2 hours, PHCWs reported that T/Ss rarely spend more than half an hour during visits. Further, there are scheduling difficulties, as the Project Deputy Director sometimes arranges two T/S visits within an area during one day; one T/S cannot thoroughly complete two PHCU supervision visits during a regular working day.

The actual number of regular T/S visits to PHCUs is unclear, as the manual states 1 visit/2 months, while Project staff report that 1 visit occurs each month. It is equally unclear what duties the T/Ss perform during the remainder of the month. Project documents also point to technical inadequacies among a few T/Ss. According to Project documents, there are repeated complaints by PHCWs that T/S regular supervision and assistance during immunization clinics are either inadequate or non-existent. Project staff responsible for supervision recognize the shortcomings of supervision implementation, but explain that it is difficult to motivate individuals to fulfill completely their supervisory roles; this is disturbing, given that those responsible for supervision already receive salary incentives.

Conclusions

On the basis of information gathered on T/Ss and observations of actual PHCU activities, it is clear that a lack of supervision is closely related to poor performance of preventive health care duties at the PHCW level. Inadequacies within monitoring and direction leave the PHCW free to emphasize curative duties, those which are simpler, require less initiative, and do not require community cooperation. Supervision requires strengthening at the T/S, Health Center Director, and Project Deputy Director levels if preventive health measures are to be promoted and a reliable set of health statistics collected.

Recommendations

Complete a thorough review of T/S and Health Center Director performance in relation to standard operating procedures as soon as possible by the Project Deputy Director. Develop a checklist of supervision requirements for each supervisory unit and assure its close monitoring by the Project Director.

Begin a skills needs assessment for T/Ss immediately; based on results, modify in-service and on-the-job training to prepare the T/Ss more fully. This would likely require the development of skills associated with technical health issues, personnel development, community involvement and public education.

In-service training for all levels of personnel should emphasize the information system and its importance to overall health goals.

4.3 Training

Findings

Long-term participant training was originally planned for four persons. One person completed an MPH at John Hopkins in June, 1986, and is now director of TPHCP. The former Project director will complete an MPH at Tulane in August, 1987. Thirty-eight man-months of short-term external training/study tours have been conducted in several countries having similar health care systems. No further external training is planned.

Training by the Project in Hodeidah has produced 55 PCW, 10 LBAs, 3 counterparts, and 40 TBAs. Eleven T/Ss have been trained by Health Manpower Institute (HMI). Training is now being conducted for 16 PHCWs and 9 female PHCWs. Short in-service training is given to T/Ss, PHCWs, LBAs as needed. Supervision and on-the-job training are given to PHCWs by T/Ss.

TPHCP, with assistance from NIPA, has conducted the following courses in Sana'a for MOH staff: General Management (2 weeks) 14 participants; Supervision (2 weeks) 24 participants; Accounting/Financial Management (2 weeks) 24 participants; Manpower Management (2 weeks) 21 participants; Information Systems (2 weeks) 20 participants. Two more courses are planned before June, 1987: a one week course at the Directorate General level in Sana'a, and a two week course in General Management for Project and MOH Hodeidah staff.

HMI provides training for PHCWs, but its courses emphasize curative rather than preventive health care. HMI has trained the T/Ss for TPHCP and tested the PHCWs at the conclusion of their courses. MOH Sana'a determines the curriculum for HMI.

There is general agreement that more in-service and on-the-job training is needed at all levels to enable Project personnel to raise the health care services to the standards desired.

There are seven office staff working at the Project center who are not employed by MOH and are expected to leave when the MOH assumes full management of TPHCP. At present, there is no counterpart in the Project for the health services advisor.

Conclusions

Project training in the future should emphasize in-service and on-the-job training. All permanent staff should be in place promptly to obtain training before June, 1987. NIPA can be a resource to develop management skills needed in TPHCP. Staff pre-service training will only be necessary for PHCW replacements; Project training needs in the future can be met through on-the-job and in-service training conducted in Hodeidah.

Most senior Project staff are trained to a level that assistance from the MSH can be reduced after June, 1987. At Hodeidah, working relationships have been established and trust has developed among those involved so that transfer of skills, knowledge and attitudes from MSH to Project staff has occurred to some extent.

Recommendations

Conduct a needs analysis early in the Project consolidation phase so as to determine the skills, knowledge and attitudes of Project personnel required to improve the health services component of TPHCP. Emphasize the following: immunization, child spacing, GM and ORT for children, community involvement in preventive measures, increased participation by women and children, and staff supervision. These activities should be strengthened by in-service and on-the-job training by Yemeni Project staff with MSH staff support.

Provide pre-service training only for replacement PHCWs and only when a sufficient number (10-15) of vacancies make training cost effective.

Review the management needs of senior Project staff six months after their management training. Additional training required should be given by MSH staff locally or through a NIPA short course.

Appoint a Yemeni counterpart for the health services advisor immediately so that he can obtain on-the-job training before the PACD.

Replace the seven Project staff who will not become MOH employees by MOH personnel so that the latter may receive on-the-job training from present non-MOH staff before the PACD.

Continue to provide Yemeni senior Project staff with on-the-job training by MSH staff as necessary.

Discontinue central MOH courses in Sana'a.

4.4 Logistics and Transportation

Findings

The logistics system of TPHCP receives necessary drugs and other materials from the MOH, stores those supplies under proper conditions at the Training and Integrated Health Centers, and supplies these materials to the PHCUs as ordered. TPHCP logistics is responsible for provision of furniture and equipment at PHCUs when they are established and when replacements are needed. Project staff report equipment has been purchased for supplying a total of seventy PHCUs. Distribution of motorcycles to the PHCW is also a logistics function.

TPHCP's transportation system involves scheduling vehicles for Project activities, vehicle maintenance and repair. PHCWs and their LCCDs are responsible for motorcycle maintenance and repair. However, since many LCCDs lack the funds for this, costs are often borne by the PHCW.

Thirty-nine drugs and other medical supplies are supposed to be available to the PHCWs and adequate supplies of these materials are to be stocked by the Project. At present, there is a two month delay between the submission of drug requests by the PHCWs and actual provision to the PHCUs. Unavailability of drugs from the MOH is a critical factor in this regard. Project staff acknowledge that 30-35% of the drugs and vaccines listed are not available at the PHCUs. As discussed in Section 5, Service Delivery, PHCWs cite the lack of drugs as a major problem affecting their operations. Their inability to meet the demand for curative treatment has a detrimental effect on their credibility and effectiveness in the community.

Past experience with the MOH's importation, storage and distribution of drugs indicates that the Ministry's own logistics system is weak. For example, perishable drugs have set as long as six months in storage at temperatures above acceptable limits. The consequent losses have been high, making some donor agencies reluctant to supply drugs through the MOH. Distribution to PHCUs of drugs which have lost their potency or are beyond their expiration date is equally detrimental to the credibility of PHCWs.

Conclusions

The logistics system of the Project needs further strengthening to reduce the time between submission of drug requests and actual supply to the PHCU.

The unavailability of drugs to the PHCUs is ultimately a problem that the MOH must correct. During the two year extension of TPHCP, this problem could seriously undermine the test of whether the TPHCP constitutes a model for PHC systems in other parts of the country. Project assistance will be needed as a stop-gap measure to deal with the drug shortage problem, under the condition that the MOH take the necessary actions to improve its own logistical system.

Recommendations

Continue technical assistance for logistics and transportation during the first year of the extension and perhaps for a second year, depending on progress made. Provide adequate funding to assure transportation for supervisory visits.

Provide equipment and furniture to the new PHCUs as planned.

Provide partial Project funding for the purchase of drugs for the PHCUs in the Project area. Project support should be contingent on the MOH's taking the necessary action to expedite drugs through customs and to deliver those same drugs to the Project immediately. The procedure can be described as follows:

- a) Assess supply versus need for the thirty-nine items available to the PHCUs to determine critical shortages;
- b) TPHCP, AID and the MOH agree to what will be purchased;
- c) the MOH purchases the drugs and expedites the shipment through customs;
- d) the drugs are delivered immediately to the Project and, assuming the drugs have been treated correctly in the process (e.g., proper storage at acceptable temperatures, assured by Project staff inspection of storage facilities), the Project will reimburse the MOH for fifty percent of the costs of the drugs (not to exceed \$50,000) for the first year of the extension, and twenty-five percent (not to exceed \$25,000) for the second year. The Project will not reimburse the MOH for drugs which have been mishandled.

4.5 Work Plans/Action Planning

Findings

In 1985, to obtain consensus on roles and responsibilities among various entities involved in the Project and to agree on the major activities to be undertaken, a two year

Project workplan was developed. In addition, the Project management systems each developed individual workplans. Most workplan activities are behind schedule and some have not been initiated. Original long range planning was modified to respond to new conditions and information that emerged during implementation.

Within the Project's two year workplan, most goals and activities have not reached the Project standards. These are: number of female PHCWs trained, number of women and children using PHCU services; amount and type of preventive health care activities in operation; community involvement in health care activities; fully trained Project staff; all positions in Project filled with MOH staff; up to date accounting on all units and activities; and the management systems.

Conclusions

While progress has been made, many of the health care activities in the two year workplan have not reached the goals established nor have management systems been fully developed.

Recommendations

Develop a new workplan for health care activities for the consolidation phase from 1987-89, with end products having clear standards that are realistic to conditions in the Tihama and MOH capabilities. Develop six month workplans for each Project section and management system with reviews and action planning within each plan scheduled.

4.6 Information System

Findings

Data are needed on PHCWs/PHCUs and IHC/THC activities and on the costs of services provided by TPHCP. PHCWs now should report monthly on twenty-nine types of operational measures. A more comprehensive information system is being developed.

Many PHCW do not adequately complete the monthly data forms, nor do they adequately maintain a running balance of drugs and vaccines. T/Ss supervise in order to identify and report problems the PHCWs have in providing the health care services at Project standards, as well as to give on-the-job training where needed.

The project has a computer. The TV media segment has been eliminated from the Project.

Conclusions

The information system must be improved if it is to provide useful, accurate data which can be analyzed and effectively used in modification of Project activities toward improved services.

Recommendations

Increase training for PHCWs in collection and recording of useful data/information. Analyze on a monthly basis the data/information collected, so that it results in feedback to concerned Project and MOH staff. Give additional computer training to selected Project staff so that information can be stored and retrieved easily.

5. SERVICE DELIVERY OF THE PRIMARY HEALTH CARE UNITS

This section reviews the current operations of the existing PHCUs, noting both strengths and weaknesses in their performance. At this time, summary statistics on service delivery of the PHCUs are not available. Monthly reporting from the PHCUs continues to be inadequate; a number of PHCWs fail to report regularly and record keeping is frequently incomplete or inaccurate. Consequently, this section relies on what limited statistical data are available, observations and interviews conducted at nine PHCUs and one Training Health Center (Tahreer Center in Hodeidan), and interviews with Project staff.

5.1 Organization and Coverage

Findings

TPHCP will include fifty-six PHCUs within the next few months. Assuming the sixteen PHCWs currently in training establish new PHCUs, a total of seventy-two units will be possible within the next year. Two Training Health Centers (THC), one in Zaidia, the other in Hodeidan, are staffed with doctors, community health nurses, and midwives to provide medical services beyond the capacity of the PHCUs. Recently, three Integrated Health Centers (IHC) were established to expand medical services and supervision in the Project area. The IHCs will each have a medical doctor, nurse, midwife, and a PHCW. The IHCs are also better equipped than PHCUs. Trainer/supervisors (T/S) are assigned to the five Health Centers. Supervision visits to the PHCUs are supposed to be made at least once a month. By June, 1987, the Project will have ten T/Ss, giving a ratio of seven PHCUs per supervisor.

It should be recognized that the actual Project area or TPHCP does not include all of the Tinama. Rather, Project activities have been limited to an area within approximately two hundred kilometers of Hodeidan. The coverage provided by the fifty-three PHCUs in the project area is already denser than in other areas of the country. Obviously, this coverage will increase with seventy-two units. A very rough estimate based on a catchment area of 3,000 people per unit is that the seventy-two unit system could provide services to one-third of the total rural population in the Tinama.

5.2 PHCU Facilities and Equipment

Findings

Forty-three of the existing PHCUs are currently operating in temporary facilities, such as rooms in the PHCW's house or space donated by the sheik or a local businessman. Others are established in permanent facilities constructed with funds from the LCCD and/or UNICEF. However, temporary facilities are not necessarily inferior to permanent locations.

Conditions in the PHCUs visited varied from very sanitary with functioning equipment which appeared to be used regularly, to unsanitary (e.g., garbage piled outside of the unit) and equipment that was broken or infrequently used (e.g., heavily covered with dust). In addition to unsanitary conditions, most PHCUs did not have electricity and piped water.

5.3 PHCWs

Findings

The PHCWs interviewed for the evaluation ranged in age from nineteen to twenty-eight. One began working in the PHCU when he was sixteen. All PHCWs at present are males, though eight women are currently in PHCW training. An elementary school education is required to enter PHCW training. Several taught elementary school prior to becoming PHCWs. Some have additional education and are studying for a high school diploma. The increasing number of individuals in rural communities with elementary school educations has enlarged the potential pool of PHCW candidates. However, these people recognize that other options are also available to them. In short, it cannot be determined whether the Project has benefited from the increasing number of individuals with elementary school education in rural areas.

5.4 PHCU Services, Operation and Supervision

Findings

Based on PHCU visits and limited operational data, it appears that the majority of units are operating at an adequate level and providing services which the community values. This includes having a technically sound understanding of PHC services, maintaining sanitary working conditions in the unit, keeping regular hours, making house visits, lecturing on health issues at schools and mosques, keeping thorough records, reporting operational data as required, etc. It appears that many PHCWs have gained acceptance and respect in their communities. For example, patients at the unit will refer to the PHCWs as "the doctor." It is also interesting to note that PHCWs in discussing their operations express a proprietary view about their activities, as though it were a business.

The number of patients seen per week varies widely. Newly established PHCUs may have twenty to twenty-five contacts a week (the same person may be seen more than once that week). Longer established PHCUs have a patient load of fifty to sixty contacts per week, and may go as high as one hundred during peak periods of the year. A number of PHCWs also report making house calls which further increases their patient load.

Project staff report that there is a tendency for PHCWs to shift to curative services at the expense of preventive health care. Curative services are simply easier to provide than preventive services. Prevailing attitudes toward health care result in a preference for curative services. Equally important, fees can be collected by the PHCW for curative services, though this is not official MOH policy. It is considerably harder to obtain payment for preventive services, particularly those involving community action or provision of public health information. Nonetheless, several PHCWs interviewed during the evaluation cited their efforts in preventive health care as an important part of their services. This included draining of stagnant pools of water and covering water sources to reduce malaria, inspection and treatment of water tanks, sanitary disposal of garbage and solid wastes, and lectures on public and personal health care at schools and mosques.

To offset the tendency to shift to curative services, regular supervision and reinforcement of the importance of preventive services are necessary. Supervisory visits are supposed to be conducted at least once a month. However, records at one PHCU showed that eight supervisory visits had been made in the past year, and project records indicated that some units were visited only twice in 1986.

5.5 Immunization

Findings

An important part of TPHCP preventive health care is the immunization program for children under five. The program includes a set of three injections for DPT, Polio, TB, and Measles. TPHCP has been instrumental in starting an immunization program and in implementing the YARG's Expanded Program of Immunization (EPI) in the Tihama.

Progress toward immunization objectives has been mixed. A comparison of 1985 and 1986 results suggests that the percentage of children completing the set of injections increased by nine percent (this is within an estimated population of under 5s for each PHCU). However, at this rate, it will take six years to achieve the objective of 80% coverage in rural areas. On the other hand, health attitudes change slowly and the importance of immunization appears to be gaining wider acceptance, in part due to encouragement by local leaders (e.g., the sheik) and through mass media campaigns, but also because of the efforts of the PHCWs.

5.6 Indications of Improvement

Findings

Though firm data are lacking, Project staff report some positive signs that the operations of PHCUs are improving and that general acceptance of PHC is growing. Only two PHCUs have dropped out of the program to date, hence staff turnover has been remarkably small. Of course, this overlooks the number of PHCWs whose performance is sub-standard.

The regularity of submitting monthly reports appears to be gradually increasing, though activity reporting (operational statistics) is still problematic and needs further attention. A new system will soon be implemented involving daily recording of activities and monthly compilations made during supervisory visits. The unevenness of reporting was supported by PHCU visits: several PHCWs appeared to keep inadequate or very dubious records.

Other signs of improvement include:

- increased awareness of community health problems;
- an increasing number of presentations at schools and mosques on public and personal health issues;

- drug requests being made more or less on time by almost all PHCWs;
- TPHCP's ability to attract eight women and several older individuals for training;
- individuals' requests for training, as opposed to the need to recruit trainees, as was the case at the start of the Project;
- an increasing number of women contacted about ORT.

5.7 Weaknesses in PHCU Operations

Findings

Despite the progress made by TPHCP, there is considerable room for improvement in the existing system. Visits made to PHCUs during the evaluation suggest that the operations of as many as one-third of the units (perhaps more) need improvement. In addition to the problems cited previously concerning record keeping and facility conditions, some PHCWs lack necessary skills and motivation, resulting in poor services and irregular operating hours.

The lack of female PHCWs and LBAs continues to preclude women and their children from access to PHC services. The location of some PHCUs is simply unacceptable for women. Project staff readily admit that the referral system is functioning poorly. Only at Zaidia (a THC) is there any indication of increasing contact between the Center and PHCUs. A similar pattern may emerge for the Integrated Health Centers, but that remains to be seen. A persistent problem has been implementing the growth monitoring system. Interviews confirmed that some (perhaps many) PHCWs either do not understand how to use the charts or simply fail to do so. Health attitudes favoring curative services and the lack of interest in preventive services impede the program. Moreover, the current program of services supported through TPHCP is not as comprehensive as it ought to be. Major inadequacies include a lack of nutrition education and child spacing information.

Interviews with PHCWs identified additional weaknesses in the system. The problem most often cited by PHCWs was the low pay they officially receive. The base MOH salary several workers reported was YR 1380 per month. In some cases this is augmented by a payment from the LCCD, as much as YR 500 per month. Some LCCDs also cover limited operating expenses, such as gasoline, and have contributed to facility construction. However, in many cases, there is no support of any type from the LCCD.

It is presently a national policy that all MOH medical services are free. However, it is widely acknowledged that an informal system of user fees is in operation, and this is certainly the case in the TPHCP system. One PHCW (openly) admitted that he received payment for injections and house visits. Given the low salary PHCWs receive and the proprietary, business-like view they express about their operations, there is good reason to believe this is more widespread than a single case. And all the better if it assures the presence of medical services in rural areas. Moreover, when the PHCU lacks drugs, patients will purchase medicines at pharmacies, indicating their willingness to pay for medical treatment.

After low salary, PHCWs reported that the unavailability of drugs such as anti-tetanus vaccine, medication for bronchitis in children, and aspirin substitutes, was problematic. In some cases, the PCHW writes a "prescription" for the patient to purchase medicine at a local pharmacy; others reported receiving money from patients to purchase the medicines for them. In short, from the PHCW's point of view, the lack of drugs undermines his credibility and effectiveness in the community.

There is also an apparent lack of cooperation among PHCWs and other sources of medical services. Several PHCWs reported that they have never worked with Traditional or Local Birth Attendants in their area. Moreover, it appears that competition between PHCWs and other providers of medical services exists. Yet in direct contradiction to this, other PHCWs cite the lack of an LBA as a problem for their operations.

Additional in-service and on-the-job training is needed, and PHCWs expressed considerable interest in this. They frequently encounter health problems which they cannot treat. Of course, certain medical problems they should not treat, but instead refer the patient to a medical doctor. But the training issue also pertains to broadening TPHCP services, i.e., additional training will be needed in nutrition education, family care/MCH, and community organization for public health activities.

Conclusions

The preceding findings suggest gradual progress toward the objective of establishing an effective PHC system. The preventive and curative services provided by the PHCUs are having a positive effect on the health status of rural people. Far more are receiving basic services than prior to the project. Though the basic elements of PHC are emerging from the results of TPHCP, more remains to be done before the system can effectively reach its potential.

The majority of the PHCUs appear to be operating at a satisfactory level; however, a significant number, perhaps as many as one-third, are not. Based on the total number of PHCWs to be trained by June, 1987, sixteen additional PHCUs can open; thus, the Project will have established seventy-two units.

The need for additional training is apparent if these improvements are to be made and if the broader program is to provide a full range of PHC services. Information on coordination among PHCWs and other sources of medical services is somewhat contradictory; some PHCWs report they never work with other medical practitioners, while others state that a major problem is the lack of additional assistance, such as that of LBAs. At the very least, it can be concluded that better coordination within the existing health service network is needed. As described in Section 4, Management Systems, progress has been made toward developing necessary support systems, but this work is not yet complete.

A period of strengthening and consolidation, rather than further expansion, is needed to improve the overall performance of the PHCU system. This will entail refining management systems, upgrading weak PHCUs and making operational the remaining units to reach the target of seventy PHCUs. In short, TPHCP needs to shift its emphasis from continued expansion to assurance of the sustainability and enhancement of accomplishments.

Recommendations

Limit the number of PHCUs established through TPHCP to a maximum of seventy-two.

Direct Project activities to strengthening the operations of the seventy-two units, which includes the following actions:

- identify PHCWs whose performance is sub-standard and provide additional training, support and supervision to these workers, as well as the newly trained PHCWs; if necessary, replace those who do not improve;
- concentrate future training activities on in-service and on-the-job training;
- improve coordination among PHCWs and other sources of medical assistance in the immediate area; and
- strengthen the supervision system and revise the scope of work for trainer/supervisors to emphasize programs in community organization and public health action, inclusion of women in the PHC system, nutrition education, and family care/MCH information.

6. COMPARISON OF TPHCP TO THE TAIZ PHC SYSTEM

Findings

The Taiz PHC system has been developed by gradually expanding services managed and supervised from the central MOH facility in Taiz. The Taiz program includes a more comprehensive set of preventive services than does TPHCP, including nutrition education and child spacing practices. Supervision of the system is equivalent to TPHCP's at this time, i.e., marginally adequate. The director of the program plans to move to a decentralized approach, similar to TPHCP's, as the number of units increases.

Currently, thirty-one PHCUs are in operation, with another five units to be added shortly. Thirty-seven PHCWs are in training at the Taiz facility in preparation for further expansion of the system. Adequate funding for this expansion is lacking and the Swedish Save the Children Project, which provides limited funding, will soon end.

Conclusions

Experience from the expansion of the Taiz system in the coming months will provide useful information about future YARG/MOH support for PHC. The broader range of services provided through the Taiz system provides an insightful guide to the MOH's definition of PHC and suggests TPHCP consider expanding its program accordingly.

Recommendations

Monitor closely the Taiz PHC experience.

Footnotes

(1) Lillian L. Barros, IBRD, Resource Mobilization in the Health sector of the YAR, January 1985.

(2) We were informed by Project personnel in Hodeidan that the Swedish Save the Children Mission paid salary incentives to workers at the Swedish-supported project in Taiz Directorate, and that this practice was continued after the termination of most Swedish financial support. However, the lone remaining Swedish advisor, whom we met in Taiz, advised us that they never paid salary supplements. Rather, he said, they financed a portion - roughly half - of the regular salaries of Primary Health Care Workers. He added that this was also the practice of the foreign Missions supporting PHC programs in Ibb and Dhamar.

(3) Barros, op. cit., citing a study done by Salen and Haider. According to the study, the number of health centers increased by 45 percent between 1981 and 1982, but the clientele increased only 9 percent.

(4) Vincent David, TPHCP Financial Analysis Report, February 1987.

The external evaluation team found that adequate progress toward achieving EOP's had been made, despite the above issues, to warrant continuation of the project. Evaluation recommendations concerning a work session to resolve outstanding issues between the MOH, USAID and the Contractor were successfully completed later in 1985, with the assistance of an external facilitator. Following that, recommendations for the development of a more focused, revised workplan were also followed by all parties. This workplan did not include certain objectives envisioned in the 1982 amended Project Paper, such as training of 75 LBA's and production of a series of television spots, due respectively to changes in MOH policies and LOP time constraints. The evaluation team did not recommend a project extension.

Following the evaluation, Project 279-0065 audit recommendations that primarily concerned contractor reporting procedures were resolved between USAID and the contractor, and a final report issued by USAID. The audit process underlined the fact that past expenditure patterns indicated the contractor would not expend existing contract funds by the PACD. As such, the Mission did not request an additional increment of funding for 279-0065 in FY 86. In order to eliminate discrepancies between the original 279-0065 contract amount and the actual amount of AID funds obligated, the USAID Contracts Officer went into negotiations with the contractor in 1986 to reduce the level of effort in the original contract.

During July, 1986 a 279-0065 participant who completed a graduate degree in Public Health under the project returned to become Project Director. He submitted a proposal to USAID that the project be extended on the grounds that all activities had centered around training new staff, and a period of consolidation was required. He proposed, further more, that certain problematical child health services (growth monitoring, ORT) required further strengthening and some new services (child spacing) should be introduced as part of an extended project. The Ministry of Health submitted a formal request for a project extension in December, 1986.

As of January 1987, of the objectives listed in the 1982 PP amendment, the following have been accomplished:

1. 1 baseline and 2 follow-up health surveys --
baseline health survey completed in 1985
- for 2. 1 facilities survey --
completed in 1983
3. Manuals developed and tested --
3-4 completed in draft and under discussion with TPHCP staff
4. 80 PHCW's certified and employed --
60 PHCW's certified; 16 PHCW's in training; 53 PHCW's
functioning;

7/8

5. 75 LBA's certified and employed --
7 LBA's now employed, training was ended due to changes in MOH policy. Training of TBA's completed in 5 villages, and initial group of 8 female PHCW's (category that replaces LBA's in PHC programs) in training
6. 9 LT and 38 PH ST training --
3 LT participants returned with MPH's; 1 currently in training; 1 potential candidate; ST training completed
7. 1 coordinated set of programs for community PHC--
systems for training, supervision, drug logistics, transportation, information and child health developed and associated procedures manuals prepared in draft
8. TV broadcast facilities strengthened and 3 media surveys --
1 ST media consultancy completed; TV element dropped due to time constraints and regional nature of project; some funds transferred for health education unit equipment and training
- 9 Housing for trainees --
housing provided; air conditioning recently upgraded

2. Statement of Work:

The following questions are the body of the evaluation. The evaluators must respond to each of the questions in their final report by presenting their findings (i.e., evidence), their conclusions (i.e., their interpretation of the evidence and their best judgement based on their interpretation), and their recommendations based on their judgements. Each section in the final evaluation report should respond to the sub-headings from A-C. The evaluators are requested to distinguish clearly between findings, conclusions, and recommendations.

- (a) After reviewing TPICP finance study data, calculate the increase in MOH funding required to sustain all aspects of the project at the planned 70 unit level when USAID grant assistance ends. Analyze this increase in terms of the MOH budget.
- (b) Through interviews with the MOH PHC Directorate, Hodeida Governorate Health Office staff, and other donors, describe which management systems (workplan, training, supervision, transportation, logistics, child health) used in the TPICP can, and should be developed on a nationwide basis or in one or more additional governorate PHC programs. Present conclusions and recommendations.
- (c) Through interviews with the TPIC Project Director and Managers, community members and reviews of PHCU logs

describe to what extent PHC services are being used as planned (e.g. sanitation education, preventive child and maternal health, environmental health). Present conclusions and recommendations.

(d) If time permits to make necessary arrangements, interview the MOH representative in another government (e.g., Hajjah) to inquire about perceived need for systems similar to those developed by the project and receptivity to systems already developed.

3. Methods and Procedures:

The Evaluation Team Leader, evaluation specialist, will be responsible for identifying and developing the methodology and procedures that the team will implement. In addition, the evaluation team leader will be responsible for the preliminary evaluation report.

The total level of effort of the external contractor team is planned at 36 person days. To facilitate the evaluation exercise the following items are noted:

- Six day work week in Yemen authorized.
- The YARG will nominate three persons who will be members of the evaluation team.
- USAID/Yemen will provide two persons who will facilitate the evaluation and ensure the final team report is completed in Arabic and English and signed by all evaluation team members prior by March 3, 1987. One of the USAID staff will be bilingual in Arabic and English, and assist with translation and preparation of the Arabic language documents.

Tentative Schedule

	<u>Date</u>	<u>Location</u>
Team planning meeting	2/16	Sana'a
Interviews and data analysis	2/17-23	Hodeidah
Meetings to draft report	2/24-26	Sana'a
Present draft report signed by all team members in meeting at MOH, record minutes for insertion into draft	2/28	Sana'a
Same, USAID	2/28 (PM)	Sana'a

Prepare final reports, Arabic and English, including mtg. minutes

3/1

Sana'a

4. Required Reports

A final evaluation report incorporating findings, conclusions and recommendations on each of the three questions described previously, to be written in English and Arabic and signed by all evaluation team members. The report is to be presented to USAID no later than March 2, 1987.

5. Composition of the Evaluation Team:

Mission judgement based on the statement of work indicates that the evaluation team should be structured as follows:

<u>Title/Function</u>	<u>Organization</u>	<u>Duration</u>
Evaluation specialist/ Team Leader (To respond to statement (c) in the SOW)	AID/W, PPC/CDIE	14 P/D
Economist (To respond to statement (a) in the SOW)	External Contractor	14 P/D
Inst. Devt. Specialist (To respond to statement (b) in the SOW)	External Contractor	14 P/D
Program Assistant	USAID/Yemen	14 P/D
Evaluation Officer	USAID/Yemen	14 P/D
Representative from YARG	CPO	14 P/D
Representative from YARG	MOH	14 P/D
Representative from YARG	MOH	14 P/D

The following persons will participate as resource persons available to the evaluation team.

Health Officer, USAID/Yemen
Management Sciences for Health team (Project contractor)

The evaluation will be funded by PD&S funds as follows:

1. Evaluation Specialist/Team Leader*	
12 P/D (AID employee)	1,148
14 days per diem at \$ 82/day	320
Secretarial Service \$80/day for 4 days	100
Telephone/Telex	
Transportation-rented vehicle and driver	
for 14 days	
	Sub Total
	1,600
	<u>3,168</u>
2. Contractor Economist	
12 P/D at \$260/day	3,120
14 days per diem at \$82/day	1,148
	<u>4,268</u>
3. Contractor/ID Specialist	
12 P/D at \$260/day	3,120
14 days per diem at \$82/day	1,148
	<u>4,268</u>
4. YARG Staff	
Per diem for 3 persons (7 days each)	1,722
at \$82/day	13,426
	<u>13,500</u>
	Grand Total
	Round to
	13,500

*Team Leader is responsible for providing the specific logistical support to the other team members.

Justification For Other Than Full and Open Competition

The available pool of local expertise capable of performing the tasks described in the above scope of work is extremely limited in Yemen, due to the very small pool of professionals, particularly English-speaking professionals, who are available for a short-term assignment of this nature. The short-time period allowed for the planning of this evaluation and the necessity of contracting locally with limited funds further constrains possibilities for competition.

Appendix B:
Evaluation Methodology

The evaluation was conducted between February 16 and March 1, 1987. Because of the focus of the evaluation, i.e., whether an extension of the Project was justified on the basis of economic, management and operational considerations, the assignment was possible within the limited time available.

As noted in the report, operational data from the Project's management information system were very limited. The principal sources of information for the management and service delivery sections of the evaluation were interviews with Project and MOH staff in Hodeidah and with PHCWs at selected primary health care units. The team divided into three groups to contact as many units as time permitted. Nine PHCUs and the Training Health Center in Hodeidah were visited; PHCUs were: Al Laawia, al Ma'aras, al Mo'ataradh, al Hashaabara, Dayr Mandi, Kidf Zameila, al Qamaria, al Behah, and O'dal. The team also interviewed staff at the Taiz Health Center and visited two PHCUs in the Taiz area.

A short list of questions was covered during the interviews with PHCWs to assure that the same basic information was obtained for each unit visited. The following questions were used:

1. PHCU - Unit Conditions

- How long has the PHCU been in operation?
- Are drug supplies adequate?
- Is equipment functioning?
- Estimated number of patients per week.
- Quality of record keeping.

2. PHCW - Staffing

- Age and education of PHCW.
- Adequacy of technical skills.
- Interest in additional training.
- Major problems encountered with service delivery.
- Perception of PHCW by community.

3. Other sources of medical services

- Presence of nurse, mid-wife or doctor in the immediate vicinity.
- Does PHCW work with any of the above?

4. What support for PHCU does the local community provide?

Economic data were obtained from the MOH and CPO. The economic analysis section of the evaluation benefited substantially from a recent study produced by Vincent David, MSH, which estimated current costs and projected increased budget requirements for the MOH if it were to assume full financial responsibility for the project.

Appendix C:
Persons Contacted

USAID

Michael Lukomski, Deputy Director
Gerry Donnelly, Chief, Program Division
Howard Thomas, General Development Officer
Lee Feller, Health Officer/TPHC Project Officer

MSH

Don Chauls, Chief of Party
Vincent David, Chief of Evaluation and Follow-up
Mary Hebert, Chief of Training
William Guy, Chief of Services
Tim Irgens, Chief of Logistics

TPHC Project

Arsalan Ahmed, M.D., Project Director
Ali Sherai, M.D., Project Deputy Director
Salah Hakim, Counterpart for Evaluation and Follow-up,
Najid Kaid Mana'a, Counterpart for Logistics

Primary Health Care Workers interviewed and their
respective Villages

Hassan Abdallah Hamood, al Mo'ataradh
Hassan Ali Sagheer Haza', al Ma'aras
Hassan Qadri Suleiman, al Hashaabara
Mohammed Shoqi Ahmed, Dayr Mandi
Ahmed Ali Ahmed, al Qamaria
Abdo Omar Salem, Kidf Zumeila
Ahmed Basha Abdallah, al Behan
Shoqi Abkar Ali Hassan, O'dal
Mohammed Yanya Ibrahim, al Laawia

Health Manpower Institute, Hodeidah

Nahat Rudami, Deputy Director

Tanreer Training Health Center

Abdul al Galil, M.D., Director

LCCD, Hodeidah

Hebat-allan Sherain, Secretary General

Taiz Swedish Save the Children Hospital

Abdul Wahab al Ghurbani, M.D., Director
Abdul Karim Ahmed, Trainer
Abdullah Bader, Trainer
Dr. Roland Ecksmere, Swedish Health Consultant
Monamed Denagee al Ganadee, PHC Supervisor

Appendix D:
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Appendix D (Continued)

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