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MINISTRY OF HEALTH

STRENGTHENING RURAL HEALTH DELIVERY PROJECT

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REPORT ON
FINAL EVALUATION OF PROJECT

CAIRO, EGYPT
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STRENGTHENING RURAL HEALTH DELIVERY PROJECT

Grant 263-015-76

FINAL EVALUATION

April 26 - May 15, 1986

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Directory of Abbreviations Used

DDCS	Diarrheal Disease Control Study
DHO	District Health Office
DNRP	Draft Nationwide Replication Plan
FP	Family Planning
GOE	Government of Egypt
HHS	Household Survey
HSR/PHC	Health Services Research in Primary Health Care
H.I.O	Health Insurance Organization
MCH	Maternal/Child Health
MDH	Ministry of Health
ORT	Oral Rehydration Therapy
PACD	Project Activity Completion Date
PHC	Primary Health Care
R & D	Research and Development
RHC	Rural Health Center
SRHD	Strengthening Rural Health Delivery
TAC	Technical Advisory Committee
USAID	United States Agency for International Development
WSS	Work Sampling Survey
CAS?	Cost Analysis Study
SF	Supervision Form

EXECUTIVE SUMMARY

INTRODUCTION: This final evaluation of project 263-015-76 was undertaken at the request of the Strengthening Rural Health Delivery (SRHD) Project and the Cairo Egypt USAID Office. It started on April 26 and was completed on May 15, 1986.

The purpose of the SRHD project was to test the premise that given appropriate interventions, the rural health system of Egypt could and would result in expanded health care and an improved health status of the people. After 8 years of project life, the purpose of this evaluation was to determine the validity of that premise and also to determine whether a research and development capability had been established to continue development.

In undertaking its work, the Evaluation Team studied documents of previous evaluations, interviewed major implementors, observed field operations in project and non-project areas and analyzed data available through the project staff:

FINDINGS AND CONCLUSIONS: This project initiative has been highly successful in creating a strong and technically sound R & D unit within the Ministry of Health. It has also created a climate of success in introducing new interventions into the processes of service delivery. This will influence the Ministry's willingness to undertake new explorations in the future. In general, the interventions attempted did, in one degree or another, extend health care and improve the effectiveness of services. Impact on the health status of the people was also probably favorable but difficult to define in a quantifiable way.

The most effective interventions were in the outreach and in-facility MCH activities. Systematic outreach and in-facility care when carried out by motivated personnel such as the well trained nurse, led to improvements in service coverage and utilization. Overall upgrading of service quality was found to require a combination of interventions which included raising staff income with incentives and ensuring, through systematic and supportive supervision, that the incentives were performance based.

Regular in-service training proved to be a valuable motivating factor and was viable within the systems constraints. Shortcomings in the basic professional education system were overcome with structured in-service training programs when these were task-oriented.

Information collection and dissemination was perhaps less satisfactory and continued to be of limited use at higher levels of the system. The multiple recording requirements of diverse MOH departments and projects constrain productivity. The project successfully demonstrated the impact of good information coordination in the development of the family health record.

Logistic support, particularly in the purchase, and maintenance of vehicles has been a major contributing factor in the strengthening of the rural health system in the project areas. Outreach activities benefitted substantially from additional availability of transportation. Replication strategies should take the high cost factor and procurement difficulties into consideration.

The upgrading of the rural health service delivery system will depend significantly on the ability to increase community participation, particularly in the development of alternative financing mechanisms, and health education programs.

Greater efforts are needed to strengthen the supervision and management aspects of the rural health system at the facility, local, district, governorate and central levels. Effective replication of successful interventions will require commensurate intervention and development in the quality and purpose of supervision and management.

The team believes the project has been successful. At the same time, it should be noted that some difficulties appear to have existed in early stage project planning. In particular it is likely that more attention could usefully have been applied to developing detailed evaluation instruments.

RECOMMENDATIONS:

1. Systematic outreach should be institutionalized using the MCH/FP home visiting program as its focus.
2. Community participation should be actively encouraged in all health education activities in rural areas.
3. In-service and pre-service task oriented training linked to supervision should be institutionalized for all categories of rural health personnel.
4. Organizational changes within the M.O.H. need to be introduced to encourage health service managers to engage in improved management practice.
5. Logistic support should be considered an integral part of every operational health program.
6. Supervision should be based on objectives with incentives for motivation and using criteria consistent with Egyptian standards and attainable within the resources available.
7. Incentives to improve staff income should be systematically introduced by the M.O.H. and should be performance based.
8. The central role of the M.O.H. Statistics Department should be strengthened to serve as a clearing house to ensure that new projects and new activities build on a common data base.
9. The new R & D Unit should focus on health services research with an emphasis on development activities based on priorities identified in collaboration with relevant M.O.H. Departments and projects.
10. Replication of successful interventions is feasible and should concentrate initially on complete coverage of the four governorates involved with the project, and where resources are available and adequate.

11. Community cost sharing mechanisms should be adopted in order to fund the upgrading of service quality and physical facilities.
12. Strategy proposals in the five identified critical areas of manpower development, health care financing, management development, information evaluation and technological development for further rural health service delivery system development should be focused on key starting points described in this report.

LESSONS LEARNED:

1. Systematic outreach as carried out through the home visiting program had considerable impact on improving service coverage and utilization particularly of MCH services.
2. The expanded role of the nurse in providing both in-facility and home care could be further strengthened by the inclusion of the day as part of the outreach program.
3. The effectiveness of health education is more dependent on staff commitment than on the means used to educate the community.
4. In-service training has proven to be a valuable motivating factor and effective when linked to perceived job needs, although it cannot compensate for shortcomings in basic professional education.
5. Planning for the purchase and maintenance of vehicles and procurement of these vehicles was unrealistic in terms of overall cost and encumbered by bureaucratic processes.
6. Improving motivation will require a complex array of interventions and requires simultaneous engagement with multiple interacting variables.
7. A dynamic and timely information system established by a good base-line data collection system enhances the evaluation and decision-making process.

EXTERNAL VALIDITY: Experience gained by successfully implementing the family health record in the MCH intervention and, the process by which this was done, would be valid tools to use for other programs involving primary health care services in rural areas. It also would have application in the development of a data base and community participation techniques for the child survival project of USAID and UNICEF.

BROAD ACTION IMPLICATIONS: Planning among and with decentralized units of government requires the creation of an appropriate management climate with more effective coordination and correlation of manpower, money and material.

Horizontal cooperation should be determined prior to implementation between internal and external projects to assure uniformity and standardization of data flow and requirements.

1. INTRODUCTION

The Strengthening Rural Health Delivery (SRHD) Project (263-015-76) had as its goal to improve the health status of the Egyptian population and reduce population growth through improved Family Planning (FP) services. The project's purpose is:

- to identify, develop and validate a replicable and effective means to strengthen the rural health delivery programs.

The project was supported jointly by the Government of Egypt (GOE) and a grant from the US Agency for International Development (USAID). It was initiated on April 5, 1979, and provided \$ 1.8 million and LE 100,000. Subsequent amendments have raised the total life-of-project funding to \$ 14.9 million from USAID and the equivalent of \$ 29.23 million as the GOE contribution. The project activity completion date (FACD) was extended to Sept. 30, 1986.

The USAID financed grant has provided vehicles, commodities, long- and short-term training, technical assistance and evaluation. It has also supported meetings of an expert Technical Advisory Committee (TAC). Expatriate long- and short-term technical services have been provided under a contract with Westinghouse Health Systems.

The GOE contribution has included staff of the SRHD Unit, supervisory, training and health facility personnel, training centers and vehicles workshops, office space and health facilities. The GOE also assumed financial responsibility for fees paid to some local consultants and for incentives for all levels of project and participating health facility personnel. In the last phase of the program, according to project reports, the GOE paid all incentives to project and health system personnel.

Originally, the project introduced interventions in four test districts in four governorates - Assiut, Behaira, Dakahleya and Fayoum. In 1981, project interventions were expanded to six additional districts to cover a total of 232 health facilities (60 rural health centers and 172 rural units) covering an estimated

population of 1.2 million. The project initiated expansion of coverage of these interventions to an additional ten districts within the same four governorates in early 1985. This action is yet to be fully implemented.

The evaluation in September 1984 concluded that the project had fulfilled its mandate and recommended the acceleration of transferring implementation responsibilities to non-SRHD staff and institutions.

In response to this, the project increased involvement of MOH Rural Health Department staff in evaluation and supervision as well as extending SRHD intervention to the ten phase-II districts. An interdepartmental steering committee was formed and a Ministerial Decree promulgated gave the SRHD project team the status of a fully fledged R&D unit within the Rural Health Department, MOH. Four conferences for the governorates were held in addition to a National Conference on Rural Health in April 1986.

MOH planned Health System Research and Evaluative studies have been completed and the SRHD Project has made an initial formulation of strategic proposals for nationwide development. It is at this point, following the preparation of a final report, that the current evaluation team is undertaking a final review.

2. OVERVIEW OF INTERVENTION IMPACT

The assumption behind the interventions carried out by the project was that their application would lead to improved health through an upgraded and efficient health delivery system. Limited effort was directed to establishing, in the planning phase, valid, reliable evaluation criteria. At the same time the established evaluation standards were not adhered to. As a result, the evaluation team has had difficulty in reaching conclusions backed by solid documented evidences.

Nevertheless, we believe that significant changes have been achieved in a number of areas most notably in outreach, training and in the development of the R & D unit itself. For some of the interventions particularly those concerned with attitude, it is likely that not sufficient time has passed for measurably different attitudes to emerge. It is nevertheless important to record that a body of skills has been built up for organising & managing systematic interventions in the operations of the health service.

OUTREACH: The nurse home-visiting must be considered as a significant advance in changing the pattern of health & health care provision. The opportunity to expand this role appears to be a significant one but clearly will need the physician in charge to take a supportive position. This will be taken up later under "supervision".

The introduction of the sanitarian into the outreach program appears to be less than satisfactory. It would seem unlikely that the health education role of the sanitarian will be successful unless, those activities are linked to the sanitarian's service activities and, he is trained in skills of community motivation. The issue of dayas and their role in child delivery continually appears. The bulk of home deliveries continue to be supported by dayas. This may reflect a long term relationship between community and dayas that nursing staff cannot provide in the delivery services needed. It would appear desirable to continue to engage with dayas in facility outreach programs.

UP-GRADING OF IN-FACILITY MCH CARE The intervention was directed to changes in knowledge, attitude and practice (KAP) linked to changes in role within the facilities and supported by the introduction of additional equipment and supplies. There is some evidence of beneficial impact on KAP through increased utilization of RHF and on the successful transfer of some technical functions from physician to nurse. It is on the basis of the quantitative data, to argue that the changes are, in health terms, particularly significant. Other variables (e.g. physician

attitudes) need addressing in some other forum, probably in medical school, for more significant change to take place. The interventions must be supported but with more emphasis on attitudinal changes particularly in physicians.

INTENSIFICATION OF COMMUNITY PARTICIPATION THROUGH HEALTH

EDUCATION The interventions attempted were directed to skills and commitment to health education. The self-learning material provided was not properly read by staff and is not expected to change their communication abilities nor their motivation for providing health education.

It should be recognised that the measurable impact of health education may require a longer time to show up. More information is needed on staff & consumer attitudes to health education before a desirable set of interventions can be established in this area. Current interventions appear to have focussed more on knowledge than training in motivating attitude and practice changes.

TRAINING A wide range of in-service training activities have been undertaken for all rural health staff with physicians also receiving pre-service training. Some 15 new training centers attached to existing RHCs have been constructed. New patterns of training have been successfully established within the rural health system and, staff are becoming sensitised to the idea of on-going training as a proper part of their professional life. The concepts of "on-the-job" training rather than long term institutional in-service training is rapidly becoming the accepted best modality.

Best results with the training have occurred in the area of professional knowledge. The highest "pay-off" has occurred in professional knowledge and skills rather than managerial/ behavioural/ interpersonal knowledge & skills. In some areas there may be too much reliance on lectures only as the training modality.

LOGISTIC SUPPORT It is apparent that provision of vehicles maintenance facilities and basic commodities made a significant contribution to both facility & outreach services and enhanced supervision. What is not so apparent is whether the logistic system itself developed under the impetus of this intervention & furthermore whether the maintenance support for vehicles is sufficient in its present form. From the limited field observations of the evaluation team, it would seem that logistics and maintenance support has not developed significantly, probably due to problems in the procurement procedures.

SUPERVISION & MOTIVATION The supervision intervention, in conjunction with other training, support & rewarding interventions appeared to make a significant short term contribution to performance. A very real effort has been made to move supervision away from an entirely punitive function to one which provides support & guidance to the staff supervised. The punitive element was retained to a certain extent by the use of financial rewards for observed performance meeting specified norms. It is encouraging that measurable changes in performance were achieved. It is likely that much more attention will need to be paid to establishing local & individual performance goals as a basis for motivation rather than the financial approach currently adopted.

PROGRAM INFORMATION & EVALUATION The mechanics of data collection & evaluation appear well established & viable but there is a need to reduce the multiplicity of data bases that are being created by the needs of a variety of different projects and agencies. Useful demographic & epidemiologic information has been abstracted both from routine data collection and special surveys. It is not clear that there has been much shift yet to the use of the data for management purposes to meet the operational needs of peripheral unit & district managers.

HEALTH SERVICES RESEARCH The Research & Development unit established under this project is impressive. There is much evidence of technical skills & commitment. The unit's role is recognised in the research projects on ORT, ARI, tetanus neonatorum in the successful operational planning and replanning of specific service delivery interventions. The unit is now institutionalised in the Ministry structure.

3. RESOURCE IMPLICATIONS FOR EXTENSION AND REPLICATION OF INTERVENTIONS

The SRHD project has identified and validated through field testing, replicable methods to reduce or eliminate some of the major constraints to rural health service delivery. It has successfully tested interventions that could strengthen the existing infrastructure and increase the performance of the primary health care system in rural areas. Information is now available on the following:

- Cost effective outreach of rural health units
- Upgrading of in-facility Maternal and Child Health
- Consequences of varying patterns of local participation in health service management
- Realistic job descriptions and training standards for rural health personnel
- The efficiency of motivational incentives for improving job performance
- The impact of transportation and logistics as a limiting factor
- Data requirements to manage rural health services delivery and evaluate programs
- Health services research needs for guiding development of the rural health system
- Health care financing for rural health activities

Though not comprehensive in their scope, the interventions have proven replicable in varying degrees vis-a-vis their technical, administrative, financial and social feasibility. It is still

difficult to establish clear cut relationships between interventions and outcomes, but the Project has definitely created the environment for measuring progress and positively impacting the rural health service delivery system.

INSTITUTIONALIZATION OF SYSTEMATIC RESEARCH:

Systematic outreach services provided by nurses in the areas of child health surveillance, maternal care, health education and family planning increased coverage, increased demand and reduced disease duration. As demonstrated in the DDOS and ARI studies, nurses were successful in reducing child mortality and disease severity. The Cost Analysis Study demonstrated increased coverage of MCH services in SRHD facilities. Ready acceptance of the expanded role of nurses by the community and physicians would further indicate the replicability of this intervention. However, since shortages in the nursing field still exists, the involvement of dayas will be necessary in order to guarantee successes in the institutionalization of systematic outreach.

UP-GRADING OF IN-FACILITY MCH CARE

Expanded roles for nurses increased time allocation in-facility to child care services. The CAS data showed costs per encounter were lower in the test districts, and the Project inputs were significant in increasing demand for preventive services. The MOH adopted a modified version of the SRHD-developed MCH record system throughout its national health system.

INTENSIFICATION OF COMMUNITY PARTICIPATION THROUGH HEALTH EDUCATION

The HHS and DDOS showed some positive effects of health education in improved knowledge, attitudes and practices. However, unless there is sufficient motivation for rural staff to apply health education with the intent of intensifying community participation, improved chances of success are not likely. The SRHD experience

was generally disappointing, particularly with newly-graduated physicians who have mandatory service in rural health facilities. The home visiting program using the nurse and sanitarian has the best chance of success, particularly if expanded participation by the community is promoted in any replication program.

TRAINING

Supervisory leadership abilities of physicians and knowledge and practice of other staff were shown to have improved with training in the SF/WSS exercises. The results showed increased compliance with guidelines, and some change in staff productivity. Nurses showed the highest levels of achievement. Given existing systemic weaknesses in the quality of professional education, pre- and in-service training are necessary components of any replication strategy. Trainers are readily available and staff at all levels benefit from this interventions. The MOH commitment to upgrading service quality, with an emphasis on training provide favourable conditions for nationwide replication of SRHD training interventions.

SUPERVISION AND MOTIVATION:

The CAS and SF showed that monetary incentives could not be separated from other Project inputs in the areas of supervision and motivation. Motivation of supervisors, particularly the physicians, is still a problem, given some of the constraints in the system. Incentives for effective supervision are necessary for real success of this intervention. Though far more testing of this intervention is necessary, it cannot be ignored or eliminated since it is inter-related with many of the other replicable interventions.

LOGISTIC SUPPORT:

This intervention deals with the provision and maintenance of vehicles, equipment and facilities, and the supply of drugs and basic commodities. The major objectives were to provide coverage for transportation needs to support training, outreach, health education, supervision and data collection and to provide basic equipment packages for improved MCH outreach and in-facility services. It was well received, and the CAS confirmed the positive effect of the use of vehicles for outreach activities. Furthermore, the costs of this intervention, including vehicles, was only 20% of incremental capital cost. Replication of this intervention needs more detailed research, particularly in light of the fact that replacement costs in existing SRHD facilities will have to be considered. Additionally, training of mechanics and maintenance personnel in rural areas will add to the costs.

INSTITUTIONALIZATION OF PROGRAM EVALUATION AND INFORMATION SYSTEMS

Upgraded comprehensive information and evaluation systems are still absent in the health sector. Resource allocations, service outputs and system outcomes are not easily understood due to poor data collection, analysis and dissemination. Cost information is often lacking, and existing information is inadequately used. The Project used the SF as an integral part of supervision and the Family Record as a regular facility record keeping document. HHS, MCH/FP Records, and WSS all demonstrate the usefulness of this intervention. The Family Folder and Supervisory Feedback can be easily institutionalized and replicated nationwide. Upgrading of the Family Folder could replace the Household Survey (HHS). The MCH record has been revised and replicated nationally.

HEALTH SERVICES RESEARCH

The intervention attempted was to institutionalize a health services research capability as a tool for management. The success of this intervention has led to the creation of permanent

R & D Unit in the Central Rural Health Department. While it would be desirable to create a health services research capability at the local levels, cost considerations would suggest that linkages with other MOH units, universities and research institutes are more feasible.

HEALTH CARE FINANCING

The re-financing of the SRHD Project in May 1983 for an additional 36 months in the sum of \$ 32.436 million was targeted to increase the coverage the population to 3.6 million in 4 Governorates. With the exception of the provision of vehicles to Rural Health Centers in the project largely for outreach activities, the focus has been investment in human capital. There has been major emphasis on training personnel, educating mothers, and providing monetary incentives to all levels of personnel. The Cost Analysis Study (CAS) conducted by the project determined that costs in test facilities were lower than in non-test facilities, though the results were not statistically significant. In general it was concluded that the SRHD Project made a difference, resulting in reduced costs, particularly reduced variable costs.

The impact of the project on demand, particularly with regard to childrens' visits and antenatal visits was statistically significant. The physicians in test facilities had longer periods of stay in post than elsewhere, while test facility sanitarians visited public places in their area more than do other sanitarians. Other measures of service showed that the test facilities reached a higher proportion of the population in their catchment area than non-test facilities.

Amendments to the Project Paper in May 1983 estimated the costs to the GOARE at 32.3% (\$8.181 million) for service operations and 63.4% (\$16.059) for project staff salaries from its own share of \$25.336 million which represented 75% of the total funding from May 1983 to 1986. The cost analysis findings showed total costs before 1983 to be LE 3.54 per capita per annum in the Rural Health Center test facilities and LE 2.56 per capita per annum in the

*What costs? Per Cap costs.
This seems illogical.*

Rural Health Unit test facilities. Costs in non-test facilities were higher, but biases inherent in the data bases make comparisons difficult. But it is possible to suggest that Project inputs did make differences in three of the six interventions studied, viz. vehicles, incentives and training. Vehicle provision and facility participation in applied research may have had a significant impact.

The problem that needs to be addressed by the R & D unit is whether the GOARE/USAID contributions for 1983-86 are comparable to allocations for the non-project rural health facilities in the 4 governorates and for the rural health facilities nationwide. A hypothetical estimation has been made in the R & D Unit's Work Plan of what the costs would be for replication. At best, these estimates reflect the optimum costs to the system and should only be viewed as a ranging exercise. Many of the recommendations and discussions in the body of this report address the complexity of the interventions and the difficulty of measurement of inputs and outcomes in isolation. More detailed and current statistics on Chapter I, II and III budget items and service utilization data will have to be reviewed before any further economic analysis can be presented. At the present time, it is possible, as recommended in this report, to proceed with replication in the four governorates, where resources are available and adequate.

The cost analysis data suggests that some productivity and quality were impacts could be considered useful in recommending nationwide replication. While actual measures are not yet possible, it has to be assumed that the inputs made possible by the external funds created the environment for improvements in services and service coverage. Given the fact that the RHS delivery system is an ongoing aspect of the MOHs and the Governorates' activities, a large portion of the expenses/ costs are fixed. Additional resources for nationwide replication of the SRHD Project would therefore be needed only in the following areas: - incentives - training - evaluation and research - vehicles

INCENTIVES

Incentives will have to be initially based on funds generated at the local level, the most reasonable suggestion being the increase in the collection of nominal fees for each visit, limited to a maximum of 25 piastres. Half of this would be used for facility renovation and the half for the staff incentives.

While the MOH has certain built-in mechanisms for granting incentives, at the present time, only the fee-for-service provided after regular facility hours appears to be equitable. Such a systems' successful operation would depend both on demand for services created by increased coverage, and the motivation of the personnel involved. This area of funding will have to be tested before nationwide application.

One solution to the problem of finding new resources is to call for comprehensive national health insurance. The subject has been examined in detail both in Egypt and other nations, and is still being examined by the H.I.O. Partial insurance has also been studied. Both these areas are thoughtfully presented in the SRHD Project documents. Whether either system is feasible as a major source of funding remains to be tested at the rural level. The Fourth National Conference recommended in April 1986 that the Ministry of Health study this in more detail in terms of the rural health sector.

TRAINING

The various aspects of training - pre-service, in-service, on-the-job, continuing education, etc. have clearly benefited from additional (external) funding. It is an aspect of this project which the national planners and decision makers cannot ignore even if nationwide replication is not undertaken. MOH will have to generate additional funds to maintain its commitment for training in the rural health services delivery system.

EVALUATION & RESEARCH

The usefulness of this aspect of the rural health system has been recognized in the MOH. The new R & D unit will need to be actively supported through funding from the MOH, other government-agencies involved in rural health, the internationally funded projects in the health sector and private research institutions. Applied research remains a vital aspect of any planning and implementation activity.

VEHICLES/ EQUIPMENT

External funding will be required. The costs of this aspect of replication clearly will pose major problems to both the GOARE and external donors. The success of the outreach program was shown to be largely due to the availability of adequate transport. Initial outlays will not be possible through existing MOH budget allocations. Pooling of other project resources should be examined.

GENERAL

The involvement of the Governorates in generating additional funds will, of course, affect the replication strategy. The Agricultural Cooperatives and other sources of income producers need to be directed toward assisting the health sector. Variation within the governorates will clearly influence any national implementation strategy. Here again, the Fourth National Conference has made recommendations for generating additional community funds to help in the development of the rural health sector.

HEALTH MANPOWER RESOURCES

There is a sufficient supply of health manpower to replicate these interventions. The project has demonstrated the benefits of in-service training both in expanding the role of the health professional and in overcoming some of the deficiencies in health professions education. Though functioning in a supply oriented system that is not linked strongly with analysis of demand or

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need, chronic maldistribution problems and shortages persist. It is expected that these problems will not impede the process of replication.

New recruitment procedures and expansion in outputs of the educational institutions for nurses is currently underway. Midwifery training for graduate nurses has been initiated and training and certification of dayas is being undertaken by the Ministry of Health. At the same time, the enrollement of medical students is being substantially reduced to avoid a surplus.

There is also the capability within the country for conducting training on an incremental basis, but shortage of trainees for the rural health system need to be addressed before nationwide replication is attempted.

4. COMMITMENT OF GOVERNMENT OF EGYPT TO EXTENSION AND REPLICATION

Extension and replication in terms of this project is focused, in the first place on institutionalizing nationwide the interventions tested through this project which had favorable outcomes, and in the second place, in maintaining and extending research development capacity generated during the course of the project.

Extension of institutionalization will be conducted via the establishment within the rural health department of a research and development unit. This unit will continue to serve in the same implementing agency role as the current SRHD Project.

The R & D unit, will be one of two units of the general administration of rural health services in the MOH. It was established by a ministerial decree No 307 in 1985. This R & D unit is to be staffed from existing SRHD core staff. The other unit of the rural health department, which already exists, has a follow up and evaluation role.

According to the decree 307/ 1985, the functions of the R & D unit

include, inter alia, the following:

- Preparation, implementation and support of research and field studies in the priority areas of basic health services in rural areas; and definition of constraints and financing suitable solutions for the development of rural health delivery.
- Study and revision of protocols submitted from the local and central health agencies in accordance with the health plan, and submitting them to the appropriate authorities.
- Study of proposals submitted from international agencies about national projects for the support of basic health services in rural areas in accordance with the health policy.
- Preparation of the draft agreements required, and the methodology and approaches for their implementation; and the monitoring, follow-up and supervision of their implementation and their evaluation.

The predominant "development" function of this R & D unit will encompass the implementation of successful interventions and the transition to nationwide replication of their results attained from this SRHD project as well as other relevant projects, now being implemented by the G.O.E. and other International agencies throughout Egypt.

Evidence of government commitment to replication appears in a number of ways:-

1. Participation, contribution and approval of the WHO/ UNICEF declaration of Alma-Ata regarding primary health care, for the attainment of health by all by the year 2000.
2. Commitment by agreement to project 263-015-76. This project by its very nature was intended to "identify and validate, through field testing, replicable methods to reduce or eliminate some of the major constraints to service delivery."
3. Initial implementation started in 1980 and Egypt allocated LE 16 millions, with the US \$ 8.4 million as US grant for 5 years; then additional funding (amendment 1983 & 1984) raised the project total investment to \$ 14.9 million dollars from USAID, and the equivalent of \$ 29.23 million from the

- Government of Egypt. This indicates the deep interest of the government, and can be considered as evidence of commitment.
4. As an intent for nationwide replication, the government has appropriated in its present budget about 4.5 million Egyptian pounds for the "improvement of the physical qualities of the rural health units".
 5. There are proposals being drafted at present for fund raising through the charging of 25 piastres for service as a community contribution, and there are studies now to establish a reasonable fund raising system for incentives drawing from these increased charges.
 6. There is also a move to enforce the legislation for obtaining funding support from the agricultural cooperative societies to be utilized in supporting the health services in rural areas. This has been repeatedly expressed in the governorate conferences as well as in the last National Conference.
 7. Many of the basic items for nationwide replication i.e., the main commodities and supplies; have already been procured or steps taken to procure them.
 8. The establishment within the rural health department of an R & D unit (Decree 307/ 1985) for the purpose of extending the work of the SRHD project is in itself an evidence of commitment towards replication. Budgetary allocation by M.O.H. have already been made to fund the unit for the coming fiscal year July 1986 - June 1987 to take over the work of the project on its termination.
 9. Finally, there is evidence of continued and increasing commitment beyond the activities of the SRHD project itself. The 4th National Conference of Basic Health Services held in Cairo, April 12 - 14, 1986 and headed by the Minister of Health made clear in a series of recommendations (see Annex F) the interest and commitment of the government to strengthen and improve rural health and the services provided to the rural population.

5. ROLE & POSITION OF RESEARCH & DEVELOPMENT UNIT FOR THE FUTURE

The 5th TAC meeting recommended a permanent status for the R & D unit for which a Ministerial Decree was issued (307/85) stating its scope of responsibilities. The functional profile calls for three major activities:

1. Research
 - a Training/ Design/ Implementation/ Funding
 - b Review & revision of protocols & proposals presented for funding by national and external sources
 - c Dissemination of results and facilities of their application
2. Solicitation & study of grant offers from national and foreign donor agencies for supporting RH Care delivery.
3. Preparation of project agreements, plans & implementation arrangements.

All these activities are to be directed to identify:

- 1 FH Problems and priorities
- 2 Performance difficulties & possible solutions
- 3 Means to improve quality of service
- 4 Ways of applying research, findings & results
- 5 Criteria for setting performance standards

The evaluation team feels that the establishment of an R & D unit is one of the positive outcomes of the SRHD project. It has established the presence of a capable, competent scientific personnel who can be active in the field of research & development. The everchanging health need and the responsiveness of health services dictates that the MOH should have available an institutionalized capability for continued systematic & scientific development and a body of staff with expanding R & D skills.

The R & D unit derived its research function from previous research activities that were conducted by the project team during the years from 1980-1984. These research activities consisted of health services action oriented research.

Current Status:

The R & D unit is now housed within the facility available for the SRHD project at the Nutrition Institute, Kasr El-Einy Street. The unit has developed its staff members in the different disciplines with corresponding support services.

Scope of activities:

As set out in the Ministerial Decree, the scope of activities is ambitious. In the way the activities proposed include functions as "review & revision of protocols, proposals presented for funding by national & external sources, preparation of project agreement, plans & implementations arrangements". These functions to be performed in addition to research and development activities. The Evaluation Team feels that the R & D unit is capable of conducting these activities provided it is limited to unit's own protocols & proposals for supporting RH Care delivery. The scope of activities can stem from different channels:

- a) From initiation in R & D unit itself based on the results of the current SRHD project. This will involve for example further handling of SRHD data and its dissemination; reviews of training programs and their replicability; evaluation of involvement with other agencies in its activities; and the means to establish co-ordination.
- b) From operational problems determined by RHD as worthy of further study and probation. These can evolve from the peripheral and/or central agencies working in the field of rural health service.

c) From Development activities initiated by other agencies within MOH or from outside.

Organization framework:

The R & D unit is a resource body for planning/ implementing/ supervising & evaluating research activities. It is a scientific body of specialists & experts devoting their talent & experience in the line of action research that has the goal to improve & strengthen the rural health service delivery system.

The unit has been organizationally placed in the RHD in MOH. We would recommend that it should be directly linked to the office of the director of RHD.

The Financial Support:

Staff cost will be supported through the regular payroll and incentive policy. This is not a constraint.⁷

However, the RHD needs to allow within its budget for the necessary financial support to cover the operational cost of unit's functions. At the same time, it is recommended that other potential financial resources are explored, specifically, budgetary allocation from MOH and financial support for Research proposals submitted to local or international funding agencies e.g. National Academy for Scientific Research and Technology, USAID, WHO, UNICEF etc.

Internal Plan of Organization

The unit should be managed by an efficient & well selected fulltime director. It is proposed that in addition unit should have a technical Board headed by the director and an advisory Board headed by RHD Director General or Undersecretary of State for PHC.

Suggested activities for near future: The R & D unit might usefully:

1. Plan for Replication of successful interventions after further analysis of data.
2. Build up a Record system, control flow of information & consider Development of a HI System working in both directions up & down to the periphery.
3. Carry on more research on the health economics aspects of the interventions & developments that have been conducted.
4. Work on standardization of training programs.
5. Study Logistics.
6. Co-operate with ongoing programs - eg. Diarrhea, Urban Health in the following dimensions:
 - a) Implementation of accepted interventions in RH areas.
 - b) To co-ordinate, with their experience the replication and standardization of interventions.
 - c) Standardize forms, recording, and reporting systems.
7. Co-ordinate with future programs eg. Child Survival, EPI etc. in the planning, implementing and evaluation of interventions in the rural sector.

6. ESTABLISHING A STRATEGIC FOCUS FOR CONTINUING THE
DEVELOPMENT
1986-2000

Introduction: A document on strategic proposals for the development of rural health services (1986-2000) (see Ref: 4 ANNEX D) has been prepared by expert committees involving staff from the SRHD project. The proposals covered 5 critical areas: Manpower Development; Health Care Financing; Management Development; Information and Evaluation and Technological Development. The Strategies were developed around demographic and MOH institutional profiles as well as national health policy.

The strategies laid out in the report of the expert committees were comprehensive. The Evaluation Team found little in the strategies prepared with which they could not agree. If there was to be a criticism levelled at the proposals, it would be that they were too all-embracing and did not separate out those strategies which, in terms of feasibility and application, would appear to be most appropriate for early implementation. As part of its activities, the Evaluation Team reviewed the strategy proposals in terms of the results of the work of the SRHD project. From this review, and in the light of project experiences, a number of suggestions are made for focusing initial further development steps.

MANPOWER STRATEGY The manpower strategies proposed for further development of rural health services are incorporated within four main elements; (1) Planning of Manpower Development; (2) Strengthening & upgrading manpower knowledge and skills; (3) Upgrading manpower motivation; (4) Upgrading manpower management.

PLANNING OF MANPOWER DEVELOPMENT: Two strategies are proposed with the purpose of; Strengthening communication & coordination in manpower development; Creation of a demand supply master plan for health care manpower.

STRENGTHENING & UP-GRADING MANPOWER KNOWLEDGE & SKILLS: Three strategies proposed; (1) Continued development of basic professional education with emphasis on community oriented practical skills; (2) Upgrading & expansion of pre-service training; (3) Institutionalizing of in-service training linked to the supervisory network.

UP-GRADING MANPOWER MOTIVATION: Strategy proposals include; Improvement of working & employment conditions; Improving career opportunities and enhancing job satisfaction

UP-GRADING MANPOWER MANAGEMENT: Four strategies were proposed; (1) Forging an interlocking network between training & supervision at all levels of the Ministry of Health; (2) Establishing apparatus for evaluating impact of training on performance; (3) Upgrading of training methodologies; (4) Undertaking research studies on critical manpower issues

DISCUSSION AND RECOMMENDATIONS: At the outset, it perhaps needs to be said that the most fundamental of the issues facing the RHD/MDH is the motivation & commitment of its staff. This issue is most significant in the physician cadres because of their influence. In this area, only limited success was achieved through the SRHD project interventions. The problem showed itself most clearly in measures of management, productivity and supervision improvement.

Some basic requirements for improving motivation are:

- Basic human "survival" needs are met.
- Individuals have objectives against which to measure themselves.
- Individuals have a feeling of some control over their "destiny".
- Individuals feel rewarded for doing well and that their individual contributions are recognised.

Given these requirements, it is now recognised from experience elsewhere that training alone has minimal effect on managerial & supervisory activities unless there are changes within the organisation that actively support the development & application of these skills after training.

Most commonly, the way these requirements for development are met, is identification for individuals of goals & objectives of the organisation, both national & local with which they can identify. From the information available to the evaluation team, it would appear that some of the predisposing factors which influence commitment and motivation are not yet in place. "Bottom up" planning is still in its infancy; there is little local involvement in planning or setting objectives and certain cadres of staff are being underutilized as a result of a supply-led planning process combined with a full employment policy.

While these are indicators only, it is suggestive that there still remains some fairly fundamental work to be done to provide in the local setting a framework of purpose around which supervision and management can flourish. It is probably around the concept of locally established work plans and targets that strategies on motivation, management and training can best be further developed.

Strategies for implementation could include: (1) Development and staff training on Management by Objectives concepts. (2) Expansion of current management and supervisory training of peripheral unit managers to include inter-personal communication skills training. (3) Local organization with general guidelines of work plan formulation with targets/objectives linked to locally observed needs. (4) Further development of incentives scheme for measuring and rewarding performance and achievements.

HEALTH CARE FINANCING STRATEGY PROPOSAL The basic concept of this strategy is to develop means to assure adequate financing for rural public sectors health delivery in keeping with Egyptian social and health policies. The strategies proposed focused on the following:

1. To insure financing which would enable rural health facilities to deal with 80% of the health problems of the population served.
2. To assure drug financing through increased community sharing of health service costs.
3. To assure financing through increased budget allocations for health to the per capita level provided by the Health Insurance Organization.
4. The redistribution of budgetary resources of MOH, with substantial and incremental increases in investment in PHC.

DISCUSSION AND RECOMMENDATIONS: Feasible strategies which focus on major sources of funding in the immediate planning for nationwide replication would be:

1. Generating funds through the activities in the facility, such as the collection of nominal fees in the amount of 25 piastres

per patient visit, fee-for-services provided after regular hours, and profits from the sale of drugs.

2. Soliciting funds from local and district authorities through the Agricultural Cooperatives, Local Development Fund, Industrial Hazards Tax, and private donations and charitable contributions.
3. Bidding for external funds at the Governorate and Central levels through coordination of activities with international and bilateral health agency funded projects.

Facility generated funds could be used in providing staff incentives and upgrading of the physical structure. Community funds would be used in improving the information and management activities, including local training and research. National funds could be used in meeting capital expenditures, vehicle and equipment costs and in planning and evaluation.

At each level, the quality of services, the extent of coordination, and the degree of commitment would determine the rate at which service coverage would be expanded in the different districts in each governorate.

Nationwide replication would, therefore, have to be implemented incrementally based on the ability and willingness of local communities to finance the maintenance of their health facilities, and negotiate with regional and national authorities to finance the upgrading and expansion of the rural health system.

Recommendations:

1. Increase substantially and incrementally the MOH investment in PHC.
2. Strengthen current MOH commitment to upgrading of rural health services.
3. Increase community revenues as sources of health care financing.

MANAGEMENT DEVELOPMENT STRATEGY In the Strategic Proposal Document, management was defined as the process of involving men, money, and materials in a purposeful way. The document also noted the fact that management concerns use of time, methods and motivation. The primary objectives of the MOH are:

- (1) To improve and up-grade the efficiency and effectiveness of the Primary Health Care Management System.
- (2) To maximize utilization of available resources by improving managerial practices.
- (3) Merging MOH and SRHD managerial experience to utilize past lessons and analyze constraints at all levels.
- (4) Identify PHC managerial problems, as their causes; effects and possible solutions.

Discussion & Recommendation

There has been a long history of PHC management in the context of developing a local governmental system in rural health facilities management since 1954.

The SRHD project attempted to improve the infrastructure by introducing interventions which would achieve the objectives of improving and upgrading rural health services. Among those interventions were management related concepts such as:

- (1) Supervision and Motivation
- (2) Evaluation
- (3) Logistic Support
- (4) Service Delivery (Outreach)

In the process of testing and implementing these interventions, problems were identified in regard to manpower management, planning, organization, communication, budgets and logistics viz:

- Inherent deficiencies in the local service system, particularly in health sector management and administration
- Planning was not related to overall health sector programs and project targets
- Organizational structure is fragmented and multidimensional
- Communication problems develop in a pluralistic structure

The Strategy

- Effective management of a health care system is necessary to replicate interventions and maximize benefits through efficient use of limited resources.
- Improved management of the Public health sector is necessary to promote the community involvement necessary to develop a rural health system.
- Incentives are necessary to promote the concept of effective management in the Public Health Sector.

Recommendations

- 1- Planning and Organization as part of the management process must continue to develop at all levels of the MOH as well as in the Rural Health Department.
- 2- The successful interventions of training and supervision should be applied to, promote the planning process. (see also Manpower Strategies). Authority and responsibility should be clearly delegated to assure effective performance of personnel.
- 3- To place in proper perspective, the management of a system as complex as PHC services will require the implementation of interventions to strengthen the infrastructure and improve communication at all levels.
- 4- Current managers, administrator supervisors and decision-makers at every level of health care manpower development should be subject to management and supervisory training.
- 5- Relationships between services and costs should always be analyzed in light of demonstrating cost effectiveness when new changes in services bring about expanded and/or increased utilization of resources.
- 6- Rigid rules for servicing and maintaining vehicles and equipment should be adhered to.
- 7- Evaluation, must be made a dynamic management process to allow analysis for informed decisions and information must be aggregated frequently for timely interventions at the different levels of the R.H. system.

INFORMATION AND EVALUATION STRATEGY PROPOSAL

The present MOH information consists of data recorded on individual client forms and aggregated for each program regarding vital events, communicable diseases and service contacts, as well as a monthly report sent to the governorate level on daily activities of the health unit. The governorate in turn sends the information to the central MOH every three months. Other reports using distinct formats are sent at different intervals to other central and local departments and projects.

The SRHD project contribution was through developing family folders, community maps based on community census; MCH/FP records and the supervisory feedback.

The strategic proposals focus on:

1. Reformulation of the information base and evaluation criteria for enhancing its use.
2. Redefinition of current data flow channels and usage patterns to assure feedback and facilitate utilization at the different levels involved.
3. Definition and integration of program components into a multi-tiered information system: Community/ Facility Action Planning Data Base (Profile) based on family folders continually up-dated through the routine home visiting program, District, Governorate, and permanent Health Profile of Egypt as well as special studies.
4. Standardization of the present forms based on specified parameters to facilitate the methods of analysis and interpretation at each organizational level.
5. Utilization of modern equipment and methods compatible with human and economic resources.

Discussion and Recommendations:

The proposed strategy is broad and comprehensive. It requires a precise definition of content and sources of information at all levels including defining standard indices required for policy making, planning and management as well as ensuring appropriate data flow vertically and horizontally. Moreover, it will require measures to maximize utility of the information and the continuity of the system at all levels. This will require the commitments of the authorities at the various levels to synchronize the information management technology with the required level of manpower development. Financial and administrative constraints may be an obstacle facing this comprehensive strategy. However, it is proposed that the institutionalization of MCH forms and the use of updated family folders on a national level can provide information on community profile as a basic first step.

Recommendations

- 1- Forms for activities other than the MCH should be standardized.
- 2- All forms to be revised to ensure the the minimum essential information collected to meet management needs.
- 3- Data collection and processing skills to be developed at all levels of the health system.

- 4- Active interventions to be introduced to increase the bidirectional flow of information.
- 5- Family folders to be adopted as a national standard.

Technological Development Strategy Proposal

Technology in this context is defined as the utilization of skills based on current scientific knowledge to deliver and upgrade health services. It is identified as a priority in the context of health needs of rural communities. It maximizes the proper use of manpower and material resources available within the socio-cultural context.

The strategy proposal addresses widely the continuous development of the means to provide and manage health services in the rural health system activities.

The strategic proposals included:

1. System Structure Service delivery package through clearly defined and differentiated technological levels: small villages not served by RHF stationed in village through resident nurse and physician periodic visits; peripheral satellite communities through Daya's activity and periodic nurse visits; RHU through upgrading and expansion of present programs through activities of a health team (physician/ Nurse/ Sanitarian/ Lab. Technician); Rural Hospital by upgrading RH centers with specialized and technical support in fields of public health, pediatrics, obst. & Gyn., internal medicine, dentistry, radiology, laboratory and statistics
2. Construction, Equipment and supplies Development of health building design, residential quarters, selection and procurement of equipment and supplies, the creation at the governorate and district levels of preventive and curative maintenances capabilities, revision of types of drugs needed, updating availability of diagnostic equipment and improving the availability of transportation and communication facilities.
3. Research and development: Operationlization and institutionalization of a central R & D unit (Multidisciplinary, Inter and intra institutional)

Discussion & Recommendation:

The proposal for the system structure overcomes the provisions problem of basic health services for the peripheral satellite communities (ezbas) and satellite villages. The launching of such a system however will require the MOH acceptance and approval of the Daya role and on the role and policy for nurse production. The supervisory role is also not clear in the proposal.

The proposal for construction, equipment and supplies component although logical suffers from the serious constraint of budgetary limitations which make it difficult to implement. The most encouraging proposal is that of Research and Development. The experienced personnel are there and acknowledged by the RHD and MOH. It is up to the R & D group to develop the concept within the system and to increase their capability in operational field activities and to use to best advantage the resources available.

Recommendations

1. MOH adoption of proposed system structure to allow outreach of FHC services to unserved populations. Replication could be done in phases starting with the districts included in SRHD project.
2. Strengthening R & D unit role in operational field studies.

7. RELEVANCE TO OTHER U.S.A.I.D./G.D.E. HEALTH AND POPULATION PROJECTS

The USAID/Egypt health and population projects are: (1) The oncoming Child Survival project; (2) The Suez Canal University Medical School; (3) Urban Project; (4) Family Planning project and (5) NCDD project

- The last 3 projects will terminate next year. Hence, their benefit from the experience of the SRHD project will be limited. However, there is evidence indicating that these projects shared experiences and collaborated activities. Among the examples to be cited: the DDCS study carried out by the SRHD project

contributed to the National ORT programme initiative. The project staff carried out Diarrheal Research Taxonomy study sponsored by NCDDP. The MCH forms institutionalized nationwide were based substantially on SRHD and used by the Urban and FP projects.

- Linkages were attempted with the innovative Suez Canal University Medical School (FOM/SCU). This linkage is important as community based setting is fundamental to the educational system developed by FOM/SCU. To be operational this system requires the use of peripheral health units to provide students with learning experience in hospitals and community-based settings. The FOM/SCU plans are to extend the pattern of collaboration to other governorates. Therefore, they can include in their plans those of the RHSP, which has already constructed training centers and staffed and equipped them. The staff of the training centers have already been trained to carry out their responsibilities and the physicians role has been expanded to include training and supervision. The outreach and home visiting activities can be utilized to provide more learning experience through active participation of the student and faculty in community and family problems. They will acquire skills in communication, and early case finding of diseases.
- * The ongoing projects e.g. Diarrhea, Urban and FP project should cooperate with the established R&D unit in the implementation of accepted interventions in R&D areas.
- * Health teaching learning materials developed by the project including the job description and guides for the peripheral staff and trainers guides should be used and adapted to the needs of ongoing and future projects. The adaptation, distribution and management of these materials could be carried out by the R&D unit.

- * The family record forms and process used in home visits could well be the basis for standardizing and making uniform a base-line maternal and child health data system. It should be consistent with international demographic standards so that interpretation of results can be possible regardless of the national, international or local reviewer who uses the data.

B. LESSONS LEARNED AND RECOMMENDATIONS

LESSONS LEARNED:

In the eight years since the project's implementation, general lessons have been learned that are relevant for future endeavours related to nationwide replication.

Starting from the evaluation team's own difficulties in interpreting project results, it is clearly important that evaluation instruments should be designed at the initial planning phase of a project and maintained through the development process to ensure managerial control.

Secondly, in the very complex environment in which interventions such as those attempted by this project were undertaken, it is probably unrealistic to expect to get a clear cut relationship between inputs and outcomes.

Thirdly, the issue of staff motivation involves a very complex interplay of factors between the individual, the organisation and society in general. Improving motivation requires simultaneous engagement with multiple interacting variables.

More specific conclusions relating to the particular interventions undertaken during the project are as follows:

OUTREACH:

Systematic outreach as carried out through the home visiting program had considerable impact on improving service coverage and utilization particularly of MCH services. Replication of the home visiting program will have to address the issue of involving the daya along with nurse to expand MCH coverage. It will also

require clarifying the role of the sanitarian in health education and environmental health activities. An effective home visiting program requires a combination of transportation, training, supervision and management. Failure to provide any of these elements is likely to result in significant reductions in impact of outreach programs.

UPGRADING OF IN-FACILITY M.C.H. CARE:

The expanded role of the nurse in providing in-facility MCH care augurs well for future replication efforts. In-service training contributed to the success of this intervention, having positive effects on motivation, improving aspects of health education, and upgrading the logistic aspects of the program. Staff attitudes toward the community and its health concerns were most likely to show improvement in the areas of Family Planning and MCH.

INTENSIFICATION OF HEALTH EDUCATION:

The effectiveness of health education is more dependent on staff commitment than on the means used to educate the community. Self-learning materials were not used by staff and the visual aids and materials not appropriately utilized. Lack of motivation on the part of the providers and failure to establish communication with community leaders clearly impacted on community participation through health education.

In-service training has proven to be a valuable motivating factor, and is effective when linked to perceived job needs, although it cannot compensate for shortcomings in basic professional education. In-service professional training was well received, it improved the performance of the nurses. Training that was not task oriented only imparts knowledge and does not help develop skills or change attitudes. On-the-job training tied to supportive supervision, emphasizing task orientation represents the most effective learning modality.

LOGISTIC SUPPORT:

Planning for the purchase and maintenance of vehicles and procurement of these vehicles through the project clearly was unrealistic in terms of overall costs and capabilities.

Bureaucratic processes related to logistic support in the purchase and maintenance of vehicles, the supply of drugs, and the purchase and repair of equipment were cumbersome and have a major impact on implementation.

The selection of appropriate, simple-to-use equipment enhanced its use by staff and simplified maintenance.

SUPERVISION AND MOTIVATION:

Upgrading of service quality is difficult to achieve unless staff income is substantially improved and systematic supportive supervision linked to performance-based incentives is emphasized. Personnel biases on supervisory evaluation could have been reduced if more specific objective sets of criteria for supervision had been designed.

The financial incentives linked to performance can influence individual behaviour but other incentives need to be used for long term changes in motivation. Pre- and in-service supervisory training could be of advantage in this respect.

INFORMATION AND EVALUATION:

Data currently collected concentrates on service statistics, does not always provide the parameters for evaluation, is not used at the facility level, and limited use is observed at higher levels of the system. Coordination between the local, district,

governorate and central agencies was not evident and base line information was not available. Duplication, multiple data collection efforts and lack of communication between MOH projects tend to further isolate the rural health sector.

The introduction of the SRHD family folder could be an excellent starting point for the development of a comprehensive information system to be used in the development of a strengthened national rural health system.

HEALTH SERVICES RESEARCH:

The project has been successful in testing and applying interventions. The experience gained from health services research in the development and implementation aspects was impressive and contributed to the evolution of the Research and Development Unit. The failure to disseminate research findings and provide feedback to the facilities limited the utilization of research.

RECOMMENDATIONS:

The evaluation of the achievements and shortcomings of the SRHD Project's attempts to upgrade critical aspects of the rural health services delivery system through the introduction of several interventions make possible a set of recommendations that will be of importance in the planning of replication strategies on a nationwide basis. The inputs made possible by the availability of external funds helped create the environment for improvements in services and service coverage will have to be financed through the generation of internal funds. A priority recommendation is that:

Community cost sharing mechanisms should be adopted in order to fund the upgrading of service quality and physical facilities.

The additional resources needed for nationwide replication would be in the areas of incentives, training, evaluation and research, and vehicles, with the involvement of the Governorates being essential.

The Ministry of Health investment for rural primary health care should be increased substantially and incrementally and be used only for rural PHC system activities by the Governorates and Districts

More specific recommendations relating to the particular interventions undertaken during the project are as follows:

OUTREACH:

Systematic outreach should be institutionalized using the MCH/FP home visiting program as its focus.

- a. Both the nurse and the daya should serve in such an outreach program.
- b. The sanitarian should carry out his related duties in accordance with his training and job description.

HEALTH EDUCATION:

Community participation should be encouraged in all health education activities in rural areas

- a. Health education at the community level should involve local leaders.

TRAINING

In-service and pre-service training for all categories of rural health personnel should be institutionalized.

- a. Training should be task-oriented and linked to supervision.
- b. Training in behaviour modification should be included as part of staff training in health education at all levels of the rural health system.

But it said earlier this was the least effective area of training.

*This recommendation
has also been
increased with
previous findings.*

- c. Training should involve the strengthening of managerial skills and practices of appropriate staff at all levels of the health system.
- d. Organization changes need to be introduced to encourage health service managers to adopt improved management practices.

LOGISTIC SUPPORT:

should
Logistic support be considered an integral part of every operational health program

- a. Logistic support be based on Egyptian capabilities to operate and maintain vehicles and equipment in rural areas.
- b. Replication strategies should take into consideration the possibility of utilizing vehicles from other projects.

SUPERVISION AND MOTIVATION:

Supervision should be based on objectives with incentives for motivation and using criteria consistent with Egyptian standards and attainable within the resources available.

- a. Incentives systematically introduced by the Ministry of Health, should be performance based.
- b. There is a need to make more specific the objective criteria and standards for supervision.
- c. Supervisors should be actively involved in the designing and development of training curricula.
- d. Future efforts to change staff attitudes and motivation should involve action-oriented behavioural scientists in designing and implementing the interventions.

INFORMATION AND EVALUATION:

The central role of MOH's Statistics Department should be strengthened to ensure that new projects and new activities will build on a common data base and eliminate duplicative requirements on data collection that now exist throughout the health system.

- a. Information collection and dissemination be institutionalized both at the facility level and the central level, such that the flow of information is continuous and related to program implementation.
- b. Evaluation instruments should be designed at the initial planning phase of all projects related to service delivery.
- c. The Family Health Record be used in the development of a data base at the community level and be revised and updated on a regular basis.

HEALTH SERVICES RESEARCH:

The Research and Development Unit should focus on health services research with an emphasis on rural health development activities based on priorities identified in collaboration with relevant MOH departments and projects.

- a. Applied research and development activities should be funded at least at the SRHD Project levels and be linked to MOH Departments and Projects involved in health services research.

REPLICATION

Replication of successful current interventions is feasible and should initially concentrate on expanding to cover the four Governorates involved with the SRHD Project, and where resources are available and adequate.

- a. Implementation of the interventions should ensure that regular functions of the facilities are not disrupted.
- b. Only those interventions which have already proved their effectiveness and validity should be implemented.

Finally, it is recommended that:

Strategy proposals in the five identified critical areas of manpower development, health care financing, management development, information and evaluation, and technological development for further rural health service delivery system development; be focused on key starting points described in the report.

ANNEXES

ANNEX A

Statement of Work for Final Evaluation of the Strengthening Rural Health Delivery (SRHD) Project (263 - 015 - 76)

Objectives of the Evaluation:

- A. To assess the extent to which the Project has developed and institutionalized a research and development (R&D) capability within the MOH, as well as the effectiveness, replicability, and impact of interventions developed by the Project Unit.
- B. To provide technical inputs useful to the GOE & MOH in planning & implementing the replication of successful SRHD interventions in the context of a broad strategic orientation for the continued development of rural health services through the year 2000, and in allocating resources for health inputs to rural development.

Scope of Evaluation:

Based on available data, and with the intent of maximizing the usefulness of this evaluation to both the MOH and to USAID, the evaluation team is expected to answer the following questions:

1. To what extent have project interventions strengthened the delivery of rural health services in project districts? What evidence is there of the measurable impact of these interventions, singly and/or as a package, on the health status of populations in these districts?
2. What interventions have proven to be replicable, as regards their technical, administrative, financial, and social feasibility? What is the potential of these proven interventions to upgrade health services delivery and to improve health status at the national level if they are replicated nationwide? To what extent is effective replication of project interventions depended on the availability of external donor funding?
3. Are the strategies for replication developed by the project appropriate and realistic? Do they adequately consider the potential constraints to nationwide replication? How can they be most effectively incorporated into the overall MOH strategic framework for the development of health services in rural Egypt? Does this framework appear to be realistic?
4. What evidence is there of commitment within the GOE and the MOH to replication of effective project interventions and to long term upgrading of Rural Health Services? What has been the contribution, of the National Conference to mobilizing this commitment?

5. Has the project established an appropriate organizational framework and systems for the new Research and Development (R&D) Unit within the MOH? Does the unit's structure and work plan support its intended role as a center of innovation within the MOH? Have effective and appropriate mechanisms been established for the selection and implementation of applied research projects, as well as for providing MOH planners and decision makers with information on research outcomes? What is the likelihood of continued institutional growth and development of the R&D Unit after current USAID project assistance terminates? What, if any, are the remaining constraints to the unit's effective operation? How might these best be addressed?.
6. What should be the role of the new R&D unit vis-a-vis the implementation of replicable, successful interventions developed under its auspices?.
7. To what extent can the other USAID/Egypt Health and Population projects benefit from the experience of the SRHD Project? Which specific interventions are appropriate for replication through these projects? How can the strategies for upgrading of rural health services identified under the SRHD Project be best incorporated into these projects?.
8. How might AID-assisted health projects in other countries benefit from the SRHD experience in implementing primary health activities in rural and urban settings?.

ANNEX B

The Evaluation Program

1. Establishing the Work Plan

After initial introductions of the Evaluation Team members, Dr. Hornby left open for discussion how the team wished to organize for the evaluation. It was agreed, that the evaluation team would act as a unit and that the final report would be a reflection of all the team's cooperative effort.

An outline of the procedure to be followed and a work plan for the E.T. was agreed upon. The Egyptian counterparts together with the R & D Team listed for interview the major players responsible for decision-making in regard to the SRHD project. (A list of the persons interviewed is appended) In addition, the SRHD staff organized and presented to the E.T. all documents prepared and utilized in the 8 years of the project's life. Included were all previous evaluations made by both internal and external evaluators. (A list of the documents reviewed is appended)

Dr. Hornby undertook the development of an outline for all members of the E.T. to follow and established a schedule for meeting critical dates for completion of specific documents and meetings with VIP's in both the MOH and USAID. In addition dates to conduct field observations were agreed upon.

2. Interviews: Background and Status Reports

Beginning with day one, interviews with the SRHD staff began to acquaint the E.T. with the project and its current status. Specific questions were directed to the executive director and resident advisor for intimate appraisal of activities by all members of the team.

3. Interviews: Interventions - Success and failures

The following three days consisted of interviewing and listening to all MOH personnel who directly or indirectly played a part in implementing the interventions. The SRHD staff prepared outlines which illustrated how each intervention was planned, organized, implemented and received in the Test areas. Also, the SRHD Staff and Rural Health Administrators of the MOH described successes, failures, accomplishments, constraints, lessons learned, strategy used and problems encountered in the life of the project.

The E.T. requested documents, questioned activities, theories, assumptions and interrogated the interviewed persons concerning the processes - administrative, planning, implementing and evaluative criteria used.

The cooperative of the SRHD staff was excellent; the presentations through and the rapport in every way was extraordinarily complementary.

4. Observations:

The E.T. travelled to two areas the Governorates of Fayoum and Guiza to obtain first hand knowledge of the impacts of the interventions. The Governorate of Fayoum was selected as an area where the test of interventions was applied. The Governorate of Guiza was selected to observe an area in which the interventions were not applied.

Observed were a Training Center, Rural combined Health unit and one rural health center.

Interviews were conducted with Physician Directors, nurses, District and Governorate Directors Local Village Council Chief, and allied health workers in the area. (A list is appended)

5. Recapitulation and Preparing the report

The final days of the Evaluation Process consisted of the Evaluation Team reviewing, commenting, debating, and writing drafts of their responses to the scope of services as presented by USAID.

Dr. Hornby established work plans for each member in regard to preparation of the final report. The entire team reviewed, commented and edited each others reports. In essence, the final report is an amalgamation of the entire Evaluation Team's input. Thus, the report was prepared.

SCHEDULE
SRHD PROJECT FINAL EVALUATION

April 26 - May 15, 1986

April 26

- 9:00 Introduction : Welcome Dr. Mostafa Hamrany
Review of Scope of Work
Adoption of Presentation
Agenda
- 9:30 Team Internal Organization Session
- 10:00 Recess
- 10:15 Presentations
- .1 Project Profile Highlights Dr. Ahmed Nagaty
Dr. Tomas Engier
- 11:45 Recess
- 12:45 .2 Summary of SRHD Intervention Analysis
- | | |
|-------------------------------------|----------------------------|
| Outreach Program | Dr. Mohammed Moafi |
| In-Facility MCH/FP Program | Dr. Ahmed Kashmiri |
| Health Education | Dr. Ibrahim Awad |
| Training | Dr. Nagwa Farag |
| Supervision | Dr. Nasr El-Din El Tantawy |
| Logistic Support | Dr. Farouk Mounir |
| Program Evaluation &
Information | Dr. Samir Guirgis |
| Health Services Research | Dr. Ahmed Nagaty |

April 27

- 8:30 Presentation
- .3 Summary of Proposed Strategy
- | | |
|---------------------------------------|--------------------|
| Manpower Development Strategy | Dr. Nagwa Farag |
| Health Care Financing
Strategy | Dr. Ahmed Nagaty |
| Management Development
Strategy | Dr. Farouk Mounir |
| Information System
Strategy | Dr. Samir Guirgis |
| Technological Development
Strategy | Dr. Ahmed Kashmiri |
- 10:30 Recess
- 10:45 Teamwork

April 29 Briefing with USAID

April 30 Interview with Dr. A. B. Mobarak, Former project Director

" " Dr. Aleya Ayoub, Undersecretary of Health

. Visit Urban Health Delivery Project H.Q.

May 3 Briefing with HE Minister of Health

May 6 Fayoum governorate: Implemented facilities

May 7 Giza governorate: Non-implemented facilities

May 12 Submission of Draft Report

May 13 Discussion of draft with MOH and USAID (health division)

May 15 Presentation of report to HE the Minister of Health and USAID

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ANNEX C

Institutions and Individuals
Interviewed

M O H:

- HE Prof. Helmy El-Hadidy,, Minister of Health
- Dr. Mostafa T. Hammamy, Undersecretary of State for
Basic Health Services & Family Health,
and SRHD Project Director.
- Dr. Aliya Ayoub, Undersecretary of State for Manpower
Development & Research; and
Director of Child Survival Project
- Dr. Hassan El-Deeb, Exec. Director, Urban Health Services
Delivery Project
- Dr. Almotaz B. Mobarak, Former Undersecretary of State and Former
Project Director
- Dr. Helmy El-Bermawi, Director General, Planning Dept., and
Exec. Director, USAID Supported FP Project
- Dr. Mohamed Nabil Nassar, Director General,
Rural Health Dept.
- Dr. Hosni Tammam; Director General, MCH Dept. and former Exec.
Director of National Control of Diarrheal
Disease Project
- Dr. Zaher Iskander, D.G., Information & Documentation Center, IIOH
- Mrs. Effat Kamel, Director, Nursing Dept./MOH
- Dr. Moshira El-Shafai, Deputy Exec. Director, FP Project
- Dr. Mohamed El-Lithy, Rural Health Dept.

Fayoum Gov'te:

- Dr. Fakhry Hakim, Director General, Health Directorate, Fayoum
Gov'te
- Dr. Shawky M. Hassanien, physician in charge, Desia RHC, Fayoum
- Dr. Sherif El-Said, " " " & Director of Training
Center, Agameen, Fayoum
- Mr. Mohamed El-Garhy, Head, local village unit, Agameen, Fayoum
- Mr. Mohamed Nabawy, Secretary, " " " " " "

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Mit Rahina RHC/Giza:

Dr. Micheal Mourad Boolus, Physician in charge

Dr. Wahid Farid, Physician in charge

Dr. Sabry, District Health Officer

A I D:

- Dr. William Oldham, Director, Office of Health

- Mr. Charles Mantione, Project Officer

- Ms. Shanti Conley, Evaluation Officer

U N I C E F:

- Mr. Keshab Mathema; Deputy Representative

- Dr. Ibrahim El-Kirdani, Program Officer

- Ms. Amira El-Maltawy, Asst. Program Officer

- Dr. Magdy Bayoumi, Asst. Program Officer

S R H D Staff:

- Dr. Ahmed Nagaty, Executive Director

- Dr. Nagwa Farag

- Dr. Farouk Mounir

- Dr. Ahmed Kashmiry

- Dr. Samir Guirgis

- Dr. Ibrahim Awad (Fayoum Governorate)

- Dr. Nasr-Eldin El-Tantawy (Behira Governorate)

Westinghouse Health Systems(TA Contractor):

- Dr. Tomas Engler, Senior Technical Advisor

ANNEX D

DOCUMENTS REVIEWED

PROJECT DOCUMENTS:

1. Project Paper for improvement of rural health delivery -
Egypt July 1979
2. Master Evaluation Profile March 1986
3. Intervention Analysis March 1986
4. Strategic Proposal for the Development of Rural Health
Services 1986 - 2000 March 1986
5. Replication Strategy March 1986
6. Recommendations of the Fourth National Conference on Basic Health
Services for Rural Communities April 1986
7. Fifth Report of Rural Health Technical Advisory Committee
Review of Preliminary Version for the Draft Nationwide Replication
Plan August 1984
8. SRHD Project Technical Report
"Results of Household Survey No. 7" October 1985
9. Supervisory Forms
10. Training Handbook for Preimplementation Training Program SRHD, MDH,
1981
11. Pre & Post SRHD Preimplementation Training Surveys of skills,
knowledge among physicians, nurses & sanitarians.
12. USAID Rural Health Project Monthly Reports 1983-1986
13. USAID Rural Health Project Bi-annual report and implementation plan
(May 1983 - October 1985)

Other Documents

1. The National Control of Diarrhoeal Diseases Project:
An innovative and effective program
A Background Paper in support of the application for the
1986 Sasakawa Health Prize
October 1985
2. Child Survival Project Paper "Egypt"
July 1985
3. The State of the World's Children
1986 UNICEF

4. Islamic Procedure in Child Care
1985 UNICEF
"In Arabic"
5. Child Care in Islam
1985 UNICEF
6. Guide Book for Daya
Egypt, UNICEF
7. MOH Department of Statistics, monthly facilities reports for governorates of Behaira, Fayoum, Dakahlia, Assuit (1983/1984-1985/1986)
8. MOH Annual Budget Summary for health sector (1983/1984 and 1984/1985)
9. Faculty of Medicine, Suez Canal University: script & design by Dr. Anand and Dr. El-Deib. Printed by Learning Resources Unit, Faculty of Medicine SCU.
10. Incentives in FHC: Myth or Panacea; Nagaty & Engler. Presented to NCCH Annual Conference, Washington D.C., USA June 3-5, 1985
11. MOH Reports for RHD on MOH activities, OF, IP flow for the years 1981-1984
12. MOH Report Manpower for RH Sector, 1985
13. MOH Report MCH, Immunization activities by governorates, 1983

ANNEX E

DETAILS OF INTERVENTIONS WITH TECHNICAL POTENTIAL

1. Intervention: Institutionalization of systematic outreach for childhealth surveillance, fertility status surveillance, improving maternal care, increasing health education and promoting family planning.

Child health surveillance has not been part of home visiting activity in the past. The outreach program was intended to cover all villages served by the health centers and all villages within 3/4 km. of a health unit: the home visits were paid for health education in nutrition, family planning, environmental hygiene, recognition and early management of childhood diseases, case finding, treatment and referral. The program involved physicians, nurses and sanitarians, although most visits were made by nurses. Nurses were expected to produce 300 contacts per month.

- The outreach program allowed expansion of health services to the homes.
- It acted as means of collecting health and health related information.
- It permitted early detection and treatment of significant number of potentially serious diseases (Diarrhea and ARI).
- Child care coverage increased and nurses significantly allocated more time to child care and school health. Moreover, an increased coverage of MCH services in SRHD facilities was demonstrated.
- Although it has not been possible to quantify exactly the benefits received in mortality and morbidity reduction, available evidence indicates that benefits have been obtained.
- The personnel utilized for home visits should be examined specifically in regard to the role of the sanitarians. The health education role assigned to sanitarians has not been as successful. This may be due to rejection of male visits by housewives, a cultural issue.
- Dayas continue to attend the majority of home deliveries (80%). This may reflect cultural preference to this type of birth attendant or simply that nursing staff are not generally available to provide natal services and the immediate postnatal services including domestic and social services which the dayas normally give. In the light of the nurse shortage currently affecting Egypt and particularly rural areas, it appears desirable to consider to incorporate the dayas after training them in the health team for outreach programs.

2. Intervention: Strengthening of the MCH/FP medical care capability for disease prevention in rural areas and of new criteria for management of diarrhea/dehydration and acute respiratory infections.

The intervention included: redefining of staff roles; job descriptions; expansion of laboratory capabilities; revision of in-facility MCH/FP services; periodic review of immunization; nutritional status of preschool children; scheduling of all MCH activities on a daily basis; upgrading family planning services; intensified health education efforts focusing on child nutrition; Family Planning; and recognition, prevention and care of common childhood disorders.

These activities were directed to improve staff knowledge, attitudes and practices (KAP) and to improve maternal and child health through promotion and increased availability of child spacing methods. Although one is aware that the impact of these activities can not be disassociated from the outcome of the outreach activities, yet one can conclude the following:

- Expanding the coverage resulted in an increase in community utilization of in-facility care as well as improving rapport with community.
- Operational research studies sponsored by the project have indicated that nurses are capable of diagnosing and managing mild and moderate dehydration and can initiate treatment for mild and moderate ARI's. The nurse time allocation to MCH/FP service functions and to child contacts increased. The nurse services was expanded to cover the 5 years old. The community and staff acceptance of these innovations has been good, however, supervisory support may be needed.
- In the area of family planning, inspite of widespread awareness of FP methods and significant levels of receptivity, low contraceptive use, dominated by pill users however, increased reliance on pharmacies as sources of supply of pills and mechanical family planning methods continued. In spite of the educational activities offered out it had little impact on changing behaviour of the women. It seems also that a more intensive training in behaviour modification was needed and possibly more consideration of the roles of other members of the family in this process.
- Modification of physician management criteria has proven to be a difficult task. This may be attributed to the high rate of physician turnover, and the contradictions with criteria taught in medical schools.
- The pre-implementation training improved the knowledge, skills and caused attitudinal changes in staff clinical practice. However, inservice training must be continuing to compensate for staff attrition and declining motivation.

3. Intervention: Increasing consumers health knowledge and participation

Fostering community participation in a broad sense has not been attempted in the SRHD project. The interventions were all directed to the clarification of staff roles and opportunities in health education, and improvement of their knowledge and skills. This was carried out to promote consumers' knowledge of 7 priority health problems diarrhea; ARI; immunization;

utilization of maternity care and FP services; MCH nutrition; personal hygiene; home and school sanitation; and parasitic infestations. This has been supported with a series of visual learning materials (VLS) built around basic health messages. These were underutilized by the staff. A series of 7 self learning manuals (SLM) were developed. All but one were tested and completed. These have only been used on an experimental basis and they were not properly read by facility staff. It is important to point out that self learning materials can not teach communication and motivation skills. This also may explain why actual behavioural change has proven to be difficult to achieve.

4. Intervention: Training: The training intervention included preimplementation training, inservice training, construction, equipping and staffing of district training centers as well as special training. These activities were carried out to assure a high level of knowledge and skills needed to assume the staff's expanded roles; to strengthen sections and departments within the MOH; to assure managerial support of logistics for the project; to facilitate evaluation and analysis of SRHD project results; and to improve planning, implementation and evaluation of the entire rural health service delivery program.
- The project preimplementation training covered 100% of the peripheral staff of the project areas. Nurses were found to be most receptive and sanitarians the least.
 - Decentralization of training was felt to be the best approach.
 - Parts of the physician preimplementation training materials were subsequently integrated into ongoing MOH preservice training in project governorates. Unfortunately this package was delivered by lecture rather than group discussion and exercises. It did not involve observation and preceptorship in field practice as was intended.
 - Inservice training covered refresher courses for all staff; training in family planning for physicians, nurses, sanitarians and laboratory technicians; training in supervisory techniques and procedures for all supervisory staff; and management training for project field executive directors, district health officers and central MOH and project staff.
 - On-the-job training in the course of routine supervision by district and governorate level supervisors was found to improve staff performance more than formal lecture type training. However, supervisors required more emphasis in terms of training.
 - Special overseas training was conducted to cover training needs of health services research. Only few have benefited from this activity as few peripheral physicians, and no nurses nor sanitarians met the AID English requirements for study in United States. Apart from the cost involved 4 out of 32 physicians trained overseas did not return even though

- their training has been completed.
- Of the 15 planned training centers, 12 were constructed, equipped and staffed. Completion of all training centers is scheduled for June 1983. All training centers are constructed at a rural health center. This facilitates the creation of participative learning experiences.
 - A significant amount of training materials have been developed for inservice training including slide sets. Narration for nurse training in community obstetrics was developed.
 - The project has at least initially improved productivity, lowered unit costs and increased health service utilization. The improvements achieved have been sustained only for about two years after which a decline was observed in staff productivity and performance. This indicates the need to induce motivation productivity changes.

5. Intervention: Logistic Support: This included provision of vehicles, maintenance facilities and basic commodities. These were needed to support supervision, training, outreach, health education and data collection.
- Although it is agreed that logistic support significantly contributed to both facility and outreach services, improved supervision and provided physician satisfaction yet problems were encountered with regard to types of vehicles, spare part supplies, and shortage of drivers.
 - Due to the ready availability of drugs and the existence of established drug distribution procedures in the rural areas, SRHD intervention was limited to a list of essential drugs and equipments provided by UNIFAC system. These proved to have been technologically appropriate. A massive order of basic equipment for all RHF's in rural Egypt has already been ordered with SRHD funds. However, provision should be planned to cover replacement needs over the next decade.
6. Intervention: Supervision and Motivation: This intervention was aimed at upgrading supervisory technical knowledge and skills and to link supervision to on-the-job and in-service training. The upgrading of supervisory competency and commitment was based primarily on training of supervisors and on the initiation of regular incentive payments to district and governorate level supervisors. The innovation of supervisory process dynamics focused on the establishing of staff evaluation criteria expected to improve clinical and administrative knowledge, skills and performance. The scores from these regular evaluations became the basis for planning remedial inservice training as well as awarding incentive payments to staff members. However, the criteria for performance evaluation was stated in broad terms which allowed subjective rather than objective monitoring to occur. Moreover, supervisors were reluctant to deprive personnel of their incentives. The staff response to motivational inputs was determined to be less than 2 years.

Although it is hard to separate the impact of supervision from training and logistics yet, one can state that there is evidence that these interventions collectively led to:

- Improvement of the physicians leadership ability and better compliance with guidelines.
 - An increase in nurses activity as regards outreach home visiting, immunization, and monitoring child growth.
- Sanitarians indicated that administrative duties were below expectations. Laboratory assistant's administrative and technical performance was high in the beginning, and made only a modest improvement over the period.

7. Intervention: Programme Evaluation and Information: This intervention aimed at creating an upgraded comprehensive information and evaluation system for collecting data needed information for use in operational decision making. It was composed of six components to accomplish six objectives, namely to:

- o Identify unmet health needs and shortcomings in the delivery of health services.
- o Permit project response to identified health and service priorities and problems.
- o Monitor progress and cost.
- o Standardize evaluation and monitoring criteria through uniform modules.
- o Generate staff experience and interest at all levels.
- o Promote at all levels positive staff attitudes towards evaluation.

Two of the components were not utilized, namely the outpatient records and the verbal autopsy form due to the non-compliance of doctors.

Components of this intervention that were tested were:

- a. The household surveys (HHS) are 8 repeated survey interviews, carried out to provide data on perceived health needs, shortcomings, service utilization, and community KAP. It also permitted project response to identified problems, to monitor progress, and to generate staff experience and interest at all levels.
Seven rounds were completed and analysed. The data for the 8th final round was collected, which included a morbidity and follow-up on performance of CMC and FF programs. Although the data from the 8th round is not reported yet project staff feels that HHS facilitated modification of program components; confirmed and modified the role played by dayas in natal care; and identified attitudinal barriers to service utilization. However, it was felt that spacing of inter-survey intervals should take into account realistic time frames for assessing results. Also, project staff concludes that decentralization of processing and analysis does not appear to be technically nor logistically feasible. The HHS as it was implemented and was centrally executed, proved to be expensive when transportation and

personnel requirements were a limitation.

- b. Supervisory feedback (SF): This activity was carried out one round every quarter in all 24 times. The activity was related to the management of personnel rather than to the programmatic decision-making. It was intended as an instrument for assessment of staff performance, knowledge and skill changes over time to identify shortcomings, and training needs. It was also used as an evaluation mechanism for awarding monetary incentives. The activity indicated that it is feasible to link incentives to performance evaluation although it is difficult to avoid on the long run bias in performance evaluation. It was also a mean to standardize evaluation criteria. Yet there is a need to revise these formats to assure that supervisory criteria allow for objective monitoring of performance of staff and that the procedures assure ease of use and safeguard against subjectivity.
- The project staff sees that technical capability exists for decentralized supervisory evaluation of facility staff as well as for manual processing and payment of incentives.
- c. Work Sampling (WS): Was adopted to assess staff productivity and time allocation to functions. It was based on instantaneous observations of randomly selected staff members. This tool led to modification of staff job descriptions mainly in reduction of administrative work load of some staff members and the development of supervisory guidelines. The project staff found this instrument to be a valuable tool and would appear to be feasible within the Egyptian GOE-MOH system. However, WS should be combined with other studies addressing other variables that may affect productivity and time allocation e.g. patient flow, patient load, etc.
- d. Family folder; MCH/FP Records: Initiation of project activities in each district was based on village mapping and sectorization. It involved household census and enumeration linked to the creation of a family folder for each household. This was to be kept at the peripheral facility. Data was collected by nurses and sanitarians and was updated in the course of routine home visits. These family folders can provide a community profile if they are regularly updated.
- A set of individual MCH follow-up forms were designed and collected into booklets to be used both on home visits and visits to the facility. Most elements from the MCH folder were incorporated (in mid 1985) into a revised national MCH record format.

The evaluation team feels that institutionalized MCH forms as well as forms for obtaining base-line data would be an intervention enhancing data collection. It would allow interpretation uniformity and create the ability to measure impact. Administratively, technically, financially and

socially, the institutionalization of forms would benefit the nation greatly.

8. Intervention: Promotion, Support and conduction of local operational research studies: A major objective of the SRHD project was to insititutionalize a solid HSR capability within the Rural Health Department. Also to provide a scientific basis for evaluating and testing proposed service delivery, to allow managerial support intervention, and to involve rural health staff at all levels in applied research.

- Seven studies are reported in support of the research capability and scientific testing of interventions. They are: Diarrheal Disease Control Study (DDCS), Acute Respiratory Infection Study (ARIS), Neonatorum Tetanus Control Study, Cost Analysis Study, Community Cost Sharing Study, Diarrheal Disease Taxonomy Study, and ORS Distribution Study. Results of the DDC Study were instrumental in the development of the National Control of Diarrheal Disease Project. Results of ARI were instrumental in the inclusion of an ARI component in the upcoming Child Survival project. Neonatorum Tetanus study proved that mass immunization of WRA is technically and administratively feasible. The cost Analysis study high lighted the need of including cost effectiveness indicators, in the evaluation process.
- There appears to have been little involvement of field staff in HSR/FHC except for data collection of centrally identified and designed projects. Their involvement could increase their job satisfaction.
- There is also little evidence that results of research carried out were disseminated to field staff. Hence, results obtained were not utilized by field staff.

ANNEX F

The Fourth National Conference on Basic Health Services for Rural Communities

Cairo (April 12-14, 1986)

RECOMMENDATIONS

First: In the Field of Manpower Development

- 1) To appeal to the Higher Council of Universities, the Ministry of Higher Education, and the People's Assembly Health and Education Committee, to determine the number of students to be admitted to the faculties of Medicine, Pharmacy, and Dentistry according to the actual needs of health services, in the light of the Ministry of Health estimates.
- 2) To request the Higher Council of Universities to keep the community medicine course as an integral subject of other course curriculae, and to resume the system of teaching community medicine from the first year in the Faculty of Medicine, as had been followed in the past.
- 3) The Conference recommends that the Department of Manpower Development of the Ministry of Health determines the numbers to be accepted into the various sections of the technical institutes according to the actual needs required taking into consideration the geographical locations of such institutes.
- 4) To establish a pre-service training program for dentists and technical institute graduates, prepared by the relevant technical departments at the Ministry, in collaboration with the Manpower Development Department. This program should be implemented by the Governorate Health Directorates.
- 5) Transfer from the FHC units to hospitals, promotion to higher posts, and preferences in awarding scholarships abroad should be linked with passing the training programs.
- 6) Organization of the training sections at health directorates to include a unit for preparing the technical assistants (nursing schools, assistant sanitarians & lab. assistants) and a training unit which develops annual in-service training plans for FHC personnel, in collaboration with the various technical sections at the directorate, making use of the available training resources.
- 7) Support and development of the libraries existing in the rural health facilities with recent scientific materials, through the assistance of national, international and foreign organizations.

Second: In the field of effective management of the basic health welfare in the rural areas

- 1) Motivating doctors to take over full-time supervisory posts by giving them the appropriate incentives through:
 - a) Establishment of a special employment cadre for these posts, as was the case in the past.
 - b) Giving the full-time doctors a minimum of 100% allowance. This will not entail substantial financial burdens, as the number of posts, despite their importance, is small; and the required appropriation can be covered by surplus funds from the first chapter of the budget.
 - c) Requesting the governorates unattractive to health personnel to offer material and in kind incentives (such as the provision of residential quarters) to attract such professional and technical leadership to work in these areas.
- 2) To call for amending the Local Government Act with the purpose of giving prime authority to managers of service sectors at the levels of the governorate, District and the village local government. Until such an amendment does materialize, the Council of Governors has to issue directions to local government authorities at the different levels, to enact regulations delegating some of their authority to the managers of the service sectors and their units.
- 3) The Conference notes the significance of the community's participation through the local council health committees, and the importance of the role of the Board of Directors of the rural health facilities in developing, implementing and monitoring the annual plan of each unit. The Conference recommends that health directorates and district health offices have to ensure that every health unit develops its own annual plan, with the collaboration of its Board of Directors. The District Health Office is accountable for collecting the plans of the affiliated units, which make up the plan of the District Health Office itself.
- 4) Formulation of a task force, involving concerned departments at the Ministry, to review the information system with the aim of simplifying and standardizing information collection, manipulation and feedback.

Third: In the field of appropriate technology for rural health services:

- 1) To formulate a system to standardize the type of equipment used by the health units and its adequacy for work requirements, and to ensure preventive and periodical maintenance. The equipment in the rural units should be simple, easily operated and easily maintained.
- 2) To reinforce the local drug factories operated by the health directorates, and the establishment of additional ones to cover the requirements of the governorates, with the aim of optimizing use of resources allocated for drugs; and to encourage hospital pharmacies to prepare their own ointments, mixtures, reagents and other preparations.
- 3) To tighten control by the local authorities on the use of transportation means, to ensure that they are used for their proper purposes.
- 4) To enhance and encourage field studies in the governorates to solve health problems, in collaboration with the regional universities and the various research institutes.
- 5) Replication of the outreach program adopted by some projects of the Ministry of Health to reach the community and families at home, through planned periodical home-visits with special emphasis on high risk population groups.
- 6) The governorate health directorates should keep constant contact with the executive and community authorities, especially with the community, religious and social leaders to strengthen & improve health service delivery. They have also to participate with the directorates of education in applying a staged plan assigning a doctor to every school, to offer health services to the pupils. Each school has to prepare a location for the health services.
- 7) To accept the MOH plan for upgrading rural health centers into rural hospitals to improve medical care, with continued stress on preventive programs.
- 8) To perpetuate the implementation of training programs for Dayas (TBAs) to work as extensions of the health team, particularly in satellite villages and hamlets, under the supervision of physicians and nursing staff.
- 9) To request the Ministry of Housing and Public utilities to supply the villages in the north of the Delta and other deprived villages with drinking water.



- 10) The health committees of the local village councils are required to urge the citizens to participate positively in the activities related to cleanliness of the environment.
- 11) To pay attention to health education activities through personal communication, and to develop educational means to alter the behavior of the citizens.

Fourth: In the field of financing the increasing burdens of the basic rural health services:

In light of the increasing cost of health care beyond government revenues, the contribution of the masses who can afford to cover part of the health expenditures is necessary, while keeping preventive and emergency services free. In this context, the Conference recommends:

- 1) Support of the Unit Treasury through:
 - a. Increasing the outpatient fee to 25 piastres.
 - b. Establishing an economical treatment system in rural health units.
- 2) Requesting the governors to allocate a share of the profits of the agricultural cooperatives assigned to the social services and of the governorate service funds to the health services budget.
- 3) Initiation of arrangements to promulgate an act establishing a fund for the development of the rural health services, at the level of each governorate, to be financed by the following sources:
 - a. A share of the profits of the agricultural cooperative assigned for social services.
 - b. A share of the governorate service fund.
 - c. A 25 piastre annual levy on the health services provided to each pupil.
 - d. A nominal levy for the issuance of birth certificates, health certificates, medical reports and other certificates unless they are required by official departments.
 - e. Contributions and donations by charitable societies and individuals.
- 4) The Ministry of Health has to start studying the most appropriate option to cover the rural communities with a health insurance scheme, compatible with the nature of the rural community, and to put into effect the principle of social solidarity.

Fifth: General Recommendations

- 1) Issuance of a decree by the Ministries of Health and of Local Government establishing a permanent central council for rural health development, to be formed by representatives of the Ministries of Health and of Local Government, the Village Development Department and all executive and community organizations concerned with rural health development, for the purpose of co-ordinating & integrating the efforts of these organizations to ensure the optimal use and geographic coverage of the available resources.
- 2) Increasing the periodicity of national conferences on basic health services to cover both rural and urban areas.
- 3) Formulation of a task force to follow up the implementation of this Conference's recommendations.