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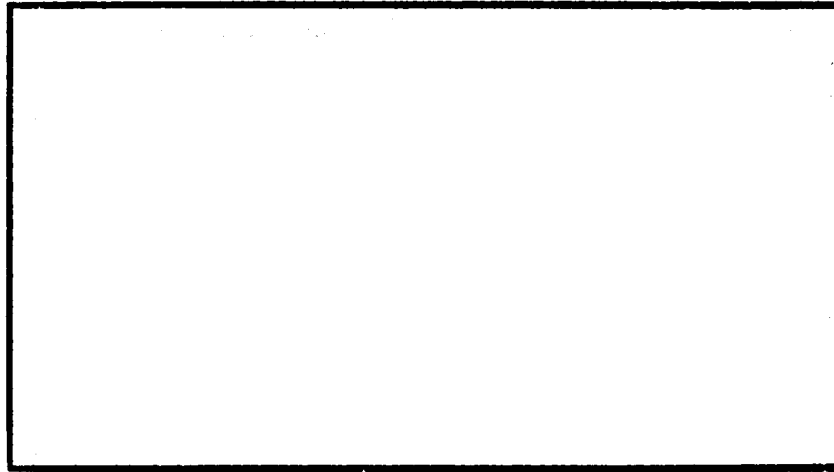

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A FRAMEWORK FOR PREPARING THE KOREA HEALTH DEVELOPMENT INSTITUTE'S FINAL REPORT ON AID PROJECT 489-U-092

A Report Prepared By:
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ACKNOWLEDGMENTS

The author wisbes to thank the following persons for their invaluable assistance and guidance: Mr. William E. Paupe, USAID Representative, Korea, for his technical guidance and for the logistic support his office provided; Younghat Ryu, President, Korea Health Development Institute (KHDI), and staff, who held briefings, arranged discussions, and provided an escort service on an extended field trip.

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EXECUTIVE SUMMARY

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The consultant was asked to review the Korea Health Development Institute's evaluation plan and mid-term progress and to draft a framework for preparing the final report on AID Project 489-U-092. The consultant was asked to assess the accessibility, acceptability, quality, and cost of the KHDI program and to determine whether it can be replicated efficiently and effectively.

The KHDI has developed a low-cost integrated health care delivery system for low-income families in rural areas. The system has been tested successfully in three different sub-project sites and can be replicated elsewhere in the rural areas of Korea. The KHDI should provide technical advice on and administratively control any low-cost delivery systems introduced in rural areas in the future. Personnel assigned to the health care delivery system should be career Civil Service staff and should receive commensurate pay.

An effort should be made to maintain the viability of the system in the sub-project demonstration areas during the interim period (after USAID withdraws from the project and before the Five-Year Plan begins in 1982).

I. INTRODUCTION AND BACKGROUND

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Purpose and Scope of Work

The consultant's tasks, as specified in the Scope of Work, were to:

1. Review the Korea Health Development Institute's (KHDI) original evaluation plan and progress.

2. Draft a framework for preparing the Institute's final report on AID Project 489-U-092.

The consultant was required to assess the accessibility, acceptability, quality, and cost of the KHDI's integrated health care delivery system and to determine whether that system can be replicated efficiently and effectively elsewhere in rural Korea.

Itinerary

The consultant's itinerary was as follows:

April 22	Arrive in Seoul, Korea.
April 23	Discussions and briefing, USAID.
April 24	Briefing and project discussions with KHDI staff.
	Discussion with World Health Organization Representative to Korea.
	Discussion with Director-General, Bureau of Medical Affairs, Ministry of Health and Social Affairs.
April 25	Discussion with Secretary-General, National Health Secretariat, KHDI, and KHDI staff on project components.

April 26	Review research documents, USAID office.
April 27	Sunday, holiday.
April 28	Visit sub-project site, Hong-chon, by motor vehicle. Visit health center and two primary health units (PHUs). Stay overnight in Taejon.
April 29	Visit sub-project site, Okgu. Visit health center, community health center (CHC), and one PHU. Stay overnight in Taegu.
April 30	Visit sub-project site, Gunee. Visit health center, CHC, and one PHU.
May 1	Return to Seoul. Review research documents, USAID office.
May 2	Discussions with KHDI staff. Draft report, USAID office.
May 3	Draft report, USAID office.
May 4	Sunday, holiday.
May 5	Draft report, USAID office.
May 6	Final discussions with KHDI staff. Depart Seoul.

Demographic Profile of Sub-Project Sites

Three rural regions were selected as demonstration sites. The first region is mountainous and sparsely populated, with less than 70 persons per square kilometer. Roads and transport facilities in the area are poor. The terrain in the second region, which is surrounded by mountain ranges, is flat. The population density is 190 persons per square kilometer. Communication (roads and transport) in the area is good. The terrain of the third region is also flat. The region is bordered on one side by the sea and a number of uninhabited islands. The population density is 354 persons per square kilometer. The region offers an excellent means of communication.

Sociological Profile of Sub-Project Sites

Most households in the three regions have electricity and a potable water source. There is more than one radio per household, and telephones are numerous. Most children attend school only through the sixth grade, but higher education is available. There are approximately 5.4 persons in each household.

The principal industry is agriculture; primarily rice, but also some fruit and produce are grown. There is some manufacturing in the three areas, and silk production is a cash enterprise. The use of motorized farm machinery is increasing, although most farmers still use oxen.

II. OBSERVATIONS AND FINDINGS

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A three-tiered health care delivery and referral system has been established in each of the demonstration areas. The lowest-level service provider is the village health agent (VHA), a volunteer selected by a committee or "gun" (county) officer. The VHAs, each of whom receives short-term, intensive instruction, promote health care and disease prevention in the villages to which they have been assigned. The next level is the primary health unit (PHU), which is usually located in the "myong" (township) and supervised by a community health practitioner (CHP). The CHP is a nurse or nurse-midwife with one year of specialized training. Three community health aides (CHAs) are assigned to a PHU. The CHP primarily provides curative medical services, and her duties in preventive medicine are kept to the minimum. The CHP supervises both the PHU and CHAs. Almost 100 percent of the work of CHAs is in preventive rather than curative medicine. CHAs treat villagers with tuberculosis and provide follow-up and maternal-child health (MCH) care, as well as family planning services and the usual preventive measures.

In the latter months of the project, the number of preventive contacts the CHAs made rose dramatically in each of the three demonstration areas, as the following figures show:

REGION	January 1979	November 1979
Hongchon		
In office	1,189	1,922
Out of office	2,050	4,864
Okgu		
In office	1,163	3,364
Out of office	2,484	7,030
Gunee		
In office	1,441	4,046
Out of office	2,987	4,760

The number of curative treatments in the PHUs has also increased, but not as dramatically. The CHP visits a village once a week; the CHAs visit each village every two weeks and work directly with the VHA in each.

Excellent village and family health records are maintained in the PHU. The information is complete and detailed. All records are color-coded for easy reference for special cases (i.e., tuberculosis, family planning, etc.).

The third tier in the primary care system is the community health center (CHC), which is usually located in a myong. The CHC supports two PHUs and is a referral point. The unit is directed by a physician who provides curative medical services, conducts specialty clinics (maternal-child health) in the PHUs, and supervises the activities of the CHPs. The physician's services are underused in this setting. Three CHAs who provide preventive care in the villages are assigned to the CHC.

Each PHU and CHC has ample, good quality medical equipment. The PHU receives approximately 60 drug items, a supply considered excessive, given the expertise of the CHPs.

If beds are available, villagers are referred for treatment to the health center in the county town or seat, to the province hospital, or to a privately-owned or denominational hospital.

The accessibility of the health care system varies with the terrain. In mountainous Honchon Gun, where the population density is low and the inhabitants widely scattered, transportation is scarce; most travel is by foot. It takes an hour or longer to reach many PHUs. In Gunee and Okgu, the terrain is flatter and the road systems good. It is possible to travel by bus or some other motorized vehicle, or by bicycle. Difficult terrain and poor transportation restrict access and impede the ability of the CHAs to make their village rounds.

Preliminary studies of acceptability in the demonstration areas indicate that 64 percent of the people have access to medical care. The remaining 36 percent either do not seek help, consider it to be too expensive, intend to but do not go to a health facility, or have minor conditions that do not require a visit. Some people are attended by herbalists. A survey conducted in late 1979 revealed that the user rate has increased substantially. The health care expenditure for 1979 was almost double that of 1976, and this too, indicates that the user rate has increased.

The quality of medical care in the demonstration areas improved after additional physicians with a higher level of training were hired to supervise the CHPs. The construction of additional modern treatment facilities with up-to-date equipment has also contributed to the quality of care. The institution of specialty clinics (MCH and family planning) in the PHUs and the ready availability of immunizations have had a direct impact on the quality of care. Under the structured referral system, the likelihood of receiving expert specialty care is greatly improved.

Low-income families can receive lower-cost medical care because morbidity has been decreased through preventive care, the early detection of serious diseases, and the referral of serious cases along the chain of facilities in the three-tiered primary care system. Post-evaluation survey studies were made in 1979 to compare the costs for health care in demonstration and control areas. Researchers found that a health care system in a non-demonstration area has a cost index of 1.74 for out-patients and 1.45 for hospitalized patients. Using the 1976 index of 100, they calculated that the average medical expenditure per household in 1979 in the demonstration areas was 201; in the control areas, the expenditure was 230. These facts attest to the validity of the low-cost health care system in the demonstration areas.

To be replicable, a health delivery system must be low-cost, accessible, and acceptable. The demonstration sub-projects meet these criteria. Three problems should be corrected to enhance the effectiveness of the delivery system.

At this time, the KHDI has had no difficulty recruiting CHPs. But, should more CHPs be needed, the Institute may have problems. CHPs receive a low salary and are not accorded Civil Service status. The yearly attrition rate of the CHAs is reported to be 33 percent. This is also attributed to low pay and the absence of Civil Service status. The need to recruit and retain a stable corps of CHPs is obvious, and the problem should be corrected as soon as possible.

The relationship of delivery personnel to the parent organization also poses a problem. The KHDI has a technical advisory role and administratively controls the personnel assigned to the demonstration areas. For these reasons, the project is operating effectively and efficiently. However, in the extended health care system (outside the KHDI demonstration areas), the Ministry of Home Affairs, through the provincial governments, controls administration and management. The Ministry of Health and Social Affairs provides only technical advice. The KHDI should assume administrative control of personnel assigned to a replicable low-cost health care delivery system to improve efficiency and promote effective administration.

It is possible that the project will flounder after USAID withdraws its financial support. The present momentum should be maintained with support from other sources.

III. RECOMMENDATIONS

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1. Problem: The services of the physicians assigned to the CHCs are underused.

   Recommendation: Alternate assignment of the physicians to health centers, which offer a more stimulating environment, should be considered. The physicians could direct the specialty clinics from their base at the health centers, as well as fulfill their supervisory responsibilities.

2. Problem: Given the limited skill of CHPs in using medicines, the supply of drugs in the PHUs is excessive.

   Recommendation: The drug inventory should be reviewed and medicaments that are not commonly used should be removed from the supply.

3. Problem: The lack of career incentives and low pay do not attract CPHs to the system. Furthermore, the attrition rate is high.

   Recommendation: CHPs and CHAs should be accorded Civil Service status and their pay should be increased to a level commensurate with their Civil Service classifications. A greater effort should be made to retain CHAs.

4. Problem: The knowledgeable parent organization does not have administrative control over the personnel assigned to health care delivery systems outside the demonstration areas.

   Recommendation: The KHDI should provide technical advice and exercise administrative control over the replication of low-cost health care delivery systems.

5. Problem: In the interval between USAID's withdrawal from the project (September 1980) and the inauguration of the Fifth Five-Year Plan (1982), the project will have no support. The viability of the demonstration areas will be endangered, as will the excellent sources from which data are collected.

   Recommendation: The Government of the Republic of Korea should pursue every opportunity to find and obtain the funds needed to continue the project.

Additional comments and recommendations are provided in Appendix B.

Appendix A

LIST OF KOREAN CONTACTS

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William E. Paupe, USAID Representative, Korea

Younghat Ryu, M.D., President, KHDI, Seoul

Chong Min Chung, Secretary-General, KHDI, Seoul

Sung Woo Lee, M.D., Ph.D, Chief, Health Projects Division, KHDI, Seoul

Choo Hwan Kim, M.D., Chief, Planning and Research Division, KHDI, Seoul

Keun Yong Song, Senior Researcher, Management Information Services, KHDI, Seoul

Kyong Shik Chang, M.D., Director-General, Bureau of Medical Affairs, Ministry of Health and Social Affairs, Seoul

A. M. Rankin, M.D., World Health Organization, Representative Advisor, Seoul

Chong Kee Park, Ph.D., Secretary-General, National Health Secretariat, Korea Development Institute, Seoul

Ha Chang Yeon, Ph.D, Senior Fellow, Korea Development Institute, Seoul

O. Y. Kim, Country Chief, Hongchon-Gun, Kangwon-do

S. T. Shim, County Chief, Okgu-Gun, Chungcheong Nam-do

T. S. Choi, County Chief, Gunee-Gun, Gyeongsang Buk-do

Appendix B

ADDENDUM TO TRIP REPORT: FURTHER OBSERVATIONS AND RECOMMENDATIONS

Appendix B

ADDENDUM TO TRIP REPORT: FURTHER OBSERVATIONS AND RECOMMENDATIONS

Review of KHDI's Original Evaluation Plan and Progress

As mentioned in the original draft the original evaluation plan or mid-term review of the project was reviewed. This joint effort of representatives of KHDI and consultants provided by USAID formed an evaluation team from which emerged recommendations toward the continued development of the project and the operation of KHDI. Each recommendation is listed and progress toward implementation is discussed.

Overall Program Direction

A. Project Purpose

Recommendation: The assessment of the achievement of the goals of the project for the impact should be based on an analysis of the effect of selected components (such as the role of the CHA's) rather than a comparison of the comparative efficiency of each of the demonstration projects.

Discussion: This recommendation is being implemented by requiring the submission of activity reports (monthly) to KHDI by type of health worker. Management Information maintains these records which aid in measuring impact of each sub-project and the effectiveness of each component.

B. Service

Recommendation: Primary attention in the project should be redirected from curative medical care to individuals, and focused upon providing preventive health services to the community. Specific MCH activities should be undertaken for individuals in rural areas by trained CHA's.

Discussion: This has been implemented. Active programs are in each sub-project and supervised by the Community Physician. Instruction in MCH is a part of the curriculum of the training for each CHA plus supervision in actual practice by the CHP.

C. Coverage

Recommendation: The key indicator proposed for evaluation impact of these sub-projects is the percent of population reached by specific services. The primary focus should be getting complete preventive coverage, especially with maternal services and child care through a deliberate extension service to homes.

Discussion: This recommendation has been implemented, as shown previously, by the report of health services for the calendar year 1979, particularly as it pertains to those out of office services for preventive care which is provided in the main by CHA's.

Recommendation: This recommendation discusses the type of records to be maintained particularly by the VHA to be transmitted to the CHA with changes in the individual household as they occur--births, deaths, etc.

Discussion: As discussed earlier, the completeness of the records maintained by the CHA's in the PMU is to be admired. Also recommended was the use of infant growth charts which is being carried out.

Recommendation: The team also recommended that increased emphasis be given in the training of the CHP's in preventive measures and in their health promotive capabilities as well as in MCH.

Discusion: This is being done in both primary and referesher training for the CHP's

D. Priority Target Population

Recommendation: Concentrated attention should be given to the poor and their major health problems; particularly those problems which could be alleviated by appropriate preventive measures for women of childbearing age, mothers, infants and children.

Discussion: The poor are, in most instances, located in rural areas at which the project goal is directed. Prior to the inauguration of this project approximately 12 to 14% of the women of childbearing age received pre and post natal care from a physician or health worker. A survey is now underway in each sub-project to determine the impact of an extension service to the homes. As in other preventive services, this is expected to be a substantial plus.

E. Community Participation

Recommendation: Increase community participation through Saemual Undong.

Discussion: Continued participation by the people is apparent. For example, the villagers in Hong Chon sub-project have established a fund to cover part of the cost of their medical care. Another example is that there is almost unanimous acceptance of the health insurance concept in Okgu Gun now in its first year of trial.

F. Institutional Development: KHDI Internal Organization

Recommendation: The internal organization of KHDI should be retained essentially in its present from for the purposes of loan project implementation.

Discussion: This has been done. The position of KHDI has been strengthened by the increased recognition of its function and capability by other government agencies and by the placing of increased reliance by the Ministry of Health and Social Affairs. The viability of KHDI will extend long past the present loan project implementation.

Recommendation: The team recommends for both the immediate and long term, the establishment of a trainer training team at KHDI. Attention should be given to training these trainers on introducing more active teaching methods, use of audiovisual aids, and the more dynamic training approaches. This trainer team would assume the responsibility for the proper training of each trainee.

Discussion: The Manpower Development Division contains the training department and training is done principally by the KHDI team at the headquarters, or may be dispatched to Health Units to give refresher training.

G. National Health Planning and Evaluation

Recommendation: Beyond the current scope of work, KHDI offers an important potential for national health planning in Korea. Efficiency requires that the Republic of Korea establish a health planning and evaluation unit with the capability to recommend appropriate technical and economic solutions within the context of national development. KHDI should receive careful consideration as the nucleus of a national health planning organization.

Discussion: The capabilities and expertise of KHDI will be employed considerably in the forthcoming five year plan of 1981.

Recommendation: Because of the presence of diverse planning units in the MOHSA, Ministry of Home Affairs, and in the private sector, the team has recommended, because of its liaison with the planning units of the various sectors, that KHDI be given the sole responsibility of health planning for the ROKG in its future role.

Discussion: This has yet to be resolved.

H. National Linkages

Recommendation: KHDI should continue to expand and strengthen its linkages with the Economic Planning Board, the Korean Development Institute, the Ministry of Home Affairs, Provincial Governments, national, public and private institutes, and professional organizations in order to understand and assess the full range of alternatives to improve national health levels.

Discussions: As the quality of the expertise of the staff improves, the value of KHDI to other national organizations will become more apparent. The present effort is directed toward continued staff improvement and expansion of linkages.

B-5

I. International Linkages

Recommendation: The mid-term review team felt that one of the more constructive future roles of KHDI would be to serve as an international center for health planning, research, and training, and recommends for consideration.

Discussion: While international associations up to now have been primarily to receive training from other international bodies, the presence of KHDI is becoming known in international circles with increased attention and visitors find their way to KHDI. The organization maintains active participation in international meetings and seminars and has presented national seminars in health related subjects attended by international representatives. The future role of KHDI could be influenced materially by international support.

Replication

As indicated in an earlier report, each of the sub-projects was believed to be capable of replication inasmuch as each has demonstrated a favorable impact upon the population served.

There must be some reservation in regard to the sub-project at Okyo Gun for the insurance scheme has not been in full scale operation for a year although a preliminary survey has shown a satisfactory effect on and acceptance by the population. Full studies of survey results are underway in KHDI.

Appendix C

OUTLINE FOR EVALUATION AND REPORT

Appendix C

OUTLINE FOR EVALUATION REPORT

I. Historical

a. USAID Contribution
b. Korean Government Contribution
c. Establishment of KHDI
d. Role of KHDI

II. Purpose of Demonstration Program

III. Attainment of Purpose

a. Time Frame
b. Establishment of Demonstration Sites

1. Site Selection
2. Special consideration for each site.

a. Hongchon Gun
b. Gunee Gun
c. Okgu Gun

3. Local Participation by Gun government
4. Acceptance of sub-project by populace.
5. Level of sub-project function:

a) Ri (village) simple curative and preventive Measures.

1. Select, train Ri level health workers
2. Health Manual Preparation
3. Provide supervision
4. Establish and equip health facility
5. Educate community and coordinate with Saemaul movement.
6. Bring Special Programs (MCH, THC, Family Planning) to Ri level.

b) NYON (township) Improve health services by a primary health care center.

1. Select train, and assign primary health care workers.
2. Prepare training manuals.
3. Establish a Primary Health Unit and equip and supply it.

4. Provide for adequate supervision.
5. Attempt to obtain villages support.
6. Establish referral system
7. Coordinate with Saemual movement.
8. Reinforce special programs (MCH, TBC and Family Planning) in Myon and Ri levels.

c) .Gun (County)

1. Provide support for primary referral
2. Provide higher level health care - curative and preventive.
3. Provide over-all supervision of Myon and Ri levels.
4. Provide administrative and logistical support to lower levels.
5. Monitor preventive and curative practices of lower levels.

IV. Manpowers

a. Health Personnel

1. Skill identification and training.
2. Training

   a. Primary
   b. Refersher

3. Utilization

   a. Community Physician (CP)
   b. Community Health Practicer (CHP)
   c. Community Health Aid (CHA)
   d. Village Health Agent Worker (VHA, VHW)

b. Administration: Participation in Program

1. Supervision
2. Reports

V. Community Participation

a. Health Care councils established in Gun, Myon and Ri
b. Close cooperation with Saemaul Movement.
c. Enlighten and educate villagers.
d. Explore pre-payment plan or medical insurance for community.
e. Explore methods for government subsidies for indigents.
f. Enlist assistance from private health care resources.

VI. Data Collection

Collection of data for evaluation and policy planning.

a. Establishment of a management information center to gather data for project and program implementation.

b. Establish regular reporting systems to record

1. Vital Statistics--births, death.
2. Statistics on diseases and morbidity.
3. Statitistics on treatments and referrals.
4. Data on medical charges and operating costs.
5. Establishment of operational budgets for all costs: equipment, supplies, personnel, etc.

Appendix D

RECOMMENDED READING

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Joint AID/ROKG Med-Term Review of the KOREA HEALTH DEMONSTRATION PROJECT, July 20 - 28, 1978.

KOREA HEALTH DEMONSTRATION PROJECT (Project #489-22-590-710; AID LOAN #489-U-092): Progress Reports No. 1 - 17 (ending June 30, 1980)

KHDI Report, 1976 - 1977.

KHDI Report, 1978 - 1979.