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The Health Post Project: An Approach to Improve Health Care Delivery at the Grass-Roots in Rural Korea

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ABSTRACT

The Health Post Project in Gang Wha Gun is part of the Yonsei University Medical College's Community Health Teaching Project. Two townships, Son Won Myun and Nae Ga Myun, with a total population of 14,000 are being guided through a planned change process in order to raise health consciousness in the community based education of medical and other health manpower through demonstration of relevant community health principles and provision of entry points for applied teaching.

The key to community access is provided through village based Family Health Workers (FHW) who, according to carefully designed selection procedures, functions, service package, training and implementation plan now serve as semi-independent village health representatives. The FHW is supervised by the government employed township health workers who in turn received re-orientation as multi-purpose workers. Their functions were re-designed according to project needs. Thus the government health services in the target area have been extended to the household level through FHW activities in MCH, TB care and Family Planning.

The Health Post Project provides a statistically controlled environmet with a base line survey and constantly incoming data. It also provides communication channels for reciprocal understanding of the health issues and problems between traditional villagers and city educated faculty and students. Moreover, the Health Post Project provides motivation for the communities to solve their health problems with existing resources to the highest degree possible.

Finally, the development of grass-root level services in cooperation with the communities has potential for long term benefits. These include relevant training of health manpower regarding principles and practice of rural community health. It also includes the study and development of health manpower and service packages, streamlining of administrative and evaluation procedures, and information urgently needed for health planning.

I. Background and Justification

The problems from which the Korean health care delivery system suffers are typical of developing countries. Health care is unevenly distributed among the people, too costly for the majority to afford and disease oriented although most of diseases are caused by prev-

entable conditions. Number, education and distribution of health manpower are inappropriate to actual needs of the population. Health problems remain unrecognized and unattended in face of abundant need, because of poverty, but equally so because of lack of health knowledge, health consciousness and health concern among the people. (Sich, D., 1974; Proceeding, 1975; Sibley, J.R., 1971)

International organizations like WHO, Unicef, Christian Medical Commission, the World Bank etc. have presented within the last year with studies and strong recommendations concerning health care delivery in developing countries (Kingma, S.J. (ed), 1975; Newell, K. et al, 1975; Ranehma, M., 1975; UNESC, 1974; UNCF, 1975). These will and already do profoundly affect support from abroad.

In this context it becomes essential that additional appoaches to hospital based health care must be developed, approaches that build on a strong concept of the community health team. A change in health care delivery toward comprehensive all embracing community health is impending.

So far the present health care delivery system in rural Korea is based on a centrally controlled system with mainly public health and preventive medicine programs. Each Gun has one health center with one public health officer whose major role is inevitably public health administration. The public health officer is appointed by the local government with the recommendation of either the central or provincial government. The major portion of the subsidy to add to the very low salary of the health officer is from the central government. Also, major health programs of the local health center are assigned and directed by the central government. In addition to these, the health center is usually built with support from the central government. Also, the other facilities and equipment are all supplied by the central government. Therefore, the community voice has not much to do with the decision making process for its health programs. The community is simply a passive receiver of health services. Therefore, it is necessary to establish a certain mechanism so that the community can participate actively in the health programs for its own people, if a new system is to be designed. This can only be accomplished through regionalization of existing health care services (Hellberg, H., 1971; Lee, S.K., 1972).

Another very weak point of the health care delivery system in rural Korea is the dual system of health services. The preventive medicine and public health programs belong to the government's responsibility and the curative service is in the hands of local practitioners. No integrated programs or efforts have ever been tried. The government system usually reaches to the village people, however, the curative service is only for those who seek and for those who are able to afford the health care rendered by the private practitioner. Thererfore, the integration of preventive and curative services should be an essential part of the new system, so that the health care system can effectively respond to actual community health needs.

A few experiments on the improvement of the health care delivery system in rural Korea brought to light that the present frontline workers, usually three nurse aides with nine months training at the township health sub-center, are not enough to cover the needs for health care in their entire target population. The development of a new type of health personnel at the grass-root level in rural areas is necessary.

Much has been learned for approaches to new types of health personnel at the grass-root level from experiences in other countries (Fendall, N., 1970; Morley, D., 1973; Newell, K. et al., 1975; Ranehma, M., 1975; RHRC, 1970).

In this experiment a new type of health worker called Family Health Worker is being introduced into the village. This new frontline worker is a housewife from the village, chosen by the village, integrated into the community power structure and acting as village health representative.

Through such an approach it will become possible to streamline, with the help of community input, the offered services in response to community demands and to ensure the best utilization of existing manpower, facilities and services.

To promote such an approach is not competition to hospital centered health care delivery, but a method to make the quality of the latter most effective for all people who are in need of it and not just for those who come for care. It will make health care as a right possible for all people of the country and help the present system to be transformed into something more efficient.

In consideration of the above mentioned factors the Health Post Project has been designed to improve the delivery of health care at the grass-roots in rural Korea.

This paper mainly presents the description of the Health Post Project which has been implemented for the past year after two years of planning. Therefore, this paper presents a description of an ongoing experiment which has not yet been completed.

Another purpose of the Health Post Project, which will not be mentioned in this context, is that it is being developed as a field area for community based education of health manpower on all levels in rual community health, and for the provision of necessary statistical and observational data for classroom teaching. In other words, it is designed as a laboratory for community health in action.

Ⅱ. Objectives of the Health Post Project

The objective of the Health Post Project is to experiment with a new health care delivery system in rural Korea for the purpose of improvement of health care services. The following new apporaches are incorporated:

1. reorganization through regionalization of existing government health services.
2. development of self help effort and activities for the improvement of community health and welfare through implementation of village based Family Health Workers(FHWs).
3. further development and integration of curative with preventive services at the township health sub-center.
4. development and implementation of an appropriate record system and evaluation framework.

Ⅲ. Description of the Study Area

The Health Post Project is located in Gang Wha Gun, Gyeonggi Province, approximately 58km distant from Yonsei University campus in Seoul. The rural island district has been chosen because of its proximity, its rural character and the unlikeliness that it will be absorbed into the rapid urbanization process around the capital. It can be reached in one hour's car drive, passing over a bridge which connects the island with the mainland. (Fig. 1).

The Health Post Project is part of the Yonsei Medical Center Community Health

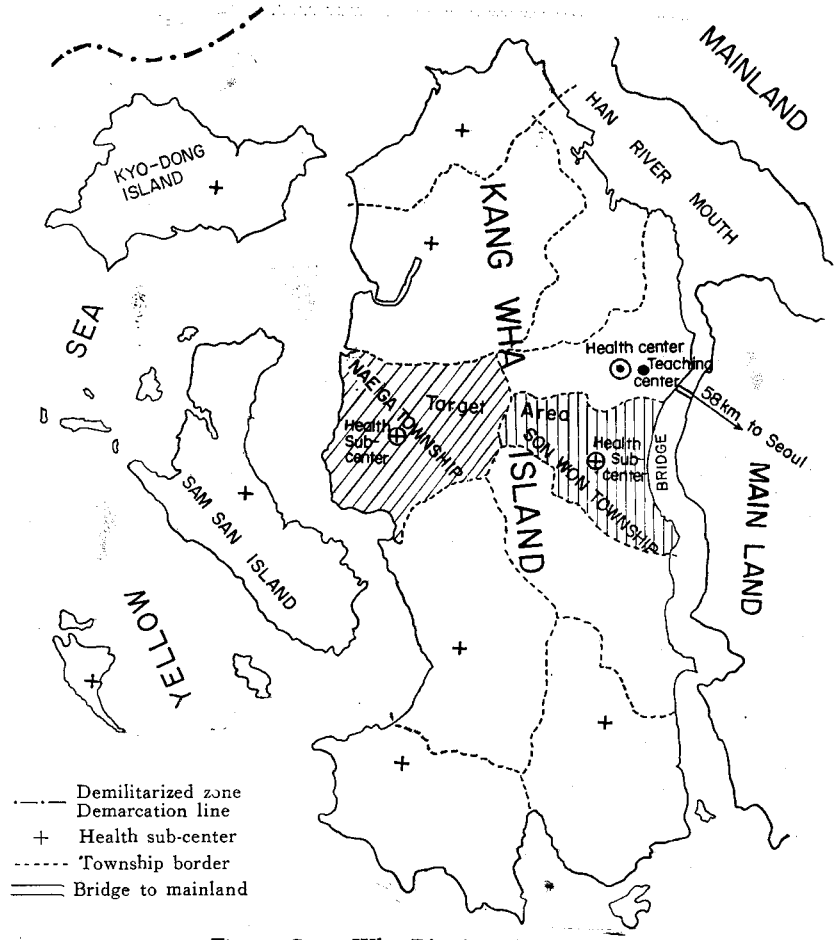

Fig. 1. Gang Wha District Map.

Teaching Project. It is being developed in two out of thirteen townships as the first activity of a long range program to develop the entire island district into a teaching demonstration and research area of how to deliver comprehensive health care to rural Korean people. The total population in the target area is approximately 14,000 people. Each township has a health sub-center building as is typical for rural townships, and each sub-center is staffed with one midwife for MCH services and two nurse aides for TB and FP care. (See figure on the next page). The availability of a midwife is not typical, however through their long experience in the community, great support for the project was expected. There were neither a physician nor a public health nurse available and equipment amounted to a bare minimum allowing some preventive care in MCH, TB and FP services. In other words, prior to project implementation the services or rather lack of services in health care were comparable with any other typical rural area.

Ⅳ. Description of New Approach to Community Health Care

A. Regionalization and reorganization of existing government health services at the township level

1. The township health workers

The government plans to have in future three multi-purpose workers at the town ship level instead of the existing MCH, FP and TB workers. This multi-purpose worker concept permits regionalization as planned in the Health Post Project. However, in order to have a functioning regionalized program there must be a qualified leader. Theoretically this can be a physician, a nurse-midwife, a nurse, a community health nurse practitioner or a midwife with experience in community health. In the Health Post Project area the existing MCH workers are midwives. They are qualified for assuming such supervisory functions, and are of great value to the project since they are already well accepted leaders in community health. Within the Health Post Project they are called Multi-Purpose Worker I (MPW I). The previous TB and FP workers are nurse aides. They are called Multi-Purpose Workers II (MPW II). The township is being divided between these two into areas A and B. MPW IIa and IIb have the new fuction of supervising and supporting the services and activities of the FHWs in the field. The resulting regionalized health manpower pyramid in the township is diagramed below.

The township health workers had to become thoroughly familiar with the regionalized health care concept and the FHW role and function. They had to comprehend their own changing role and function, their new relations with each other, with the FHWs at the village and their supervisors at the county level. Therefore, the new job descriptions and functions were handed to them in print, and they were given an opportunity of growing into their new role by actively participating in the selection and training of the FHWs.

The MPW I is in charge of all administrative work and responsible for supervising, coaching and educating MPWs II and FHWs. She is stationary at the township health sub-center and only leaves it when called for a delivery and for occasional supervisory trips and visits to parturients and prenatal problem cases. During her absence one of the MPWs II takes her place.

The main role of the MPW II is field supervision of the FHWs. She makes routine visits to each village once a week and performs specifically prescribed supervisory, educational and service functions.

The teams of township region A and region B meet once weekly on different days at the health sub-center in the persence of the MPW

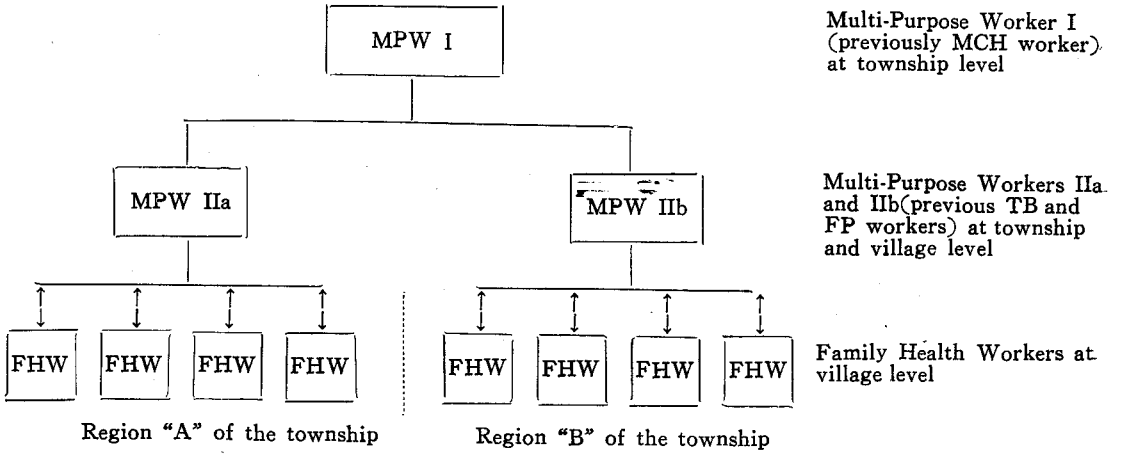

Fig. 2. Regionalized Health Manpower Diagram

I, possibly a physician, and one or more members of the project staff. This meeting has a service, an education and an evaluation function. Patients are seen by the MPW I and/or the physician together with the MPW II ande the FHW, who are both learning with the patient about the treatment plan and follow-up. After the clinic is finished, the team discusses current regional health problems and special cases. The project staff evaluates records and diaries and gives feed-back of results to the team.

2. The regionalized health services

Services are being delivered in the Health Post Project at household, village and township level, in child care, maternity care, family planning and TB care.

The child care program is essentially built around a continuous weight survey conducted by the FHW. For this prupose she is given a scale and the necessary records. The record is filled out at birth and handed to the mother. Weight, vaccinations and incidence of disease are recorded on this chart. Through this, a history of growth, development, vaccinations and previous illness becomes available at each contact of the child with the health services. All children under age two are weighed monthly, two to four year olds quarterly and five to six year olds twice a year. Experiences with the "under fives" program and "road to health chart" in Nigeria served as a blueprint in Gang Wha to supervise the health of all pre-school children in the community through village auxiliaries with only rudimentary training. The contacts are used to identify and refer sick children and to educate the mother on growth and development of her child with regard to nutrition, vaccination and hygiene. Vaccinations are given at the Health Post on the occasion of the regular MPW II visit. Regular home visits help to identify sick children and weight and vaccination program defaulters by means of the "road to health chart".

Maternity care starts with identification of a possibly pregnant woman at her home through inquiry about menstruation history, which is made of all eligible women. If the menstruation is delayed more than six weeks from the first day of last menstruation the woman is referred to the MPW I for diagnosis and counselling. This consultation includes history, diagnosis, lab. tests, and an inquiry of whether the pregnancy is desired. If the pregnancy is not desired, and the patient is still within the first trimester, she is immediately referred to an OB/GYN at the county level for possible pregnancy termination.

Otherwise, the maternity record is filled out, with a carbon copy to be handed to the FHW in charge. The patient is given printed and verbal instructions, about pregnancy, childbirth, newborn and child care. These instructions were developed to build on her motivation and provide essential knowledge taking into account attitudes and conditions in her home environment. Major emphasis is on regular prenatal care, preparation for safe home delivery and child spacing, and instruction for the attendant. The patient is seen monthly by the FHW during the second trimester; there-after, bi-weekly; and during the last six weeks of pregnancy, weekly. On each occasion she examines the urine for albumin and sugar, screens for edema, inquires for problems and records her findings in her copy of the maternity record which is presented to the MPW I at the weekly meeting. Four to six weeks prior to delivery the patient is seen again by the MPW I at the clinic for another thorough examination and instructions related

to safe home delivery. This approach to maternity care allows the MPW I, a mid-wife, to be aware at any point in time about the health condition of all pregnant women in her target area, to concentrate her attention on the high risk group and to attend all deliveries. Many hazards from childbearing and for the new-born in the community can thus be more readily identified and eliminated. Moreover, motivation of expecting mothers to learn about healthy birth and upbringing of the expected child can be most effectivly continued in the child care program. Within five years the community will have in its mothers of pre-school children a core of individuals knowledgeable in basic issues concerning MCH who will be able to make intelligent demands of service providers, as well as assist in influencing the health behavior of new mothers.

The regular household visits also include identification of family planning needs, inquiry into family planning practice, family planning education, provision of supplies (condom, foam, pill), referral for loop insertion, vasectomy, and tubal ligation and follow-up of acceptors. Family planning is so closely related to MCH that it can become quite naturally integrated with the MCH service packages of the different workers. Good rapport and communication with the clients on issues relating to child health, family welfare and maternal health can foster internal motivation for spacing and reduction of family size. It can be expected that the family planning program will improve without additional input.

The TB program is the only program area involving a different target group, different knowledge and somewhat different activities. It can, however, be incorporated without too much difficulty. The FHW identifies suspects at her regular home visits, refers them and follows up on patients. She distributes drugs, identifies drug defaulters, patient educates and family on home hygiene and ensures that all children in her community are properly BCG vaccinated.

B. Development of community self-help effort for improvement of their health and welfare through implementation of village based FHWs

Lack of health consciousness in the communities is one of the most serious drawbacks in the attempt to provide effective health care to rural populations. Likewise, entirely hospital based education of key health manpower hinders them in becoming familiar with community health conditions and problems. But it is here, where the sources of disease are, where its impact is felt, and where not only the physical aspects of illness in an individual are of importance, but also the mental and social implications and the impact on the family and community. What is known and practiced in an urban hospital with wealthy, westernized, well motivated clientele, where the physician is the highest authority on health, must be put into perspective of the rural, traditional home, where education and economy are poor, where cultural taboos are powerful, motivation and knowledge in health issues lacking, were preventable and easily curable diseases lead far too often into misery and disaster and where the physician's authority does not necessarily outweigh a mother-in-law's impact on health practices in the family. The best approach to grass-root level health care is not through the physician but through the people themselves. However, he can help them to get there,

and his education should prepare him to do so. In the Health Post Project, the village based family health worker now has the most important role in both bringing about change in community health and in enhancing community based education of health manpower. The crucial aspects of this new worker are concept, objectives for implementation, functions, service package and training. They were developed by the project staff well in advance of the actual project and will be described briefly.

1. The concept of the Family Health Worker

The Family Health Worker is a married village housewife, 20~45 years old, healthy, in good community standing, with at least primary school education, a history of social activity in her community and interest in the challenge of the offered work. She is the village health representative, supported by village leaders and committees and technically supervised by the government health workers at the township. She is given a nominal salary (₩7000= $ 14) per month, and within 2 years she is expected to become supported financially by the village.

2. Objectives in Family Health Worker implementation

The Family Health Workers are now a well established institution in their villages, strongly motivated and convinced that their activity makes a difference in the health of the community. They appear to be able to fullfill the objectives set forth for their implementation which were:

—to bridge health manpower shortage at the grass-root level through simple service in MCH, FP and TB care,

—to enhance community health consciousness through health education,

—to serve as communication channel for reciprocal understanding of health issues and problems between traditional villagers and city educated faculty and students,

—to protect the communities from dependency on university input,

—to collect essential data on health and

—to create in the communities an atmosphere for cooperation with the teaching project that stimulates students to creative thinking of how health problems can be solved through exploiting community resources.

3. Functions of the Family Health Worker

The FHW functions include activities at the household and health post level. Bi-monthly household visits are made to every household in the community, and weekly health post consultations, usually at the worker's own home, are being held at hours most convenient for village mothers. The functions of the FHW include case finding, simple service, referral, follow-up and health education in MCH, FP and TB care. One additional major function is the collection and recording of vital statistics, morbidity and other activity data.

4. Selection of Family Health Workers

The county health center director, together with the township administrator, invited the village chiefs to support the new program by suggesting two FHW applicants from each village, giving on a printed form the social and family background, suitability according to the established criteria, and reasons for suggesting the applicant. The township health workers, together with the project Public Health Nurse Supervisor, interviewed the two applicants and made the final decision on selection of the trainee. The staff attached more importance to personal communicational ability than to intellectual ability and also gave due consideration to the health worker's preference.

5. Family Health Worker training

Basic training of FHWs lasted 3 weeks. Guidelines for teaching and behavioral objectives had been developed in advance according to the concept, function and implementation plan of the FHW, and they proved eventually to be adequate and successful in teaching, implementation and evaluation. The teaching staff consisted of individuals familiar with the project philosophy, socio-cultural background and capacity of the trainees. Content of instruction focused on the bare minimum of facts and skills the FHW had to master for effective program implementation, and the instruction was made as interesting and rewarding a learning experience as possible. It started with three days of orientation at the county level at health related institutions. Thereafter, training continued at the local health sub-center focusing on child care, maternity care, family planning, TB care and record keeping. In addition, skills in home visiting and handling the contents of the FHW bag (first aid and routine MCH care equipment) were taught. The FHW learned to understand her role as village health representative, and to anticipate that students and project staff hoped to learn from and with her how health problems in her community could most satisfactorily be solved using existing resources.

Systems implementation and on-the-job training proceeded simultaneously. Retraining profited from the gained experiences. Retraining lasted 10 days and emphasized again child, maternity, TB and family planning care. An understanding of the health care system and how the worker and the patient relate to it at specific contacts was stressed for each area. It also emphasized in all areas, the workers obligations in case finding, prevention, service, referral, follow up, and health education.

C. Development and integration of curative with preventive services at the township health sub-center

Effective integrated health services require curative services at the township. Thus far, only preventive services are being provided at the health sub-centers and compulsory placement of physicians has minimal beneficial effects due to a variety of factors. These include the fact that no challenging role model, job description and service package have been developed for the performance of such a highly trained worker, and furthermore, that the physician's training did not prepare him to work in other than a hospital environment. For him to experience job satisfaction and for the community to derive greatest benefit from his presence a very simple curative unit for one or two inpatients is desirable. Patients needing medical supervision but not necessarily hospital care can be treated here by the physician or nurse while being tended by their relatives in familiar surroundings.

Plans exist to establish such a curative unit at the health sub-center in the Health Post Project area. A public physician will work there and a role model for a physician at the township health sub-center will be developed and tested to become a blue-print for other areas. It will include the care for sick patients at the clinic, bedridden at home or in the curative unit, and referral of and follow-up on those in need of specialized care. It will include all public health and preventive activities assigned by the county health center. It will also include education, technical and, in the absence of a nurse, administrative supervision of the township health manpower team.

Finally, it will involve evaluation of community health programs and problems, and of staff performance and the planning and imp-

lementation of new health programs. There is furthermore the capacity of the project to develop and test various health team models that include physician, nurse, multi-purpose worker, FHW or any combination of these. Developing a role model of a township physician will help the teaching project to identify the knowledge, skill and attitudes a physician must master in order to become effective in community health.

V. Development and Implementation of an Appropriate Record System and Evaluation Framework

Evaluation is beset with problems, particularly in respect to funds and experience in health practice research. The collection of basic data in respect to demography, morbidity and service activities has been planned for and implemented to a fairly satisfactory degree with records that an auxiliary worker can handle and that have been coded. Some indices have been developed which, over a long term, measure the impact on health and in the short term, measure quantity and quality of services delivered. A higher degree of sophistication is still needed to quantify and to relate input to output and cost to benefit. The necessary analytical framework must still be developed. Manpower development and service package development are, however, a national need. If that capacity can be developed within the framework of the project, it has the potential to contribute information that could be useful in national health planning. Input and output analysis, operations research and systems analysis are still major subjects in need for development. The proposed frame for evaluation in its present stage of development is described below.

1. Compilation of a community profile as base line
2. Measurement of needs and resources of the community
3. Development of adequate methods of data collection and analysis, especially in respect to various records (sevice statistics) for rural health care planning and evaluation
4. Evaluation of community health project input and communty changes as program results
5. Study of the possibility to integrate the program into the existing health care system elsewhere

This frame embraces multiple research topics. Each subject is not only independent in its own purpose but also interdependent with the general purpose. The main point, however, is to focus on the integrated general purpose of adequate evaluation of the program.

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