



DEPARTMENT OF COMMUNITY MEDICINE

SCHOOL OF MEDICINE

PAHLAVI UNIVERSITY

SHIRAZ, IRAN

SUMMARY PROGRESS REPORT

OF THE

DEPARTMENT OF COMMUNITY MEDICINE
SCHOOL OF MEDICINE
PAHLAVI UNIVERSITY
SHIRAZ, IRAN

YEAR FOUNDED 1360

PREPARED FOR
THE WORLD HEALTH ORGANIZATION'S
SEVENTH MEETING
OF THE
DIRECTORS OR REPRESENTATIVES
OF
SCHOOLS OF PUBLIC HEALTH

MARCH 3-7, 1977
IRAN

B. ACADEMIC STAFF

<u>NAME</u>	<u>UNIVERSITY POSITION</u>	<u>MAJOR AREA OF INTEREST</u>
S. Naderi, MD, MPH (Chairman)	Associate Professor	Family Health: Population & Family Planning; Maternal & Child Health. (Obstetrician & Gynecologist)
H. Ronaghy, MD, MPH (Former Chairman)	Professor	Population Dynamics Public Health Auxiliary Health Care Delivery (Internist)
D. Zeighami, PhD	Assistant Professor	Biostatistics
E. Zeighami, PhD	Assistant Professor	Epidemiology
E. Pournadeali, PhD	Assistant Professor	Environmental Health
P. Sadeghi, MD, MPH	Instructor	Maternal & Child Health
S. Amidi, MD, MPH	Assistant Professor	Family Planning (Pediatrician)
F. Afrasiabi, MD, MPH	Instructor	Preventive Medicine
F. Agah, MS	Instructor	Public Health Nursing Nursing Education Sex Education
G. Amirhakimi, MD, MPH	Associate Professor	Maternal & Child Health Nutrition Pediatrician
E. Makuee, MD (part-time)	Associate	Industrial Health
K. Nader, MD, MPH	Associate	Auxiliary Health Care Delivery
J. Mehrabanpour, MD, MPH	Associate	Auxiliary Health Care Delivery Community Medicine

NOTE: Dr. Moazamee, Dr. Nader and Dr. Mehrabanpour graduated from this Department's residency program this year and they are Community Medicine Board Certified in Iran.

RESIDENTS IN COMMUNITY MEDICINE

K. Afrasiabi, MD*	A. Eslami, MD
G. Heshmati, MD*	A. Karimi, MD
A. Sadeghi, MD*	H. Sabokrooh, MD
M. Jalali, MD**	I. Javidian, MD**
M. Sodagar, MD, DTM & H	S. Sanaee, MD

* Currently studying abroad for M.P.H.

** Accepted for M.P.H. program abroad in 1977

C. STUDENT BODY

1. Medical Students

This Department is responsible for the teaching of Public Health, Community Medicine, Epidemiology and Biostatistics to first, second, third and fifth-year students in the School of Medicine at Pahlavi University. The numbers of students vary from 60-120, and are primarily Iranians, although there are a few students from foreign countries such as Pakistan, India, the U.S., and the Arabian countries.

2. Dental Students

Students from the Dental School of Pahlavi University are offered courses in Community Medicine and Biostatistics of varying length. We teach approximately 20 students each year from this School.

3. Nursing Students

Annually, approximately 70 nursing students from the Nemazee School of Nursing and the Saadi School of Nursing spend a month of fieldwork and coursework here in Community Medicine.

4. M.S. Program in Biostatistics and Epidemiology

Currently seven students are enrolled full-time in our M.S. program in Biostatistics and Epidemiology. (see section D below). These students enter the program with varied backgrounds and are involved in research and coursework for the two-year program.

5. Elective Course for Interns

Interns in the Pahlavi University School of Medicine may elect to spend part of their internship in the Department of Community Medicine. Currently there are two interns in this program.

6. Residency in Community Medicine

Ten M.D.s are now taking their residency in this Department. This is a 3-year residency program, one year of which is dedicated to complete the M.P.H. degree. The residents participate in seminars, research, administration of Health care, and teaching of auxiliary health workers in our rural health programs. They also spend approximately one year in various clinical departments of the Pahlavi University hospitals.

D. TEACHING ACTIVITIES

1. New Teaching Activities & Programs

a. Proposal for M.P.H. degree program:

Because the training of public health professionals is an essential step in the improvement of general health conditions of a population, we have proposed and initiated steps toward the establishment of a M.P.H. degree program. Graduates of the program will be competent to participate in health teams in all areas of Public Health. Training will include classroom instruction, field training, and individual projects under the guidance of their principal advisor. The training of these professionals will be tailored toward the particular situation of health needs in Iran.

Two types of enrollment will be offered: first, those persons enrolled full-time in order to complete the M.P.H. Secondly persons in other University departments or even persons outside of the University (such as practicing M.D.s) may enter the M.P.H. program part-time. This is to promote education in Community Health issues and will also lead to a M.P.H. degree after certain requirements are met.

A minimum of 30 credits will be required for the M.P.H. degree. The core curriculum is similar for all students, allowing for minor adjustments according to the student's background and interest. It will give each student a sound basis in the principles of Public Health: course areas will include biostatistics, epidemiology, environmental health, public health administration, principles of community health and health education. Students will also have a number of electives from which to choose, and during the last semester each student will carry out an individual research project, under the supervision of one of the faculty members of this Department.

b. M.S. Program in Biostatistics and Epidemiology

In the fall of 1975 a M.S. program in Biostatistics and Epidemiology was established. The goal of this program is to train persons in both Biostatistics and Epidemiology who will be prepared to participate both in research in disease and health, and in programs for the direct provision of health care. More specifically, graduates of this program will be able to perform the following functions:

- (1) Epidemiology
 - (a) Work as a communicable disease control officer
 - (b) Teach epidemiology at various levels including within a medical school.
 - (c) Be a part of a disease research team, as well as initiating and executing independent epidemiological research projects.

- (d) Serve as a consultant to persons in various health fields.
- (e) Serve as a director or consultant for a disease screening program.
- (f) Serve as a director or consultant in a program for prophylactic or therapeutic trials.
- (g) Serve as a member of a public health department

(2) Biostatistics:

- (a) Serve as a member or director of a data collection and analysis team
- (b) Teach Biostatistics at various levels, including within a medical school.
- (c) Be a member or director of a population health research team.
- (d) Serve as a statistical consultant to persons in all health fields.

Seven students are presently working toward the M.S. degree in this program.

2. Outline of Course Content

- (a. Biomedical Sciences
 - (1) Biostatistics
 - (2) Epidemiology
- b. Family Health
 - (1) Maternal and Child Health
 - (2) Nutrition
 - (3) Population and Family Planning

- c. Environmental Health
- d. Preventive Medicine
- e. International Health
- f. Health Manpower Development
 - (1) Auxiliary Health Development
 - (2) Health Administration
 - (3) Public Health Nursing

E. RESEARCH ACTIVITIES

1. Evaluation of the Kavar Rural Health Care Delivery System:

The Government of Iran and the International Development Research Centre (I.D.R.C.) of Ottawa, Canada are currently supporting a major evaluation and research project of the Kavar Rural Health Care Delivery System (described in Section F below). The objective of this evaluation is to provide information useful for decision-making, both for the network and for other rural health care systems, and to provide the best possible answer to the fundamental question of whether such a network can provide quality health care at a level of cost which makes it practical for developing countries.

Data is currently being collected and analyzed which will answer not only questions concerning the efficiency and effectiveness of the system in various areas of endeavor, but will provide answers to more general questions concerning the nature of the system. In order to measure efficiency and effectiveness, manpower time and cost for various tasks and for the total project are being measured, and are being compared with the output of the system as indicated by the achievement of its objectives.

In addition, a number of questions of considerable importance can be answered, at least for this particular network, through the data collected and analyzed by the evaluation center. Such questions of interest include the following:

1. Is referral through the stratas of the system being carried out efficiently and correctly? If not, at what point does the system most often fail?
2. What is the approximate cost of treating various diseases, in terms of a) money b) patient time c) health worker time at each level?
3. What diseases and conditions consume the greatest amount of the health worker's time, and hospital facilities?
4. What are geographic patterns of referral and seeking of treatment? Do persons use the system as it is designed to be used? If not, how do they deviate, and how can it be improved?
5. How accurately does each level of auxiliary diagnose, treat and refer patients? How frequently does the diagnosis change when a patient is referred?
6. How great is the need for laboratory services, and what is the optimal arrangement and usage pattern for a rural laboratory?
7. Is there great variation in "effectiveness" among various auxiliaries, and if so, are there identifiable characteristics associated with this effectiveness?
8. Does quality of referral and care for a village vary according to its geographic position relative to various links of the system?
9. For those activities which are shared by both levels of auxiliary, what are major differences between the performance of the two?

10. What are variations in patient load according to age and sex?
11. How frequently do persons visit sources of health care outside the system, and for what reasons? What are these sources of health care, and how frequently does this include traditional healers, traditional birth attendants, and the dispensation of locally-made curative preparations?

Project villages include those with and without a health auxiliary. Four fieldworkers are currently gathering census data, and this information is being coded on a computer disc. Each person is given an identification number, and the health workers report monthly information such as patient's visits to the evaluation center

This system is believed to be by far the most complete and useful data bank which has been constructed for any health services network in a rural developing area--one which may be used not only for evaluation purposes, but for the drawing of a complete picture of the operation of a health services network utilizing rural auxiliaries, and of its impact on the health of the population. It is expected that this evaluation project will produce results which are of interest throughout Iran and the rest of the developing world. In addition, it will provide a model of a health systems evaluation for others interested in evaluation of other such networks.

2. Longitudinal Studies of Growth in Village Infants

Malnutrition remains the primary health problem of pre-school children in village society. One of the obstacles to providing better nutrition is the identification of the child in need of help--and further, to identify those children most-in need of treatment, in order to provide the limited resources to

those in the greatest need. The VHW can conduct a continuous monitoring of the status of children within his or her village, if a sensitive and specific test were available to identify those whom treatment is most needed. Since the auxiliary can provide longitudinal measurements, and since weight can be accurately measured, rate of gain in weight has been chosen as the parameter likely to have the highest sensitivity and specificity under the given conditions. A longitudinal study is now underway to establish norms of weight gain in children less than three years old in the village population. Since standards will be based on minimum acceptable weight gains for a given age and period of time, percentiles of weight gain in a cohort of children will be calculated for each initial age x , x less than 3 years, and each increment of age y , where y is between one and six months.

3. Relative Risk

Relative risk is a measure frequently used in epidemiology, whose properties in various common epidemiological situations still remain somewhat unexplored. At the present time, two studies of relative risk are underway:

(a) computer simulation studies of the amount of bias involved in estimating relative risk of developing disease from prevalence cases in a case-control study. Evidence indicates that if the underlying population are substantially different, risks of death and bias exists in such estimation, even when matching for age has been done on a narrow range.

(b) Standardization of relative risks--standardization of relative risk across strata of a confounding factor represent an alternative to matching in retrospective study. However, there has been little work done on how such standardization should be carried out. Current research work in this area includes (1) the form which such a standardization procedure should take and (2) the choice of standard in common epidemiological situations.

Other Current Research

4. Distribution of Malaria in Fars Province.
5. Fertility and Contraceptive Use among Employed and Unemployed Women in Shiraz.
6. Pilot Study of Hypertension among Nomads in Fars Province.
7. Study of Endemic Goiter in Fars Province
8. Narcotic Use among Pahlavi University Students.
9. Solid Waste Collection and Disposal in Shiraz
10. Carbon Monoxide Content of Shiraz Environment.
11. Caliform and Bacteria Count of Village Drinking Water.
12. Addiction and Social Status in Shiraz.
13. Epidemiological Study of Congenital Abnormalities in Children of Consanguinous and Non-consanguinous Parents in Southern Iran.
14. Family Size and its Relation to Gender Preference.
15. Migration of Rural People to Cities (Urbanization).
16. The Foreign Physician in Iran.
17. Continuation of a Ten-Year Study of the Growth and Development of Shiraz children.

F. SERVICE ACTIVITIES

1. Kavar Rural Health Care Network

Since its inception as a pilot project by I.D.R.C. in 1973, the Kavar Village Health Worker (VHW) Project has continued to progress and expand into what is now a "network" of primary health care in that area. The health care delivery is a four-tiered system which consists of VHWS (Komak Behdars) providing primary health care and preventive services at the village level; Middle Level Health Workers (Behdars) who provide intermediate health care and act as supervisors of VHWS; physicians (currently Department of

Community Medicine Residents) who provide higher level health care and treatment services; and physicians at the Pahlavi University hospitals who provide specialized services that require hospitalization.

Almost all villages in the Kavar area are presently covered by this system, and their effectiveness continues to be evaluated by a comprehensive computerized population analysis system (see Section E above). Furthermore, a similar network has been adopted by the Ministry of Health in an area to the southeast of Kavar, and graduates of our program have been employed by the Ministry for that project.

The Kavar Training Center for VHWS and Middle Level Health Workers is now completed. Approximately 300 trainees can be trained there at the same time, in addition to other facilities such as a library, laboratory, cafeteria, and staff and faculty housing.

2. Other

The Department of Community Medicine also has occasional training and orientation programs for the Ministry of Health's personnel in this area, and also for foreign doctors who serve in the rural areas of Fars Province. Other organizations also call upon individual staff members or several staff to train or present an orientation program in the general area of community medicine and public health.

G. COOPERATION AND COLLABORATION

1. Regional

Tentative exchange and cooperative agreements have been made between this department and the University of Khartoum in the Sudan, and with the University of Alazhar in Egypt. Continued cooperation and support is given by the School of Medicine at Pahlavi University.

2. Other

a. Johns Hopkins University. This year, Professor Dr. Robert Wright was the guest of this department for two months as a Visiting Professor. We have had a number of graduates of the Johns Hopkins School of Public Health's M.P.H. program here, and this year one of our residents is entering the M.P.H. program there.

b. Liverpool School of Tropical Medicine. We continue to maintain both formal and informal relations with this School. One of our residents has just returned from his coursework there. Last summer, four students from the Liverpool School spent three months of their summer doing research here for their thesis at Liverpool, focusing primarily on the rural health projects. This summer we are again hosting four students who will be carrying out research in rural areas near Shiraz.

c. U.C.L.A. We have an informal agreement with the School of Public Health at U.C.L.A. for exchange of professors. This year, Professor H.A. Ronaghy is spending his sabbatical as a Visiting Professor at U.C.L.A. Recently, Dr. A.H. Katz, Professor of Public Health at U.C.L.A. visited this department for 10 days, and was involved in presenting lectures and seminars to our residents and staff.

d. International Development Research Centre (I.D.R.C.) From December of 1972 until September 1976, I.D.R.C. financially supported the Kavar Village Health Worker project. As this was initially a pilot project to test the effectiveness of village-level health workers, financial support from I.D.R.C. was ended upon the completion of the projects' original goals, and the project is now financed by the Iranian Government. However, I.D.R.C. has recently begun financial support of the major evaluation project of the Kavar rural health care delivery system (See Section E).

I.D.R.C. also supported an international seminar on Village Health Workers held in Shiraz during 1976.

3. Association Membership

We are an Associate Member of the Association of Schools of Public Health in Africa, Eastern Mediterranean, South-East Asia and Western Pacific.

H. OBJECTIVES

The Department of Community Medicine at Pahlavi University has four major purposes:

1. To teach the principles, methods and skills of Community Medicine to medical, dental and nursing students, and residents in the Department, and to all other interested groups and individuals who are concerned with the health and welfare of the population at large.
2. To conduct research into community health problems, particularly those which are relevant to and prevalent in Iran.
3. To become directly involved in partnership with the community of Shiraz and its vicinity in regard to the identification and solution of the health problems of the area.
4. To encourage clinicians to become more active in the areas of Public Health and Community Medicine.

The Ministry of Health is particularly interested in our program of training for Auxiliary Health Workers. On the basis of the Kavar Village Health Worker pilot project, and other similar primary health care projects in Iran, the Ministry has recognized the concept, feasibility and importance of utilizing Auxiliary Health Workers for health delivery in the rural areas of Iran.

All indications are that similar programs and networks are to be established throughout Fars Province and in other Provinces of Iran.

Recently, the first four-year training program for auxiliaries was completed, and (as noted above) the Ministry of Health requested ten of these graduates to work for the Ministry in a network of health care in the area of Khafr, about 80 km southeast of Shiraz. It is anticipated that continued arrangements will be made by this department for the training of auxiliaries at our newly-completed training center at Kavar, after which the graduates will work for the Ministry of Health.

I. PLANS FOR REORGANIZATION

We are currently formulating and discussing plans with the Dean of the Medical School for reorganizing this Department. Our program is being expanded in terms of staff and a M.P.H. program is being developed, as noted above. We are considering (1) division of the department into specific branches such as the Biomedical Sciences, Family Health, Environmental Health, Preventive Medicine, International Health, and Health Manpower Development, or (2) complete reorganization of the Department into either a "School of Community Health" or a "School of Public Health" with the above departments. However, we are not anxious to break our official connections with the Pahlavi School of Medicine, which the creation of a School of Public Health might suggest. We want to continue the clinical aspect of our curriculum, especially for the M.D.s and Residents in this Department, in order to train clinicians in the area of Community Health.

As we currently have a M.S. program in Biostatistics and Epidemiology, we are hopeful of expanding along similar lines in other specialty areas of Public Health. Currently we are recruiting both Iranian and foreign staff members to further strengthen this program, and will hopefully have a total faculty of between 30 and 40 members in the future.

SUMMARY OUTLINE OF PROGRESS REPORT

Department of Community Medicine
School of Medicine
Pahlavi University
Shiraz, Iran

Chairman: Shahrokh Naderi, MD, MPH

- B. Academic Staff: 13 Faculty Members
 - 12 Full-time (4 with double appointments from the University)
 - One part-time (Honorary Member)
 - Frequent Visiting Professors, e.g. from Johns Hopkins, U.C.L.A., etc.

- C. Composition of Student Body
 - 1. Medical Students
 - 2. Dental Students
 - 3. Nursing Students
 - 4. M.S. Program in Biostatistics and Epidemiology
 - 5. Elective Course for Interns
 - 6. Residency in Community Medicine

- D. Teaching Activities
 - 1. New Teaching Activities
 - a) M.S. Program in Biostatistics and Epidemiology, 1975-1976
 - b) M.P.H. Program, 1977
 - 2. Outline of Course Content
 - a) Biomedical Sciences
 - (1) Biostatistics
 - (2) Epidemiology
 - b) Family Health
 - (1) Maternal and Child Health
 - (2) Nutrition
 - (3) Population and Family Planning
 - c) Environmental Health
 - d) Preventive Medicine
 - e) International Health
 - f) Health Manpower Development

E. Research Activities

- A. Evaluation of the Kavar Rural Health Care Delivery System
- B. Longitudinal Studies of Growth in Village Infants
- C. Relative Risk
- D. Other (in general, more than 25 research projects)

F. Service Activities

- A. Kavar Rural Health Care Network
- B. Other

G. Cooperation and Collaboration with Other Institutions

- A. Johns Hopkins University
- B. Liverpool School of Tropical Medicine
- C. U.C.L.A.
- D. International Development Research Centre (I.D.R.C.0
- E. University of Khartoum
- F. University of Alazhar

H. Objectives of Department of Community Medicine

I. Reorganization Plans

- A. Departmental Division, or
- B. Creation of a School of Community Health
- C. Faculty Recruitment