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Sanitation in Developing Countries

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In Malawi, the Department of Personnel Management and Training deals with all major training programs in government and other related bodies. All ministries are required to make reference to this department for their training requirements. This department, therefore, acts as the Central Manpower Planning and Training Office.

Individual ministries, however, plan their manpower requirements according to their programs and activities that fall under their responsibilities. Likewise, the Ministry of Health, which is responsible for human health, has its own manpower development programs that are geared toward the improvement of human health. This paper, therefore, will deal mainly with health manpower.

**Health Manpower Problems**

The problems involved in the task of making and keeping people healthy, either as individuals or as a community, overwhelm the resources available for solving them. Even in countries classified as rich or developed, the availability of adequate trained personnel, medical supplies, logistics, and other factors concerned with the delivery of health care services has always left plenty of room for further improvement. Of all of these elements, the health manpower problem is the most decisive, the most costly, and the most difficult to solve.

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In developing countries it is certainly the most challenging of the difficulties to be faced.

There was a time when it was thought that the health problems of developing African countries could be solved only by developing health services along the same lines as those in industrialized countries and, consequently, all attempts at encouraging indigenous health practices were frowned upon. After practical lessons learned through failures, it has been admitted that despite modern well-equipped health institutions, the health problems of the developing countries cannot be solved if the people, most of whom live in isolated rural areas, are not adequately covered with the appropriate health infrastructure.

**Health Manpower Planning: Malawi Approach**

Very few countries, where large numbers of the sick people must be looked after, can afford to train and use specialized professional and technical health personnel in their health services. A natural development, therefore, has been to place emphasis on prevention and also defining the duties of personnel on the traditional health team, so that the few highly skilled and most costly professionals can delegate the less-technical aspects of their work to the auxiliary personnel who are in closer contact with the rural health problems.

This has led to a revolutionary concept in the composition of the accepted health team.
and the training programs conducted locally and geared for the rural health situation. With this kind of approach, practically every health professional category has its auxiliary partner now trained locally. Even more significant is the fact that every community, particularly in the rural areas, is being motivated and trained to appreciate and manage its own health problems as advocated in the World Health Organization's (WHO) global plan of "health for the people, by the people." According to observations, this strategy has provided a breakthrough for many developing countries, enabling them to rise up to the task of providing the basic health services for their population by using their own human and other resources in association with the necessary appropriate technology.

In Malawi, there is the same spectrum of diseases that exists in other developing countries of the tropics. Most of these are preventable and arise because of the way in which people within the communities live, i.e., in the grip of unsanitary surroundings, poverty, and inadequate health knowledge. There are also a number of other problems that plague health-care delivery services. One is the distribution of the population, 90% of whom live in rural areas and most of those in communities of under 1000 people. With such a pattern, it becomes immediately clear that there are limits to the health facilities one can provide for each rural community, bearing in mind the financial and trained human resources of the country.

Based on the above fundamentals, the Ministry of Health has accepted the practical view that a satisfactory and efficient health service can be provided by locally trained personnel. A systematic approach involves defining the health needs, determining the number of categories of personnel required, and defining the job assignments and the necessary training.

The ultimate aim is to have a manpower structure that is pyramidal, with large numbers of the least-costly trained personnel at the bottom and a few of the professionals at the top, so that the simple health problems are filtered out and handled by lower-level personnel and the difficult problems are left to be dealt with by the highly trained cadres at the top.

**National Health Plan**

When Malawi became independent, it introduced a 5 year health plan (1964–1969). Its major emphasis was on health manpower development. To illustrate this, training of health inspectors at the Malawi Polytechnic and state registered nurses at the Kamuzu College of Nursing was started for the first time in 1965.

Later, in 1971, a 15 year national health plan was drawn up that emphasized, among other things: (1) strengthening the preventive services, e.g., maternal and child health services; (2) health manpower development, e.g., introduction of local courses for various cadres; and (3) laying guidelines for providing health facilities, i.e., (a) population 50,000, primary health centre; population 10,000, health subcentre; population 2000, health post; (b) distance: 10 mi (16 km) limit between two health units; and (c) proposed staffing: health post: one maternal and child health assistant; health subcentre: one senior medical assistant, one medical assistant, two enrolled nurse/midwives, one health assistant, one home-craft worker; primary health centre: one senior clinical officer, one clinical officer, two medical assistants, one state registered nurse/midwife, three enrolled nurse/midwives, one senior health assistant, one health assistant, one community nurse; village level: cholera assistants and village health committees; district level (district hospital): two medical officers, two clinical officers, eight medical assistants, one nursing sister, one public health nurse, three staff nurses, 16 enrolled nurse/midwives, two health inspectors, one senior health assistant, two health assistants, one pharmacy assistant, one laboratory assistant, one dental assistant. This staffing pattern clearly indicates that there is a lot to be accomplished in terms of manpower development if the health plan is to be successful. To meet this commitment the Ministry of Health is using some of the following training programs:
(1) Training of doctors: There is no medical faculty or school in the country and there is not likely to be one in the near future. Therefore, all of the training in this field is done outside of the country. This program, however, is not without difficulties.

(2) Health inspectors diploma course: The Polytechnic College of the University of Malawi runs a diploma course for health inspectors. The duration of the course is 3 years.

(3) Training of health assistants: The Ministry of Health has a School of Hygiene in Zomba for training health assistants. The duration of the course is 2 years.

(4) Training of medical assistants: Medical assistants are required in large numbers and are used to give leadership to the health team at the health subcentre level. In the absence of enough medical officers, they are required to undertake the curative work load up to the district hospital level. They are trained for 3 years at the Medical Assistants Training School in Blantyre. The desired annual enrollment is 40 trainees.

(5) Training of clinical officers: Clinical officers fall between the doctor and medical assistant. They are trained for 4 years at the newly established Medical Auxiliary Training School in Lilongwe. The first group of 23 trainees graduated from this school in June 1980. Other courses offered at this school include those for laboratory assistants and pharmacy assistants.

(6) Training of state registered nurse/midwives: Since September 1979, this training has been run under the University of Malawi and is conducted at the new Kamuzu College of Nursing in Lilongwe, adjacent to the Kamuzu Central Hospital. The period of training is 4 years. The desired annual enrollment is 60 students.

(7) Training of enrolled nurse/midwives: These people are now trained at the nursing school premises in Blantyre, adjacent to Queen Elizabeth Central Hospital. The program consists of 3 years of general nursing and midwifery. The target enrollment is 60 students. This training is also conducted by a few of the mission hospitals.

(8) Maternal and child health assistants: These people are initially trained for 1 year by the Ministry of Agriculture, for community development activities, after which time the training is taken over by the Ministry of Health, which provides 2 months of training in maternal and child health activities, which includes training in nutrition and hygiene.

(9) Cholera assistants: This cadre will be dealt with in another paper.

(10) Primary health worker (and village health committees): This is a new training program which is just in its infancy stage. It too will be dealt with in another paper.

Impact of Training on Sanitation

As is the case in most developing countries, well over 75% of the diseases that occur among the rural communities could be prevented through good sanitation. The Ministry of Health has, therefore, insisted that the promotion of good sanitation be the responsibility of every health worker. To this end, sanitation subjects are included in all of the training programs. Sanitation subjects are also included in training programs that are run by other ministries, e.g., the training of community development assistants, homemaking workers, and agricultural extension workers.

Conclusions

At present, the population of Malawi is approximately 5 million and will reach 6.5 million by 1988. To meet the health needs of 6.5 million people, the projected number of health institutions of various categories required as per the 15 year national health plan will be: primary health centres, 130; health subcentres, 520; and health posts, 2080.

These figures indicate that the need for properly trained personnel will continue to grow in the future and, therefore, training programs will have to be continued and strengthened. It must be realized, however, that this task cannot be undertaken without
proper management of available financial resources, which, unfortunately, are judged to be inadequate.

This paper was compiled with some contributions from sections of the report from the National Primary Health Care Seminar held in Lilongwe, Malawi (30 October – 3 November 1978) and the report from the WHO National Health Planning Mission of 24 May – 18 September 1971.