

PRIMARY HEALTH CARE AND THE CONTROL OF COMMUNICABLE DISEASES IN DEVELOPING COUNTRIES

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ABSTRACT

A primary health care Project in India which was successful in the control of communicable diseases is described and the principle factors which led to the success of the Project are identified. The Project is described in the context of a review of the causes of excess child mortality in developing countries and the primary health care approach to disease control outlined at the Alma Ata Conference (1978). The author does not attempt to apply this particular model to primary health care projects in Ethiopia but it is hoped that publication of this review in the Journal will stimulate others to do so.

BACKGROUND

Since communicable disease has been identified as one of the major causes of the excess of infant and child mortality in developing countries, one, way to approach the understanding of the mechanisms underlying the prevalence and severity of communicable disease in those countries is to ask the question "why do children die?" and to compare specific disease mortality experienced by children in developing and, more or less, developed countries. For example:

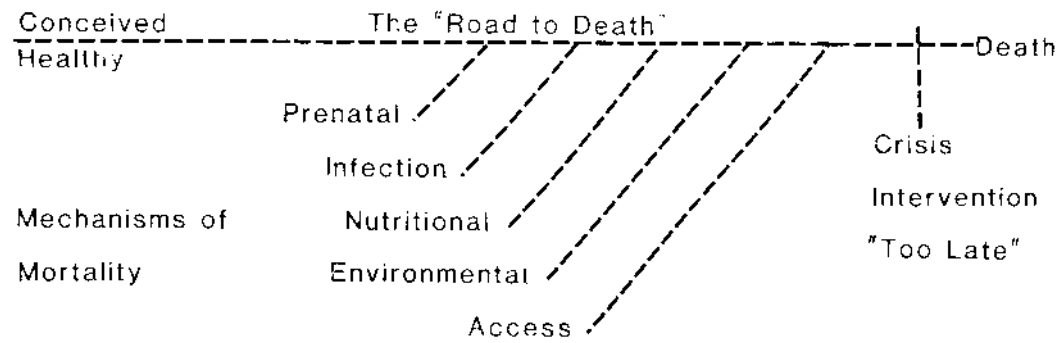
1. In developed countries case fatality rates for measles are low (0.03%) and in contrast case fatality rates for measles in developing countries are very much higher ranging from 5 to 25 percent and measles accounts for upwards of 10 percent of all children's deaths. (1 and 2). However, it is not measles alone which is killing these children for they "are at risk of dying not because of the severity of measles per se but because they are on 'the road to death " and their nutritional status is so poor that they are more likely to die of any infectious disease." (3)
2. "The case fatality rate for the average episode of childhood diarrhoea (excluding cholera), is quite low. In healthy populations, it will be well below one in 1/1000 and even in the developing world, it will range below one percent. The conclusion from this observation is that the diarrheal diseases are not such killers of children because of their severity but because of their frequency." (4)
3. It is self evident that the efficacy of medical measures for the treatment of measles and diarrheal diseases and their sequelae can only be successful when they are applied. Timely access to health services is not available for many mothers and their children in developing countries because of the simple facts of geography and lack of transportation.

These examples serve to illustrate the fact that the causes of excess deaths for communicable diseases in developing countries are not related to infection alone but are due to a multiplicity of mechanisms and factors illustrated in Figure 1. Crisis intervention is of limited value only and effective health services must be as multifactorial as the diseases the services are intended to control. These kinds of considerations underlie the " Alma Ata " approach to primary health care, which has been summarized by Mosley (5) as follows:

1. Active participation by the community. The

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FIG. 1. WHY DO CHILDREN DIE?



Factors influencing

Education

the mechanisms

Economics

Geography

Culture

implication is that the local community would exercise some control and authority over the contents and management of the program as well as responsibility for its implementation.

2. A strategy socially relevant to the local context, implying that Western medicine would be shaped to augment, rather than replace traditional health systems.

3. Involvement of other sectors such as education, housing, water, sanitation and agriculture, among others, to promote general development.

4. A program of health services and health promotion largely operated by paramedical personnel. Although the Jamkhed Comprehensive Rural Health Project was initiated in 1971 or seven years before Alma Ata, it is upon these principles that Jamkhed has been based.

JAMKHED COMPREHENSIVE RURAL HEALTH PROJECT

The Jamkhed Comprehensive Rural Health Project (6,7,8) is situated 400 km southeast of Bombay in rural Maharashtra, India. Agriculture is the main means of livelihood. Sixty-six percent of the population own their own land and 22 percent are landless labourers. The large majority of the people live in relatively compact villages which vary in size from approximately 500 to over 6,000 people per village. The project now covers a total of 175 villages with a population of 210,000 in an area of 800 square miles. The typical village has a stable population of about 1,000. The very large villages are characterized by available population, and substantial numbers of migrant labourers increase the size of the village for six months or so each year. Most of the roads in the area are not made up. But all the villages are accessible by bullock cart or four-wheel drive vehicle throughout the year. Per capita income in the area is of the order of U.S.\$150-250 per year.

Project Structure

A three-tier structure was evolved for the project soon after its inception in 1971. The first tier is the Village, the second the Facilitator Team, and the third the Support Base with beds for in-patients and more or less elaborate hospital facilities. One hundred and seventy-five villages are now involved in the project. Beginning with thirty of them in 1971, 145 have been added in subsequent years.

Since all decisions about village development and involvement in the project are taken by the villagers and not by the project directors, the rate of development of villages has been very varied - for instance, 159 villages now have resident Village Health Workers, 81 have resident village Veterinary Workers, 76 villages have women's clubs and in 79 villages, farmers' clubs have been organized.

Village Health Worker

The Village Health Worker is the key to the program. She is selected by the village from amongst long-term residents. Most of the village health workers are illiterate or near-illiterate at the time of their selection and many are middle-aged. These women provide curative services to the village using a relatively few basic drugs supplied by the support base.

In addition to her curative functions, the Village Health Worker undertakes home deliveries, advises the people on family planning, keeps records of vital statistics and with the help of the members of the farmers' clubs and women's clubs runs a village feeding program.

She is also responsible for nonformal health education in the village and for regular visitation of villagers being treated for chronic communicable diseases such as leprosy and tuberculosis.

In the villages where the program is most successful, village health workers receive a great deal of assistance with their health programs from other villagers. For instance,

literate villagers will help with the collection and collation of statistics and record-keeping generally. Others give assistance with detection and follow-up of leprosy patients.

The village health worker is paid the equivalent of U.S. \$ 60 per year. The purpose of this payment is to help her to be financially independent of the village power structures. The training of the village health worker is undertaken in one of the Support Bases. It begins with one week of full time competency based, hands on instruction, continues through the weekly visits of the Facilitator Team and a weekly overnight stay at the Support Base.

During the overnight stay, the Village Health Worker: meets with other Village Health Workers to discuss common problems and solutions with the Facilitator Team and staff of the Support Base as well as with each other. The Facilitator Team consists of a nurse or assistant nurse/midwife and a paramedical (usually a leprosy health worker) sometimes accompanied by a social worker or a doctor. The team visits each village weekly. The principal role of the facilitator Team is to encourage and to teach the resident Village Health Worker.

The team also deals with medical and other problems that have arisen in the village which are beyond the capabilities of the Village Health Worker. The team provides antenatal care and carries out immunizations. The paramedical visit leprosy and tuberculosis cases to check progress and collect smears. Referral Case to the Support Base may be undertaken either by the Facilitator Team or, between visits, by the Village Health Worker.

The Support Base

The Support Base, which is within eight miles of the related village has three primary functions:

1. It is the training center for the Village Health Workers and their only source of technical supplies and assistance.
2. It is a referral center for the management of medical and surgical cases beyond the competence of the Village Health Worker .
3. It is the source of supply of supplementary foodstuffs for the feeding program (basic food stuffs for the feeding program are provided by the farmer's clubs), funds for the sinking of tube wells, arrangements for the purchase of farming supplies such as fertilizers and improved seeds, and arrangements of bank loans.

In these and other ways, the Support Base provides credibility to the Village Health Worker, and imaginative and innovative support for the development program of the whole village.

Results

Table I illustrates the results of Village Health Workers' leprosy control work in eight villages with a population of 9,965. In 1971 only 10 cases of leprosy were registered for treatment in these villages. The subsequent discovery of pre-existing and new cases has been due entirely to the Village Health Workers and the excellent co-operation generated between them, their patients, and villagers generally.

The rapid fall in the number and proportion of new patients with significant disability is indicative of quality leprosy control and; effective early case finding. (9,10) Regular intake of prescribed drugs is ensured by weekly home visits to each patient. In these eight villages, leprosy patients are no longer ostracized. For some years healthy villagers have actually helped disabled patients with their economic problems. Some patients, for instance, have been given assistance with plowing their land and with the purchase and care of milk goats. In these villages, social pressure has brought to bear on known patients who do not take their treatment regularly, with positive results.

Principles

The principles on which this project has been based have recently been outlined (6) by Dr. Rajanikant Arole who, with his wife Mabelle Arole, is the originator of the project, as follows :

1. "Demystify medicine, simplify medical knowledge so that even illiterate peasants in the countryside can use the principles of medical science to live a healthy life.
2. "Professionals act as teachers, act as catalysts to help ordinary people care for themselves.
3. "One is challenged to go beyond the confines of medical technology and find the roots of ill health, poverty, exploitation, injustice, witchcraft, land tenure, professional greed and the existing value system of the society.
4. Primary health care 'involves respecting an other human being no matter at what social level he stands'.
5. Primary health care means basically restoring human dignity lost due to dependence and frustration.

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Table 1. Control of leprosy in eight villages. (pop.9,565)

Years.	"New" cases	Number with Disability *
1971-73	56	25(44%)
1974-76	49	13(26%)
1977-79	31	2(6%)
1980-83	,5	0

*[Grade II or III, (10)]