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AN ASSESSMENT OF THE
HEALTH FACTOR
IN BASIC HUMAN NEEDS STRATEGIES
OF DEVELOPMENT

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I. INTRODUCTION

A fundamental aspect of the well-being of the individual is the state of his health. Illness or good health is the intervening variable in the life of an individual that either affect his dependency on others or gives him a chance for independence through productive work. The health of the individual is a liberating force from which flows motivation, energy, and productivity. Yet the incidence of illness and disease is widespread not only in the developing nations but in the developed nations as well. Even though, life expectancy has been extended and mortality rates have decreased in LDC's, ill health is still the debilitating condition of many people in the developing nations.

The World Bank estimates that "one-tenth of the life of the average person in developing countries is seriously disrupted by ill-health.^{1/} Children under five are the most frequent victims of early death, reflecting the poor state of health of the mother, the family and the disease conducive environment in which they live. Half of all children die during the first year of life in the poorest regions of low-income countries,^{2/} contributing, in the aggregate, to the low life expectancy rate of these nations. Even though health statistics are thought of by many experts as unreliable indicators of the actual health status, the tables below provide some measure of the extent of the problems, especially when compared with the data on the developed countries. (see table I).

^{1/} Health Sector Policy Paper, 1980, World Bank, Washington, D.C., p. 5.

^{2/} Ibid.

Table I. Measures of Health Status by Level of Gross National Product,
per capita in Selected Countries

	GNP per capita in US dollars(1)	Crude birth rate per thousand population (1)	Crude death rate per thousand population (1)	Life expectancy at birth (1)	Infant mortality rate per thousand (aged 0-1) (2)
	1977	1977	1977	1977	1975
Bangladesh	90	45	18	47	140
Mali	110	49	22	42	120
Somalia	110	48	20	43	--
Malawi	140	52	20	46	142
India	150	35	14	51	122
Afghanistan	190	48	22	42	269
Haiti	230	43	17	51	150
Sudan	290	45	19	46	132
China, People's Republic of	390	22	9	64	--
Nigeria	420	50	18	48	163
Senegal	430	49	22	42	158
El Salvador	550	39	9	63	58
Guatemala	790	41	12	57	75
Peru	840	39	12	56	65
Iraq	1,550	48	13	55	104
Iran	2,160	40	14	52	120
United Kingdom	4,420	12	11	73	16
German Democratic Republic	4,680	13	13	73	--
France	7,340	14	11	73	14
German Federal Republic	8,160	10	12	72	20
Canada	8,460	16	8	74	15
United States	8,520	15	9	73	16
Sweden	9,250	12	12	75	8

Health Sector Policy Paper, World Bank, February 1980
Sources:

(1) World Bank Development Report, 1979, pp. 126, 127; 160-161; 166-67

(2) World Bank Development Report, 1978, pp. 108-109.

While the statistics bear out the severity of the problems in LDC's, in terms of real and human costs, the figures do not convey the individual tragedies they represent.

As the development process changes the status quo ante, invariably altering the man/environment relationship, external development assistance as well as internal allocation of funds toward the health sector has been minimal, and disproportionate to the extent of the problem bearing on health.

In 1977, the total expenditures on health care in LDC's represented about 0.5% or about \$400.00 million of all bilateral, multilateral and PVOs assistance.^{3/} Public expenditures on health by LDC's is estimated to be no more than 1.0% of GNP in 1977.^{4/} Some data on health expenditures in selected countries are provided in table II. With decreasing levels of official assistance from the developed countries and low allocations of expenditures toward the health sector within LDCs, health standards can be expected to decline.

This paper attempts to reappraise some of the strengths and weaknesses of the basic needs approach with a focus on health. A review of the theoretical underpinnings of the basic needs approach, the rationale for the change and reorientation from the "trickle down" approach, and the state of the art of various policy aspects in relation to health forms the second part of this paper. Chapter three discusses the relationship between poverty

3/ Ibid, p. 6.

4/ World Development Report, 1980, op. cit., p. 29

Table II. Health Expenditures in Selected Developing Countries

	Year	Health expenditure as percentage of total central govern- ment expenditure (1)	Public health expenditure as percentage of GNP (2) (US \$)	Public expenditure on health per capita (2) (US\$)
Bangladesh	1976	—	0.8	1
Mali	1976	--	1.6	2
Somalia	1976	--	2.7	3
Upper Volta	1973	7.8	0.8	1
Malawi	1976	--	1.4	2
India	1976	2.7	1.2	2
Afghanistan	1976	—	0.6	1
Pakistan	1976	1.8	0.6	1
Tanzania	1975	7.0	1.9	3
Sri Lanka	1975	6.1	1.9	4
Haiti	1976	—	0.6	1
Sudan	1976	1.6	0.9	2
Egypt	1976	--	2.2	8
China, People's Republic of	1976	0.2	1.5	5
Nigeria	1976	--	0.7	3
Senegal	1975	5.7	1.0	4
Philippines	1976	4.5	0.7	3
El Salvador	1976	--	1.4	7
Guatemala	1976	8.4	0.9	6
Peru	1976	5.8	1.4	10
Jamaica	1976	--	3.1	41
Brazil	1977	6.3	1.2	13
Iraq	1976	--	0.6	8
Argentina	1976	--	1.0	15
Iran	1976	3.3	1.5	27

Health Sector Policy Paper, World Bank, February 1980

Note: Public health expenditures are reported by ministries of health to the World Health Organization and may not include expenditures by state or local governments, or by other ministries. Therefore, data on "health expenditure as percentage of total central government expenditure" should be used with caution.

Sources:

- (1) Government Finance Statistics Yearbook, Vol. II (Washington IMF, 1976) Table 8
- (2) Sivard Ruth L. World Military and Social Expenditures, 1979 (Leesburg, Virginia, World Priorities, Inc., 1979) Tables II and III.

and health and analyses some of the causes and effects of malnutrition underlying many conditions of ill health in the developing world.

The paper also points to the effects of poor health on national development, and considers the perceived trade-offs in terms of higher literacy and life expectancy rates, and their impact on incentives, motivation and productivity. An analysis of low-cost community health care services as the best alternative to the high cost of traditional health care delivery for many developing countries concludes this paper.

II. BASIC HUMAN NEEDS - A DEFINITION

The Basic Human Needs approach to development is no longer an abstract concept but an explicit policy endorsed by major donors and multilateral institutions, including the Development Assistance Committee (DAC) of the OECD.^{5/} Definitions of basic needs vary. However, the prevailing definition of basic needs stresses the provision of a bundle of goods and services needed for at least minimal subsistence. Its focus is on growth, employment generation and income for the poorest of the poor. It is generally assumed that without growth there is no employment and without employment there is no income. Thus the BHN approach focuses on the demand side of the economic process. It also aims at changing the pattern of distribution which accords the poor greater purchasing power.

The International Labor Organization (ILO) defines basic needs as consisting of a minimum of food, shelter, clothing, health care, safe water, education and transportation.^{6/} Some of these basic needs can be fulfilled either through the mechanism of the private market, others invariably must be provided for by the public sector through the intervention of government.

^{5/} Danny Leipziger, "The Basic Human Needs Approach to Development: Some Policy Issues". Dept. of State, Bureau for Economic and Business Affairs, Washington, D. C., p. 5. (Paper presented to the Conference on the New International Economic Order, sponsored by the City College of New York, April 26, 1979.

^{6/} Employment, Growth and Basic Needs, International Labor Organization, p.32.

Fulfillment of basic needs was the declared objective of the United States bilateral assistance and expressed in the Foreign Assistance Act of 1973 which established the mandate of the Agency for International Development to:

"concentrate (our) aid in the three key sectors of food and nutrition, population and health, education and human resources development....to help developing nations increase their capacity to meet basic needs of their people." 7/

The Agency's "New Directions" in program design and implementation focused in particular on the "poorest of the poor", in LDC's who had been left behind by the traditional development strategies of "trickle down". It was estimated that some 800 million people lived in absolute poverty most of them in developing countries of a 1) per capita income below \$150 per year; 2) a daily diet of less than 2,160 to 2,670 calories; 3) life expectancy at birth of below 55 years; 4) infant mortality over 33 per 1000 children aged 0-1; 5) birthrates over 25 per 1000 population; 8/ 6) 40% of the population lacking access to broadly defined health services.

7/ Implementation of "New Direction" in Development Assistance, Report to the Committee on International Relations on Implementation of Legislative Reforms in the Foreign Assistance Act of 1973, July 22, 1975, U.S. Government Printing Office, p. 3.

8/ Ibid, p. 6.

While some development economists agree on the objective of fulfillment of basic needs, they disagree on the ways and means of achieving this objective.

A World Bank economist suggests that resources needed for implementing basic needs programs in LDCs could be "found by redirecting consumption expenditures of both the poor and the rich from non-basic needs expenditures."^{9/} Other BHN advocates argue that the poor already consume too little of everything, and that reducing the consumption levels of the poor would plunge them from poverty into destitution. Radical basic needs proponents, on the other hand, point out that investment in human capital has long term effects sufficient to cancel out any temporary reduction in growth.^{10/}

Irma Adelman for example, believes in radical distribution of national assets. She argues that a country cannot afford to wait until its economic growth has increased the value of the asset to be redistributed. She contends that once people are well-off and have attained a level of well-being, it is extremely difficult to take it away without causing a "bourgeois revolution".

^{9/} Norman Hicks, "Growth vs. Basic Needs: Is There a Trade-Off?" World Development, Vol. 7, Pergamon Press Ltd. 1979, p. 985.

^{10/} Ibid., p. 986.

"Trickle-Down" - The Case of Brazil

The Brazilian development model is considered by many development-
alists to be a typical "capitalist" model of growth in which the benefits
of growth were supposed to "trickle down". In spite of an annual growth
rate of 6 percent in GNP over the last decade, Brazil's rural popula-
tion is extremely poor and disconnected from the development process.
Development by and large took place in the urban centers and ignored
the country side. High income concentration within the urban centers
created structures of demand and consumption from which mostly the up-
per and middle income groups benefited.^{11/}

Brazil can be cited as an example of development policies leading to
a dual economy dividing the relatively well-off from the absolute poor.
It has often been suggested that change could only come from the aliena-
tion of the presently well-off urban population, the government's only
political constituency. If the government were to raise food prices, due
to the declining food production for domestic consumption, change in
favor of agrarian reforms could well be initiated by the newly dispossessed
urban classes.

Brazil's emphasis on growth oriented development programs and projects
reinforced the pattern of demand and consumption of the top minority, where-
as the bulk of the population continues to experience poverty, unemployment
and inequality. Growth was achieved at the expense of equity, and led to
unequal purchasing power of the Brazilian people.

^{11/} K. P. Jameson and Charles Wilbur, "Employment, Basic Human Needs and
Economic Development", unpublished paper, January 1978, p. 14.

External trade grew at rates substantially higher than the growth of the economy as a whole. During the early part of the 1970s, the average yearly growth rate of exports was 14.7 percent whereas Brazil's per capita GDP was only 8.3 percent in 1973.^{12/} This period of export growth seems to coincide with greater income concentration. "The share of the lowest 40 percent of income recipients declined from 11.2 percent in 1960 to 9 percent in 1970; the share of the next 40 percent fell from 34.5 to 27.8 percent,^{13/} while the top 5 percent increased their income from 27.4 to 36.3 percent"

In terms of growth, development and modernization, Brazil "took off" while leaving a majority of her people behind. A two-tiered system divides the masses of the poor people from the small group of rich people. While the majority consumes less of a few products, the rich minority consumes more of many products. Each group is linked to different baskets of consumer goods as well as to differential access to public services.^{14/}

The Brazilian model of development, perhaps, typifies the kind of development which tends to lead to a skewed income distribution and intra-state inequities. They are the outcomes of development strategies that aim at "quick fixes" to endemic problems. The BHN approach attempts to seek solution through long-term planning, in which growth, income generation and equitable distribution play central roles.

^{12/} Werner Baer, "The Brazilian Growth and Development Experience: 1964-1975", Brazil in the Seventies, Ed. Riordan Roett, American Enterprise Institute for Public Policy Research, Washington, D.C. p. 47.

^{13/} Ibid, p. 52.

^{14/} Celso Furtado, "The Brazilian "Model" of Development", in the Political Economy of Development and Underdevelopment, Ed. by Charles K. Wilber Random House, Inc., 1973, p. 299.

International development policies began to focus on the type of strategies that would generate both growth and equity in development. The emphasis on growth with equity was also intended to counteract critics of basic human needs (BHN) who labeled it a global welfare approach to development, and those who objected to it that it constituted intervention. Even though BHN strategies were designed to assist those sectors where inequality of income and lack of access to essential social services is the greatest, their cost-both capital and recurrent-forced development planners to conclude that growth is essential if there is to be the kind of equity intended by these strategies.

However, being target specific, BHN strategies seek to eliminate conditions of poverty through creating opportunities for income generation and of consumption of goods and services deemed basic for a decent life. The involvement and participation of the beneficiaries of BHN programs are presumed essential if development is to occur on a sustainable basis.

Of course, a basic needs policy is not necessarily a strategy much less an international welfare program. Rather BHN should be seen as a set of objectives by which alternative strategies can be appraised. BHN can be obtained through a number of strategies. What is important is the effectiveness of these alternative strategies in terms of achieving these objectives in a country specific context. The effectiveness of any of these strategies is dependent on the resource base, the political system and other social and economic factors.

Basic Need of Good Health

Good health is considered as one of the fundamental needs of the individual. Fulfillment of this need contributes to the attainment of many other needs. The underlying assumption of this statement is the expectation that an improvement in the nutritional and health status of the people will have a positive impact on the economy in the long run. Decreased infant mortality, higher life expectancy and higher literacy levels are expected to increase productivity and economic output.

The recently formulated Physical Quality of Life Index (PQLI) ^{15/} measuring the quality of life, is an important indicator of a country's potential for economic and social progress. BHN is thus essentially an investment in human capital as contrasted with investment in physical infrastructure, etc. It is the furtherance of public goods from which all benefit over the long run.

It has been estimated that the average total cost of a basic needs program amounts to \$30-\$40 billion for the low income countries if it were to be implemented over the next few decades. This represents 12-16% of these countries' average GNP for this period, a capital outlay hardly feasible for most low-income countries. ^{16/} Other estimates on investments required for the provision of the five major basic goods and services have been calculated to be \$377-381 billion. ^{17/}

^{15/} Morris David Morris, Measuring the Condition of the World's Poor. The Physical Quality of Life Index, Overseas Development Council, Pergamon Press, New York, 1979.

^{16/} "Basic Needs Policy Paper", PPC, Agency for International Development, Washington, D.C. p. 2. (unpublished paper)

^{17/} Ibid, p. 3.

Even if the developed countries were to grant these sums toward meeting basic needs requirements, it is doubtful that these needs would be met. Development and the satisfaction of basic needs may not depend solely on the financial transfers but on the mobilization of human resources, reorientation of public expenditures, through the types of policies, technologies and institutions appropriate to the society.

Thus, the success of any of the BHN strategies depends by and large on the individual government's willingness to reorient its public expenditures so as to increase the distribution of social services favoring the poor. However, the high opportunity cost for investment in human capital may be the reason why LDC governments are reluctant to invest in supposedly unproductive activities. Changes in the pattern of income distribution would also affect national savings and investment into more capital producing activities and thus affect national growth in the near term. Many governments are faced with the crucial decision of either foregoing rapid growth in order to use the available capital (or substantial portion of this capital) for social service oriented programs that have long-range impact.

However, the future will tell whether the medium-term cost, especially in terms of reduced investment, reduced levels of national savings associated with a widened distribution of income, and increased taxation of the upper classes, will not be outweighed by the long-term benefits accruing to the whole of the society through programs that involve broadened access to social services and improved income distribution through greater employment of the poor.

Basic Needs Trade-Offs

Fundamental to all strategies is, of course, the financing, the calculation of trade-offs between various political, social and economic objectives.

There is so far no hard evidence relating higher productivity and increased GNP to well-being and to the general state of health in LDCs . However, just as knowledge and skills are important attributes to economic growth, attitudes and motivation toward work cannot be discounted. Healthy individuals tend to be more aggressive, motivated and innovative accepting higher risks and uncertainties in their environment. According to the World Development Report, 1980, the impact of health, as measured by life expectancy and of nutrition on economic growth, is less clear cut. Life expectancy seems to have a positive effect on investment and output per worker. ^{18/} As a corollary, there appears to be a strong correlation between income and life expectancy. The table below shows three countries where the difference in income has affected life expectancy in two regions experiencing differential growth rates. ^{16/}

Differences in Life Expectancy within Countries

Country and Region	Income (national average=100)	Life Expectancy (Years)
<u>Brazil, 1960-70</u>		
Northeast Region	54	47.9
Southeast Region	122	62.8
<u>Tanzania, 1973</u>		
Kigoma Region	46	43.0
Kilimanjaro Region	215	55.0
<u>Thailand, 1969-70</u>		
North Region	78	55.6
Bangkok Region	248	63.7

Source: World Development Report, 1980. World Bank, Washington, D.C.

18/ World Development Report, 1980, op. cit., p. 38.

19/ Ibid, p. 55.

The trade-offs between fulfillment of basic needs and economic growth have been demonstrated by Norman Hicks. In a comprehensive cross-country regression analysis, Hicks showed a substantial influence of basic needs indicators on the rate of growth of per capita income.^{20/} Life expectancy and literacy variables positively correlated with output/growth. He concluded that 1) "countries making substantial progress in basic needs do not have substantially lower GNP growth, and 2) higher level of basic needs satisfaction appears to lead to higher growth rates in the future."^{21/}

In a study of the relationship between basic needs satisfaction and economic growth in Sri Lanka, Paul Isenman (1978) notes that the "above normal progress in basic needs fulfillment as reflected in the life expectancy rate and literacy level of its people is the result of Sri Lanka's investment in basic needs. Even though per capita income may have been reduced, the social gains are much greater than would have been expected even at higher income levels."^{22/}

Tables III and IV indicate deviations from the expected norm of the literacy and life expectancy variables at the growth rate of GNP per person between 1960 and 1977 for several countries.

^{20/} Norman Hicks, "Growth vs Basic Needs: Is There a Trade-Off?", op.cit., p. 989.

^{21/} Ibid, p. 992.

^{22/} Paul Isenman, "The Relationship of Basic Needs to Growth, Income Distribution and Employment. The Case of Sri Lanka," World Bank, Washington, D. C. unpublished paper, May 1978. (quoted in Hicks, ibid, p. 987.)

Table III. Literacy and Growth

Top 10 countries ranked by growth of GNP per person	Growth Rate of GNP per person 1960-77 (percent)	Literacy: deviation from norm 1960 (a) (percent)
Singapore	7.7	...
South Korea	7.6	43.6
Hong Kong	6.3	6.4
Greece	6.1	7.5
Portugal	5.7	1.7
Spain	5.3	1.2
Yugoslavia	5.2	16.7
Brazil	4.9	8.6
Israel	4.6	...
Thailand	4.5	43.5
Average top 10 countries	5.8	16.2
Average 83 developing countries	2.4	0.0

(a) Deviation from expected value derived from equations relating adult literacy to GNP per person for all developing countries (Example: in the top part of the table, South Korea's literacy rate in 1960 was 43.6 percentage points higher than expected for a country at its income level.)

Source: World Development Report, 1980, World Bank, Washington, D.C.

Table IV. Life Expectancy and Growth

Top 10 countries ranked by life expectancy in relation to income	Life expectancy: deviation from norm 1960 (a) (years)	Growth rate of GNP per person, 1960-77 (percent)
Sri Lanka	22.5	1.9
South Korea	11.1	7.6
Thailand	9.5	4.5
Malaysia	7.3	4.0
Paraguay	6.9	2.4
Hong Kong	6.5	6.3
Panama	6.1	3.7
Burma	6.0	0.9
Greece	5.7	6.1
Average top 10 countries	8.8	4.0
Average 83 developing countries	0.0	2.4

(a) Deviation from expected value derived from equations relating life expectancy to GNP per person for all developing countries. (Example: South Koreans lived 11.1 years longer in 1960 than would be expected for a country at its income level.

Source: World Development Report, 1980. World Bank, Washington, D.C.

As the tables show, the trade-offs between basic needs satisfaction and economic growth can be demonstrated over time. However, without the necessary political will of LDC's governments, it is unlikely that the conditions of the poor will improve.

Investment in Human Capital

There is no doubt that a developing country with a GNP of \$500 or less is in a difficult position to implement basic needs policies, especially the type of programs that would lead to a healthier, well nourished and better educated people. It has been estimated that the annual recurrent expenditures for investment in any of the basic needs sector is too high to warrant continued investment. Lack of sufficient resources may well prevent the pursuit of basic needs strategies. The recurrent costs for investment in the health sector is particularly high and their economic returns are slow and long-run.

For example, cost estimates for eradication of prevalent tropical diseases --onchocerciasis (river blindness) trypanosomiasis (sleeping sickness) schistosomiasis and malaria--could be \$20 billion (1975 prices) in capital outlays over ^{23/}20 years, whereas recurrent costs could be \$22 billion over this period.

These figures illustrate the enormous capital outlays for investment in the health sector that few countries can afford. Even though public provision of health care is a long-term investment in human capital resulting in long-run benefits, few countries in the process of development could allocate a substantial amount of their GNP for human capital investment.

^{23/} Danny Leipziger, op cit, p. 18.

Nevertheless, LDC governments play key roles in the provision of social services, health care service, family planning and nutrition. Investment in human development programs should, therefore, be broadly based and integrative in order to obtain the best results.

For example, investment in sanitation, sewage treatment plants, pre- and postnatal education and instructions will improve the health status of the people, reduce infant mortality, and may have an impact on fertility and population growth. Investment in human capital, as mentioned earlier, can have a positive effect on productivity and performance.

Balassa believes that a country's comparative advantage may depend on the changes in the accumulation of human and physical capital. He notes that Colombia, Hong Kong, India, Israel, Korea and Malaysia are countries where investment in human capital has influenced the manufacture of labor intensive goods.^{24/}

The provision of social services, financed through transfer mechanism, such as taxation of the highest income groups, subsidized food stamp programs etc., can increase real income of the poor substantially. In Malaysia, for example, the lowest 40 percent of income had its real income increased by 40 percent through social services. The transfer was financed by the top two deciles of the income distribution in Malaysia.^{25/} (Meerman:1977)

^{24/} B. Balassa, "A Stages Approach to Comparative Advantage" World Bank Paper No. 256, World Bank, Washington, D. C. (quoted in Leipziger op cit., p. 8).

^{25/} Jacob Meerman, "Meeting Basic Needs in Malaysia: A Summary of Findings, World Bank Staff Working Paper No. 260, World Bank, Washington, D. C. 1977 (quoted in Leipziger, op. cit., p. 8).

Furthermore, a characteristic of human development programs, e.g., health programs, is that they are additive and not distributive. They do not diminish the health and knowledge of others at the same time. In other words, improved health status does not diminish or reduce the health status of the already healthy and well-off population, unless massive resources, on which the maintenance of the health of the well-off depends, are drawn from them and channeled to the poor.

Expressed in game theory, human development programs are more positive-sum than zero-sum ^{26/} insofar that over the long run, all citizens benefit from better health conditions. Because of the positive-sum characteristic of health programs, it could be assumed that opposition and resistance from other political interest groups in competition for the resources could be minimized by the governments.

The relatively non-conflictive nature of health programs could be working for the government and enhance its ability to implement such programs. The increased vitality gained by the poorer groups could result in a more productive and competitive workforce. ^{27/}

26/ Norman Uphoff, "Political Considerations in Human Development" in Implementing Programs of Human Development, World Bank Staff Working Paper No. 403, World Bank, Washington, D.C., July 1980, p. 30.

27/ Ibid., p. 38.

III. POVERTY - A CONDITION OF POOR HEALTH IN LDC's

A Poverty Profile

The World Bank has estimated that 80 percent of the poor live in rural areas and 75 percent are concentrated in low income countries of South and East Asia and Sub-Saharan Africa. The poor are characterized by high infant mortality, low life expectancy, unemployment and underemployment.

Poverty is generally measured in quantitative terms using income or lack of income as indicators of the prevalence of poverty. A poverty line is drawn which corresponds to the level of income needed to purchase a basket of goods and services essential for survival. Household expenditure surveys determine the value of the consumption basket. The value equivalent corresponding to the minimum requirement then is taken as the poverty line. Those who earn less and spend less are thought of as poor.^{28/}

However using income as a determinant of poverty may not be adequate since it does not take into account exchanges of goods and services, bartering practices, and the provision of public goods and services such as sanitation, potable water, etc. Even though income defines the ability for private consumption, it is inadequate in measuring people's access to goods and services. An analysis of who the poor are and why they are poor is essential in the identification of the causes of poverty.

Since most people in LDCs derive their income from the agricultural sector, access to land is considered an important factor in eliminating income inequalities,

^{28/} Samir Radwan and Torkel Alfthan, "Household Surveys for Basic Needs: Some Issues", International Labor Review, Vol. 117, No. 2, March-April 1978. p. 199.

and extreme poverty. However, land concentration in the hands of a minority of wealthy farmers is a well-known pattern in most LDCs. The landless agricultural laborer depends for his survival on the needs of the landowner and the vagaries of the weather. As a seasonal worker he is often unemployed, living barely through the "hunger season".

The agricultural sector has been traditionally neglected by most governments. Credits are usually made available to large producers who in turn can take advantage of their increased earnings. Experiences has shown that small farmers are not only more productive because they take greater care of their limited acreage and reap the most from it, but, given access to credits, marketing facilities, appropriate technologies and social services, e.g., health and education, the small farmer is a vital link in the production and consumption chain of agricultural goods.

Agricultural productivity and hence income, as a rule, depends on the needed support systems to promote agricultural outputs. Irrigation systems, new seed varieties, small-scale machinery and diversified patterns of crops as well as storage facilities, distribution centers and improved agricultural extension services and marketing outlets are necessary factors for agricultural output. It has been shown that when these support systems are present, small farm productivity increases beyond expectation. Sri Lanka and Taiwan are two notable examples.

Poor people also are generally excluded from the capital savings and investment sector since their contributions are held as minimal. Consequently the already wealthy get government subsidies, and tax exemptions.

Scholars and politicians have tended to undervalue the ability or willingness of poor people to save and to invest. It has been assumed that people of low income do not save but spend their incomes on consumer goods and services. Thus policies have been directed at those groups who were assumed to be capable of saving substantial amounts from their incomes.

However, it has been found that workers in urban areas can be stimulated to save provided their basic needs are met, and if they are encouraged to participate in the development. Co-ownership in industries gives workers an economic incentive to save. For example, the Singapore government has devised a withholding scheme through which employers and employees contribute equally 15 percent of the worker's salary toward a down payment of the workers home and mortgage payments. Through this device former slum dwellers now live in their own houses and enjoy the fruits of their labor. Owing their own home permits them to save and even invest in the country's industries. ^{own}_{29/}

29/ James Grant, "The End of Trickle Down", Overseas Development Council, 1976. p. 48.

The Effects of Poverty on Health

It is generally assumed that the most serious manifestations of poverty are reflected in nutritional deprivation and ill health.^{30/} Although the relationship between ill health and poverty is difficult to determine, health statistics alone tell a compelling story for a number of developing countries. George Kimble eloquently summarizes the interrelationship between poverty and ill health as it relates to Africa. He writes:

"In the African social drama sickness has a strong claim to being arch-villain. It is bad enough that a man should be ignorant, for this cuts him off from the commerce of other men's minds. It is perhaps worse that a man should be poor for this condemns him to a life of stint and scheming, in which there is no time for dreams and no respite from weariness. But what surely is worse is that a man should be unwell, for this prevents his doing anything much about either his poverty or his ignorance."^{31/}

Noting on the relationship between well-being and poverty, George Rosen states:

"The appalling inequalities in health conditions that exist throughout the world are directly and intimately connected with the problems of wealth and poverty."^{32/}

^{30/} Bruce F. Johnston "Food, Health, and Population in Development" Journal of Economic Literature 1977, p. 880.

^{31/} George H. T. Kimble. Tropical Africa, Vol. 1, Twentieth Century Fund, N. Y. 1960. p. 150. (quoted in "Disease and "Development" in Africa", Charles Hughes and John Hunter, Social Science and Medicine, 1970, Vol. 3, pp. 443-493, Pergamon Pergamon Press, England

^{32/} George Rosen, A History of Public Health. M.D. Publications Inc., N. Y. 1958 p. 179, (quoted in Hughes and Hunter, "Disease and "Development" in Africa" Ibid.)

The Meaning of Health

The concept of health, like that of development must be considered as a relative and open-ended term and cannot be defined in absolute positive terms. Its meaning can only be grasped indirectly through its opposite. That ^{33/} is, a condition of health exists in the absence of debilitating diseases.

Ivan Illich, on the other hand, defines health as the intensity with which individuals cope with their internal states and their environmental conditions. The word "healthy" as an adjective qualifies political and ethical actions and conditions a milieu that favors self-reliance, autonomy and dignity, particularly for the weaker. ^{34/} While Illich is acutely aware of the political dimensions of health conditions, others view the absence of health as a re- ^{35/} sult of complex interactions between population, environment and culture.

According to Melinda Meade, the interactions between these variables determine the health status of a people. If the population dimension includes genetics, immunological and nutritional status, the environment determines the kind of habitat that is or is not conducive to infections, physical, chemical and psychological insults to health, whereas culture includes all behaviors, taboos, dietary practices, clothing, hygiene etc., as well as the conceptual world through which reality is perceived and ^{36/} understanding structured.

^{33/} Charles Hughes and John Hunter, "Disease and "Development" in Africa", Social Science and Medicine, 1970, Vol. 3, p. 444.

^{34/} Ivan Illich, Medical Nemesis, Pantheon Books, Random House, New York, 1976, p. 6.

^{35/} Melinda Meade, "Medical Geography as Human Ecology: The Dimension of Population Movement", The Geographical Review, Oct. 1977, Nov. 4 Vol. 67, p. 382.

^{36/} Ibid

An all inclusive conceptualization of health that brings together the social, cultural, and medical dimensions is offered by Ralph Audy for whom health is not merely the absence of disease but the individual's ability to "rally from insults, whether chemical, physical, infectious, psychological, or social."^{37/} Health exists when people are able to create the kind of environment in which they can adapt to conditions that maximize their well-being.

Malnutrition - The Child Killer

Malnutrition is perhaps the most widespread and intractable condition of ill health affecting millions of people in less developed countries. In many cases malnutrition exists undetected until people succumb from exhaustion, fatigue and other related symptoms. Malnutrition can be deadly in combination with virus infections, especially pneumonia.

It has been estimated that the number of poor suffering from malnutrition in low income countries will be 1,512 million by the year 2000. This^{38/} is equivalent to a daily caloric deficit of about 400 billion calories.

If the adult population has developed defense mechanism compensating for the lack of nutritious foods, children, especially newborns, have no such immunity responses. Malnutrition is the number one killer of children under

^{37/} J. Ralph Audy, "Measurement and Diagnosis of Health", in Environ/Mental: Essays on the Planet as a Home, Houghton Mifflin Co., Boston, 1971, pp. 140-162, (quoted in M. Meade, "Medical Geography as Human Ecology" ibid, p. 382.

^{38/} "Basic Needs Position Paper", AID/PPC, op. cit., p. 11.

the age of five in LDCs. It is also the basic and primary cause of infant mortality. A study on child mortality notes that the "synergistic effect" of diarrheal disease and malnutrition is the leading cause of infant death.

Nutritional deficiency lowers the resistance to infectious disease, thus causing diarrhea. Malnutrition is an associated cause which produces diarrhea, which causes lower respiratory tract infection and dehydration. Respiratory tract infection in turn leads to pneumonia. The combined effect of dehydration and pneumonia causes the death of the infant.

The diagram below illustrates the interaction and progression of malnutrition to death.

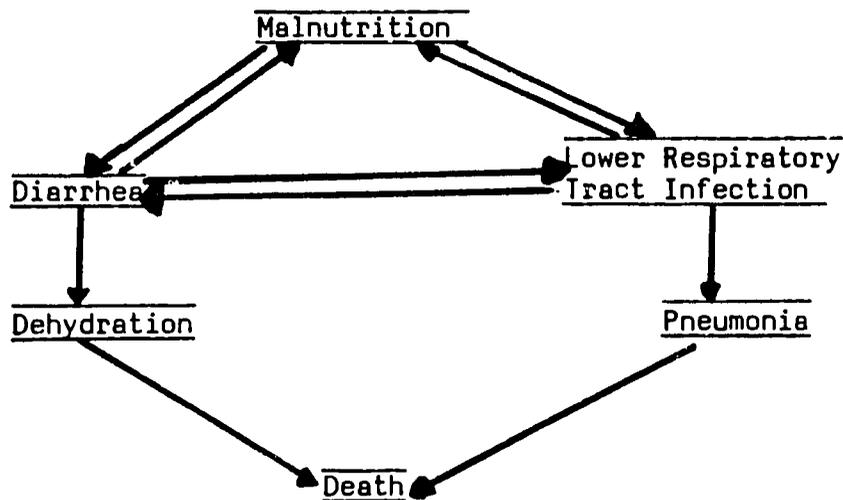


Diagram by: Robert N. Grosse, School of Public Health, University of Michigan, Ann Arbor

It can be seen that malnutrition is a precondition to the receptivity of other diseases which lowers the infant surviving rate. Other causes of infant death are measles, tetanus, and low birth weight.

High infant mortality places heavy burdens not only on the family unit but on the society as a whole. Population experts have shown a correlation between high infant mortality and birthrates. Countries that have reduced infant mortality have also reduced their birthrates. The Peoples Republic of China, South Korea, Sri Lanka and Costa Rica are notable examples.^{39/}

Life expectancy and infant mortality are dependent on the conditions of health and well-being of the adult population, especially of women.

The table below compares mortality rates and life expectancy in low income, middle income and high income countries. The figures are indicative of ill health and of widespread poverty, particularly in low income countries.

Life Expectancy and Infant Mortality 1960-1975
(Median Values)

	<u>Life Expectancy at Birth</u>		<u>Infant Mortality per 1000</u>	
	Years		1960	1975
	1960	1975	1960	1975
Low Income Countries	36	44	142	122
Middle Income Countries	49	58	72	46
High Income Countries	70	72	25	15

Source: World Development Report, 1978. World Bank, Washington, D..C.

^{39/} Bruce Johnston, op. cit., p. 895.

Social and Economic Causes of Malnutrition

It must be asked whether malnutrition is primarily due to the unavailability of sufficient food supplies. In some countries this might be the case. It has been documented that Bolivia and Haiti have had a per capita availability of food energy of about 70-80 percent of requirements, with, at the same time, very high mortality rates. This has also been true for Ethiopia, the Sahel, Afghanistan and Yemen.^{40/}

Malnutrition can be attributed to other conditions as well. Though income raises the families' overall purchasing power to supply the household with food, most shortages cannot be corrected by simply increasing the means to buy, especially when a large segment of the rural population exists outside the cash economy. It is necessary, therefore, to inquire into the relationship between nutrition and consumption to determine the factors within the social and cultural environment that impede the intake of adequate foods. Even though research into this area has been inadequate, there are a number of community level studies on nutrition and agriculture that have identified a consistent pattern of interaction among social, economic and nutritional variables.^{41/}

Accordingly, cultural pattern of food production, distribution and consumption often contribute to the low nutritional status of individuals in traditional societies. It has been shown that direct intervention through publicly sponsored nutritional supplement programs can have an

^{40/} Robert N. Grosse, "Some Notes on Health in Less Developed Countries", School of Public Health, University of Michigan, Ann Arbor, unpublished paper, October 1978, p. II-3.

^{41/} Patrick Fleuret, "Nutrition, Consumption, and Agricultural Change" unpublished AID Background Paper, July 20, 1979, Agency for International Development, Washington, D. C .p. 1.

impact over the short run by raising the nutritional status of the target population. However, programs designed to indirectly raise the nutritional status through a variety of interrelated agricultural programs that use novel methods of food production, distribution and consumption can have disruptive effects on the traditional ways through which a community meets its nutritional requirements.

Altering the traditional ways of agricultural production affects a number of related factors such as ecological balances, agricultural labor, labor-tenant relationships etc., which in turn influence consumption pattern and the nutritional status of the people.^{42/} For example, commercial food production leads to a decline of the nutritional status because the land is used for cultivating a single crop of cash and export value, instead of utilizing the land for cultivating diverse crops of high nutritional value. In many instances, food prices are driven up due by the sudden influx of cash. High food prices prevents the poor from buying and deprives them of nutritious food.

Others attribute the underlying causes of malnutrition to patterns of food distribution among various social units. It has been shown that in many traditional societies the men are favored over the women and children when it comes to food distribution.

For example, a study of nutritional inputs in a village in Zambia, showed that men received between 90 and 116 percent of the requirements as

^{42/} Ibid, p. 10.

their average caloric intake, whereas women and children's average caloric intake ranged between 48 and 65 percent.^{43/}

Other nutrition experts have suggested that the pattern of food disposition and consumption actually observed in many rural, traditionally low income environments is part of local beliefs and practices that intentionally place lactating women and young children at a nutritional disadvantage. However, the idea of so-called "cultural blocks" influencing dietary intakes and acting as cultural mechanism of fertility control and population growth^{44/} should be regarded in the overall context of traditional system of food distribution that is linked to political organization, in which equitable distribution is achieved among separate units, e.g., households, kin groups, villages, etc. but inequitably distributed within these units, especially households.^{45/}

From the above, it can be concluded that the incidence of malnutrition and of undernutrition is not automatically solved by increasing the aggregate food supply. It has been suggested that only policies and programs aimed at nutritionally vulnerable groups, especially women and lactating mothers, are more effective than food price subsidies and outright distribution.^{46/}

^{43/} Robert Grosse, op. cit., p. II-5.

^{44/} Patrick Fleuret, op. cit. p. 9.

^{45/} Ibid.

^{46/} Shlomo Reutlinger and Marcelo Selowsky, Malnutrition and Poverty: Magnitude and Policy Options. World Bank Staff Occasional Papers, #23, The John Hopkins University, Baltimore and London, p. XII. 1976.

Manifestations of malnutrition are much too numerous to mention here. Sufficient is to say that inadequate nutritional intakes stunts physical growth and affects the individual's mental processes. Malnutrition contributes to poor performance, low aspirations and handicaps learning and comprehension. As a result, children drop out of school early and become incapable of catching up with their well nourished counterparts. Aside from these consequences, nutritional deficiencies induce disease, such as kwashiorkor (bloated belly)--primarily due to a shortage of protein--marasmus due to insufficient calories and protein, iron-deficiency anemia, and blindness due to vitamin A deprivation.^{47/}

Nutrition as a determinant of good health must be regarded as a desirable end in itself. It is also a fundamental precondition that permits the development of productive individuals, capable of self-actualization thereby contributing to the development of their society.

^{47/} Alan Berg, The Nutrition Factor: Its Role in National Development, The Brookings Institution, Washington, D. C. 1973, p. 15.

IV. HEALTH CARE DELIVERY: WHAT KIND ?

The health care delivery systems of most developing countries is modeled on the type of health care provisions in developed countries. Health care is primarily physician based and provided for in hospitals and clinics. The training of physicians takes place in mostly urban teaching hospitals where the nature of the curriculum advances fundamental knowledge of the basic sciences, microbiology, immunology, biochemistry and physiology.

Characteristically large and technological complex, teaching hospitals are compartmentalized into specialty units and dependent upon highly trained and specialized personnel. Physicians trained and educated in these facilities tend to emulate the practices of their western counterparts.

Allocation of national wealth toward medical services varies greatly, and usually falls somewhere between one-tenth and one-twentieth of all available funds. Yet there is no evidence that health expenditures on the typical citizen in poor countries are proportionate to the country's per capita average income.

Ivan Illich states that most people in LDC's get absolutely nothing. 90% of all funds earmarked for health, is spent for the treatment of the sick, instead of for sanitation. 70-80% of an entire public health budget goes to the cure and care of individuals (mostly urban),^{48/} instead of to public health services, including sewage treatment plants, water instal-

^{48/} Ivan Illich, op. cit., p. 56.

lation, and vaccination programs.

Also, large amounts of money to be used on health care provision is indirectly consumed by administrative procedure such as patient files, checks, paper, forms etc., diverting not only the amounts of available funds but often the technical and medical capabilities of the personnel administering health care into wholly counterproductive activities.

Strachan and Korten report a case where the increased demands placed on the medical staff for administrative procedures actually cut down on the number of patients treated in a family planning clinic, thereby undermining its primary task of assisting in population planning ^{49/} programs.

Hospital and physician based health delivery systems tend to concentrate scarce and costly resources. Such health care systems distort perceptions of the priorities of health needs in the developing countries. These needs are most urgently felt in the rural areas where access to health facilities is often difficult or does not exist at all. The inequitable distribution of health resources within LDCs, therefore is a fundamental concern of health planners and providers.

^{49/} Deirdre Strachan and David Korten, "The Overcrowded Clinic", Casebook for Family Planning Management, Ed. Frances Korten and David Korten, The Pathfinder Fund, 1977, Chestnut Hill, Mass.(see chart on p. 55).

Community Based Health Care: Two Examples

In recent years, increased emphasis has been given to community based health care systems that use the services of the health auxiliaries, village health workers, indigeneous personnel such as local midwives and traditional healers. The reason for this change is the realization of the tremendous costs involved in providing adequate health care to the majority of the people, especially in the countryside.

A community approach offers at least minimal provisions of health services at relatively low cost to villages and small communities generally excluded from health benefits. The focus of this community based health care delivery system is on preventive as opposed to curative medicine, involving teaching of basic rules of hygiene, disease vector eradication, nutrition-education, maternal and child health care and population control programs.

The People's Republic of China, for example, has been in the forefront of implementing health care delivery systems that aim at reaching all Chinese citizens. In a combination of deliberate social policy, backed up by the political will of the Chinese leadership, China's relative success rests on: 1) mobilization of the population and mass campaigns for immunization and vector eradication; and 2) the training of para-professional persons, so-called "Barefoot Doctors" who provide primary care to the population at large.

While the Chinese health care system does not have sufficient resources to compare favorably with the developed countries, implementation of these two public health measures contributed to the control of schistosomiasis,

a debilitating disease that inflicts millions of Chinese, and to a remarkable reduction in China's population growth rate.^{50/}

Similarly, Tanzania is committed to provide primary health care for everyone. The nature of Tanzania's primary health care delivery system must be understood in the framework of its overall development policy manifested in villagization or ujamaa which emphasizes rural development, self-reliance and political decentralization.^{51/}

Poverty, ignorance and elimination of disease are declared priority areas of Tanzania's post-independence struggle for national autonomy. Under the enlightened leadership of President Nyerere and the TANY Party, economic and social policies are formulated in which concern for the health of the Tanzanian people is central and prerequisite for future development.

Realizing that there is an inequitable distribution of health centers throughout the country, the Tanzanian government allocated 70% of the 1972-73 budget for health services toward health centers and training of health workers in rural areas.^{52/} The increase in budget allocation for rural health programs reflects the government's recognition of the importance of the health of the peasant farmers who are Tanzania's biggest foreign exchange earners, but who generally do not benefit from the social services provided for in the cities.^{53/}

^{50/} Victor W. Seidel and Ruth Seidel, "The Health Care Delivery System of the People's Republic of China", in Health by the People, Ed. Kenneth Newell, World Health Organization, Geneva, 1979

^{51/} Julius Nyerere, "The Arusha Declaration of 1967", Ujamaa-Essays in Socialism 1967, Dar-es-Salaam, Tanzania.

^{52/} Seidel and Seidel, op.cit., p. 164.

^{53/} Ibid., p. 151.

In terms of organization and administration of health services, Tanzania's health care system consists primarily of rural health centers and dispensaries which are linked to district hospitals. Each ujamaa has at least a village health post that offers first-aid treatment and attends to minor ailments as well as to child and maternal health care. ^{54/}

The health manpower consists of medical assistants, rural medical aids, maternal and child health aides and health auxiliaries. ^{55/} Because of the shortages of medical doctors in Tanzania, the licensed medical practitioners and assistant medical officers are the principal medical health care providers for most rural Tanzanians.

Tanzania's approach to basic health care aims at increasing coverage and utilization of primary health services rather than at providing sophisticated but less accessible and expensive services. ^{56/} Given her limited resources, Tanzania's approach to health care delivery aims at maximizing service and minimizing cost. The conviction is held that a better distribution of health services will provide better coverage with basic health services to most of the Tanzanian people.

^{54/} Ibid., p. 157.

^{55/} Tanzania's doctor/population ratio is 1:23,000 or about 500 Physicians, Health by the People. Ibid., p. 161.

^{56/} Ibid., p. 166.

Community Health Care Programs: Problems and Benefits

The preceding pages tried to show that community based health care and delivery programs, supported by sound national policy and commitment to rural health, are the most practicable and economically viable mechanisms for improving the health status of the rural population.

The national and regional linkages necessary for implementing health care programs in rural areas are important only if the leadership is committed to bring better health services into these areas. However, in many instances, such linkages may have adverse effects on health programs if they are solely dependent on the "willingness and affordability" consideration of national or regional decision makers.

Therefore, a community should be in a position of creating the type of administrative and operational infrastructure that is self-sustaining and assures the continuation of the program. Only if a community is in control over the process of its programs, can it ascertain that the benefits accrue to its members.

The difficulty in organizing such programs is primarily due to: 1) lack of political support bases by the poor necessary to enhance organizational strength for initiating and maintaining health programs; and 2) weak resource position which makes it necessary to enlist the support of politically more effective groups.^{57/} Furthermore, there is the seemingly insoluble problem of recurrent costs. Yet, a variety of mechanisms could be used to solve the problem of recurrent costs.

^{57/} Norman Uphoff, op. cit., p. 27.

Examples are: community contributions to cover the recurrent costs, ^{58/} and cost-saving cooperatives in the health field, especially pharmacies. Once a program is in place it creates its own constituency, which itself is a political support structure of the program. This includes all those individuals who derive their incomes from the program, e. g., administrators officials, mid-wives, nurses and doctors. Once a program is established, it will be hard to cut back.

Another way of mobilizing resources for recurrent cost expenditures can be accomplished through taxation of the beneficiary groups. If they are too poor to be taxed, foreign assistance could pick up the tab. If people are to be taxed, however, their involvement and participation in the programs is indispensable.

The village health worker and paraprofessional are indentified to be the most cost-effective agents of rural health care. The training of such paraprofessionals has many tangible as well as intangible benefits. The activities of the VHW, for example, assure a continuity of health care services, through his familiarity with the problems of the individuals he serves. If he comes from the same village, a sense of solidarity through identification augments the effectiveness of his work. Since he is in a relative "superior" position, through his expertise and training, the VHW gains the respect of others and the trust and confidence of the people he cares for on a daily basis.

^{58/} Ibid, p. 28.

The training of rural health workers and aids has many benefits that are hard to measure or to quantify through economic analysis. To overlook these intangibles is to dismiss the very personal nature of illness, and the importance of the bond between healers and the afflicted individual.

V. CONCLUSION

This paper examined the health factor in the context of Basic Human Needs strategies of development. The paper tried to convey the implications of poor health conditions for the development prospects of poor nations. As a corollary, the health status of the population may determine the level of development nations can achieve in the foreseeable future.

Although the relationship between poverty and health status seems self-evident, its ramifications and impact on national development only becomes apparent in aggregate life expectancy and mortality rates. The magnitude of these statistics nevertheless, belies the human and economic cost to any nation in the process of developing its human and material resources.

Since poverty is the primary cause of poor health in less developed countries, development policies addressing basic needs necessarily focus on the national institutional infrastructure that impede the reduction of poverty. Such institutional handicaps are primarily found in the rural areas in form of poor access to land, credits and public services which prevent the poor from gaining an income adequate to meet their basic needs. Constraints on food supplies and inadequate nutrition leads to poor health and illness which in turn lowers productivity and decreases income. Thus the cycle of poverty is perpetuated by the non-fulfilment of basic health needs.

Therefore, basic human needs policies and strategies are aimed at reducing poverty in breaking this cycle at one point or another. To start at improving nutrition and meeting basic health needs is deemed to be an appropriate beginning

There is also no doubt that such policies entail some form of redistribution of wealth. However, redistribution of national wealth without the necessary economic growth must be considered as potentially destabilizing. Many LDC governments are not prepared to deal with internal instability and prefer to adhere to the type of development policies that have served them best. Yet the alternative to insufficient attention to welfare problems--especially of the poor--and to equitable income distribution, is the development of a two-tiered society marked by income disparities and increasingly wider gaps in the well-being of its people. The case of Brazil exemplifies this development.

It has also been shown that implementing basic needs programs presents enormous difficulties for countries of low per capita income. Although public expenditure for basic needs programs in general is high, especially in the health sector where the economic returns are perceived as uncertain and slow, research has demonstrated the positive correlation between productivity/output and investment in human development. The trade-offs are considerable in terms of higher life expectancy, literacy and lower mortality. Improvement in these indicators can be expected to have a positive impact on development in the long run.

Furthermore, donor concessional assistance could be aimed at supporting projects and programs of human development, such assistance will not be sufficient to change visibly and demonstrably the conditions of poor people in the world. The responsibility for attacking the causes and consequences of poverty remains with the governments in mustering enough political will

to improve the life of all its people.

In the health sector, for example, it has been shown that community based health delivery systems can make the difference between adequate health care and no health care services at all. This is particularly true for LDC citizens living in remote and inaccessible rural areas. Even though health care expenditures would be spread more thinly, a greater number of people would be served and provided with access to basic health care services. The Tanzanian and People's Republic of China health delivery systems are illustrative of the "democratization of health benefits" with impressive results.

However, in the absence of pronounced government commitment to improved health care, active participation and involvement in the organization and implementation of such programs by the people may be the only means of assuring that the programs continue and the benefits accrue to them. The village health worker and other paraprofessional could be the link between the fulfillment of primary health care needs and the often inadequate provision of funds to keep the health delivery services alive.

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