



Health Sector Policy Paper

March 1980
Agency for International Development
Washington, D.C. 20523

SUMMARY

U. S. Agency for International Development Health Sector Policy (Approved by the Administrator, March 1980)

Introduction

U. S. assistance to improve health in developing countries is an important concomitant of our commitment to help meet basic needs throughout the world. Our basic needs policy acknowledges each individual's right to a minimum standard of living, and recognizes that poverty, social inequity, ill health, and ignorance jeopardize the political and social stability of nations. A.I.D. is the principal U. S. government agency providing health assistance to developing countries. A.I.D.'s health policy reflects commitments made at the 1978 World Health Assembly, the 1978 UN-sponsored Conference on Primary Health Care at Alma Ata, USSR, and the 1976 UN Water Conference in Mar del Plata, Argentine. A.I.D. accords highest priority to programs designed to provide basic primary health care to those most affected by ill-health: children under five and women in their childbearing years, especially in rural areas.

Current Health Situation in Developing Countries

Hundreds of millions of people in the world today suffer from poor health. On average, life expectancy at birth in developing countries is 51 years, and in some countries falls as low as 37 years. Roughly half of all deaths are among children under five years of age. The principal causes of infant and early childhood mortality are common diarrhea and respiratory illness, malnutrition, and infectious diseases such as measles, tetanus and polio. It is clear that numerous, closely-spaced births are significant health hazards for children as well as their mothers.

Parasitic and other tropical diseases - notably malaria, schistosomiasis (snail fever) and onchocerciasis (river blindness) are also major causes of death and disability in the developing world. Malaria is prevalent on every continent, though 80 percent of the approximately 150 million people currently infected live on the African continent. Furthermore, despite campaigns in the 1960s to eliminate the

disease in Asia and Latin America, malaria has had a resurgence in those regions in recent years. Between 250 and 350 million people are believed infected with schistosomiasis, and somewhere between 800 million to 2 billion people are considered at risk of infection. Onchocerciasis afflicts some 30 million people worldwide, though principally in Africa.

A.I.D.'s Focus and Rationale

Programs that improve health are investments in the human capital of developing countries. Health status affects not only the individual's productivity but also the overall quality of life. A.I.D.'s health policy is premised on the belief that promoting a fair distribution of basic health services among all ethnic and socio-economic groups is a vital element of its overall commitment to efforts to promote growth with equity.

Poor health in developing countries has many causes: inadequate and erratic harvests and poor marketing and storage facilities that contribute to malnutrition; environments infested with disease vectors; polluted water and poor sanitary conditions that facilitate the transmission of disease; high fertility that may weaken both mothers and their children; ignorance of the causes of poor health and the means to improve health; inadequate and inequitable distribution of health services; and poverty that leaves people unable to purchase whatever health-related goods and services that are available.

A.I.D.'s strategy for improving the health of the poor majority in poor countries stresses four key components of an effective health sector: broad, community-oriented networks to provide low-cost primary health care services including maternal and child health, nutrition, and family planning; improved water and sanitation; selected disease control; and health planning. While all low components are an integral part of A.I.D.'s primary health care strategy, the agency accords highest priority to the first, namely: low-cost primary health care services, including maternal and child health nutrition and family planning.

1. Primary Health Care

Primary health care is the most comprehensive, cost-effective approach to improving health conditions in developing countries, and improving primary health care services will continue to be A.I.D.'s first health sector priority. The program "mix" may vary given the context, but in general A.I.D. favors locally sustainable health care programs that include the following elements:

- prenatal, obstetrical, and post-partum care;
- family planning information and services;
- immunizations for childhood and certain other diseases;
- basic medicines (oral rehydration, eye ointments, etc.);
- first aid
- health education on nutrition, oral rehydration and hygiene/sanitation and such harmful practices as female genital mutilation;
- collection, analysis, and use of baseline and service data for program planning and evaluation.

A.I.D. supports the use of community level outreach workers (including trained traditional practitioners), backed by a cadre of more thoroughly trained nurses, physicians and specialists. Multi-purpose workers are generally preferred for the comprehensive treatment they can offer, though the use of specialized workers (in immunization and family planning, for example) may be warranted in certain circumstances.

A.I.D. will generally finance:

- training
- health education materials
- planning and evaluation
- key commodities
- administrative and logistics support
- research

With regard to financing primary health care, A.I.D. will usually use foreign exchange to finance inputs needed to meet some of the initial investment costs of health projects, and will expect most governments to provide local currency for the remaining investment costs and for the project's recurring costs. In circumstances when resources are unusually scarce, A.I.D. may finance some recurrent costs, but there must be explicit plans for gradual withdrawal of A.I.D. financing in favor of local funding.

Water and Sanitation

Water related diseases are a major source of morbidity and mortality in developing countries, where about three-quarters of the population lack access to safe water and adequate means of human waste disposal.

A.I.D. supports water and sanitation programs under the following conditions;

- technology that is cost effective, geared to local circumstances, and can be maintained primarily by the local community;
- trained manpower at all levels;
- adequate administrative, fiscal and management capacity at the national level;
- sufficient support by national authorities;
- standardization of designs and equipment and collaboration among donors to avoid proliferation of diverse equipment standards and designs;
- application of the WHO Drinking Water Standards as a goal for water quality;
- genuine community participation in all aspects of programs through health education and community committees.

A.I.D. will consider for financing:

- support for system construction or rehabilitation
- education in hygiene and public health
- training
- institutional development and technical assistance
- support for local manufacture of hardware.

Recurrent costs are a major concern, and financing systems should promote self-reliance over the long term.

Disease Control

The magnitude of communicable disease problems in developing countries far exceeds the means of individual LDCs or donor agencies to deal with them. A.I.D. favors the inclusion of basic immunizations in primary health care programs and acknowledges the need for special and separate control programs where safe, practical, cost-effective technologies exist. Non-health sector activities should be designed to discourage the transmission of diseases.

Malaria; A.I.D. will continue its long-standing support for malaria research and control programs. A.I.D. will finance training, commodities, applied field research, and health education.

Schistosomiasis; A.I.D. will pursue research and development activities to determine the most cost-effective means of controlling schistosomiasis. Support may include technical assistance in the design of schistosomiasis control programs, environmental modifications, health and sanitary education, training, commodities, and support for multi-donor activities in schistosomiasis research and control.

Onchocerciasis; The Agency will fund research and development projects to determine cost-effective onchocerciasis control methods, and under special conditions experimental control programs.

Health Planning

The purpose of health planning is to allocate available resources efficiently and equitably so as to improve the health of the population to the maximum extent possible. A.I.D. encourages analysis of the multisectoral causes of poor health and supports efforts to institutionalize health planning in health ministries, planning commissions or wherever appropriate.

A.I.D. support for health planning may include:

- training
- technical assistance
- special studies to identify program interventions in the areas of health, education, nutrition, etc., that offer the greatest potential for improving health conditions.

Health as Part of Integrated Development

A.I.D. strongly supports program planning and project design that take into account the linkages and interdependence of health status with conditions in other development sectors, especially nutrition, population, education, and agriculture. For example, the Agency endorses the inclusion of nutrition interventions (promotion of breast feeding, nutrition planning, surveillance, and rehabilitation, garden projects, etc.) as part of primary health care programs. Given the links between population growth, health status, and development, A.I.D. strongly endorses not only the provision of family planning information and services, as part of a basic health strategy, but support for policies and programs that promote desire for smaller families, more equitable income distribution, and improvements in women's education and employment opportunities. Consideration is also given to the interaction between agricultural development and health.

HEALTH SECTOR POLICY PAPER

Agency for International Development
Washington, D.C.

March, 1980

AGENCY FOR INTERNATIONAL DEVELOPMENT

HEALTH SECTOR POLICY PAPER

This paper summarizes current A.I.D. health policy and its underlying rationale. The paper is directed to those who are concerned with policy in the fields of health and development: A.I.D. personnel, developing country officials, members of governmental and non-governmental donor organizations, researchers, and other members of the private sector in the U.S. and abroad. Because the paper is meant to be read by persons involved in development fields other than health, it includes much information that will already be familiar to health professionals.

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I. SUMMARY

As part of a broader basic human needs policy, the United States has committed itself to an increased effort to promote health in developing countries. The Agency for International Development is giving priority to measures that improve health particularly among the poorest groups in countries eligible for U.S. assistance, focusing on children under five and on pregnant and nursing women as a start.

After examining the need for health assistance and the role of other donors, A.I.D. has decided to concentrate on four areas within the health sector: (1) primary health care (basic health, nutrition, and family planning services), (2) water and sanitation, (3) selected disease control programs, and (4) health planning. The Agency will fund health systems which are comprised of a variety of activities in each of these areas, but stresses primary health care as the first priority. In all four areas, A.I.D. seeks to emphasize training, provision of essential equipment and supplies, and planning and analysis.

A.I.D. believes that health programs should be appropriately designed to meet the needs of the population. Since health depends not only on health sector programs but also on agriculture, nutrition, education, economic policies, and population growth, A.I.D. encourages planners to design health and other activities with these linkages in mind. The result should be a composite of programs spanning several sectors that can effectively promote health.

II. INTRODUCTION

The President and Congress of the United States have expressed the U.S. commitment to helping meet basic human needs throughout the world, including support for freedom from poverty, hunger, and disease. This policy not only acknowledges that each individual ought to have a minimum standard of living but also recognizes that poverty, social inequity, ill health, and ignorance jeopardize the political and social stability of nations. Health assistance, then becomes a principal means of improving quality of life, as well as contributing to prospects for world peace. Both the President and Congress have therefore emphasized the U.S.' intent to increase support for health assistance.

The principal U.S. government agency that provides health assistance to developing countries is the Agency for International Development (A.I.D.). Congressional authorization for A.I.D.'s assistance programs is contained in the Foreign Assistance Act of 1961, as amended. In 1975, the Congress declared that development assistance should be concentrated on countries prepared to make effective use of such assistance, especially those in greatest need of assistance. In health, assistance is to be used primarily for basic, integrated health services (primary health care), and also for safe water and sanitation, disease prevention and control, and related health planning and research.

In other fields, the legislation includes support for agriculture, rural development, nutrition, education, population, environment, energy,

urban development, appropriate technology, and enhancing the role of women in development. Each of these non-health sector programs can significantly influence health. (See Chapter VI.) In association with authorization of funds for the Food for Peace food aid program, the non-health legislative provisions are clearly supportive of health goals in developing countries.

U.S. efforts to promote health respond to growing interest in health among the developing countries. Our efforts are complemented by the activities of many other nations and international organizations. In health, the U.S. initiative is consistent with principles endorsed at the 1978 World Health Assembly by both donors and developing countries. At the 1978 UN-sponsored Conference on Primary Health Care at Alma Ata, USSR, virtually all nations including the U.S. committed themselves to the goal of "Health for All by the Year 2000." At the 1976 UN Water Conference in Mar del Plata, Argentina, developed and developing countries also joined in support of a U.N. Drinking Water and Sanitation Decade of 1981-1990 whose goal is to make safe water and adequate sanitation available to all. The U.S. health initiative thus relies heavily on continued close collaboration among developing nations and the donor community.

III. CURRENT HEALTH SITUATION IN DEVELOPING COUNTRIES

There are many definitions of health. The most frequently used definition comes from the Constitution (1945) of the World Health Organization (WHO), which defines health as:

"...attainment of optimal physical, mental and social well-being, and not merely absence of disease or infirmity."

No simple index exists to adequately measure health, and data, particularly from developing countries, are often unavailable or inaccurate. Furthermore, health status and access to health resources vary widely, not only throughout the developing world but also among population groups within countries. Nevertheless, as emphasized at Alma Ata and more recently by the World Bank, hundreds of millions of people in the world today have poor health by any reasonable definition. The objective indicators used here to describe developing country health status in the aggregate are the generally accepted and available measures of life expectancy at birth and mortality and morbidity trends. Though reliable data on morbidity and mortality are particularly scarce, these measures at least underscore the magnitude of the problem.

On average, life expectancy at birth in developing countries is 51 years, far short of the 72 years achieved in the U.S. In a number of African countries, life expectancy falls as low as 37 years. Life expectancy is low primarily because infant mortality is high. Roughly half of all deaths in developing countries are of children aged five years or younger.

Despite recent declines in infant and child mortality, 15 percent of all infants born in many poor countries still die before their first birthday, and 30 percent die before age five. The principal threats to health are common infections, malnutrition, and -- indirectly -- early, frequent, and closely spaced births, all of which compound one another. The large number of child deaths thus reflects the particular vulnerability of children under five to the chief killers: "simple" but recurring or persistent diarrheas and respiratory infections exacerbated by chronic and severe malnutrition.

The striking point is that many, if not most, children in the developing countries die not of "tropical" diseases, but from common infections that also plague children in the developed world. But children in wealthier countries are born to healthier parents, who have a healthier environment, more information, more income, and greater access to services to promote, protect, and restore health. Thus they survive.

Infection in the poor and malnourished child increases the need for fluids and nutrients that the child already may be unable to obtain or, if obtained, absorb. It also increases the need for appropriate health care that a mother may have no way to provide. While the impact of severe malnutrition and infection has not yet been fully documented, existing evidence on malnutrition points to long term mental as well as physical retardation in many young malnourished children who survive childhood in the poorest countries. In some cases, especially among older children, catch-up physical and mental growth may be possible with proper nutrition. But even when the damage is reversible, sickness and malnutri-

tion can carry a high cost in suffering, productivity, and learning capacity.

Parasitic and vector-borne diseases are of secondary importance in child mortality in parts of the world other than Africa. Nevertheless, these diseases are widespread and they deplete the body reserves. The causes of mortality in older children and adults are not dissimilar, though parasitic and bacterial diseases (especially tuberculosis) play a larger role.

Major health hazards to women which deserve special mention are pregnancy, childbirth, septic abortion, chronic malnutrition, and in certain African and Near Eastern countries, female circumcision. Physical damage from clitoridectomy and genital infibulation range from shock, bleeding, and chronic pelvic infection to infertility, lengthened delivery, brain damage to the fetus, and fetal wastage. Septic abortion is a leading cause of death among young women, particularly in countries where family planning services are scarce and abortion is illegal. Many of these women leave orphaned children, for as many as one-third of all poor households in developing countries are headed by women. Teenage pregnancy constitutes a major health problem in developing countries as it does in the United States. Teenage mothers tend to have less robust infants, in part because their babies have a lower weight at birth. Moreover, very young mothers often do not know how to care adequately for infants, and their personal maturation and development are often disrupted and impaired by early pregnancy. Close birth-spacing associated with high fertility is itself a threat to both maternal and

child health. The greater the number of children a woman has, the more opportunities arise for complications of pregnancy and difficult labor. With multiple and closely spaced pregnancies, the greater the strain on the mother's own body reserves. Her infants are born successively weaker (of lower birth weight), and her ability to nourish and care for them declines as parity increases. If a baby dies, lactation ends prematurely. Another pregnancy may ensue, and a vicious circle develops in which the health of both mother and children declines further.

IV. RATIONALE FOR A.I.D.'S INVOLVEMENT IN HEALTH

A.I.D.'s development assistance policy is to foster equitable growth. The Agency supports development strategies that help fulfill basic human needs while contributing to the overall process of development, with poorer groups benefitting most from social and economic gains. Thus two basic arguments underly A.I.D.'s rationale for providing assistance in the health sector: (1) that good health is basic to human well-being and (2) that health is a critical factor in the achievement of overall socio-economic objectives.

Promotion of health in terms of basic human needs has two dimensions. First, despite differences in opinion over what constitutes health or "good health," A.I.D. affirms that health status is a major component affecting an individual's quality of life. A.I.D.'s program is based on the premise that there must be a fair distribution of basic health services among all ethnic and socio-economic groups and that local level participation in decision-making and program implementation is crucial.

Second, health is also a critical factor in overall development efforts. The basis of all development is human energy. Labor productivity can be adversely affected by poor health. People debilitated by chronic disease and hunger can hardly learn or work to their full potential. In the aggregate, economic activity may be so constrained as to warrant programs to improve health so that broader development

objectives are realized. Just as investments to increase physical capital improve the productive capacity of the land and other physical resources, investments in human capital, health promoting activities key among them, enable people to be more productive.

Fundamental to the rationale for A.I.D.'s involvement in health is respect for the sovereignty of nations and the goal of self-sufficiency, so that countries can ultimately meet their health needs on a continuing basis, consistent with their particular conditions and resources.

V. A.I.D.'S FOCUS

Poor health in developing countries has many causes: inadequate and erratic harvests that contribute to malnutrition; environments infested with disease vectors; polluted water and poor sanitary conditions that facilitate the transmission of disease; high fertility that may weaken mothers and children; ignorance of the causes of poor health and the means to improve health; shortages of health services; and shortages of income to purchase what goods and services are available. Since impaired health can have so many causes, improving the health status of the poor requires a simultaneous attack on several fronts. Measures that have minimal effect when undertaken singly can result in a significant change in health status when effected in combination.

A.I.D.'s strategy for improving the health of the poor in low-income countries thus stresses four key components in the health sector:

(1) as a first priority, broad community-oriented networks to provide low-cost primary health care, including maternal and child health, nutrition, and family planning services; (2) improved water and sanitation; (3) selected disease control; and (4) health planning.

Health can be improved significantly in most developing countries by this four-part program. A.I.D. stands ready to consider support for any or all components that are deemed necessary in a particular country, but gives top priority to primary health care including family planning. While the following guidelines include specific activities

that are eligible for A.I.D. funding, actual selection must reflect individual country needs. In all health sector activities A.I.D. encourages the development and evaluation of innovative approaches and seeks to ascertain the effectiveness of a variety of health sector activities.

A. Primary Health Care

1. The Scope of the Problem

The principal threats to health in the third world--diarrhea and respiratory infections, malnutrition, high fertility, certain other diseases--can often be substantially affected through the provision of low-cost health, nutrition, and family planning information and services, or "primary health care." At present, however, only about 20 percent of the population in developing countries has access to basic health services. The poor, especially those living in rural areas and in marginal urban slums, are the least likely to have reasonable access to primary health care. Moreover, mothers and young children have the most difficulty in seeking out what services may be available.

Providing health care to these groups is a formidable challenge that faces many constraints, among them: the observance of rigid cultural traditions that govern health behavior; a lack of health facilities to serve as a base for health care workers; insufficient numbers of trained personnel (particularly village health workers and

auxiliary health personnel); communities so widely dispersed in rural areas that these limited health personnel cannot effectively reach all of them; inadequate logistics systems for the procurement and distribution of medicines, equipment, and other supplies, weak management and administrative systems; poor communication and transportation facilities; lack of will to alter prevailing systems; and the scarcity of the budgetary resources of developing country governments which often cannot keep up with the demands of the existing, usually urban-based, health care system, let alone support an ambitious program to further extend service coverage.

2. Primary Health Care: Basic Health, Nutrition, and Family Planning Services

Primary health care is A.I.D.'s highest health sector priority, and the Agency will continue to place principal emphasis on this health-promoting strategy. A.I.D. favors health care programs that include the following elements:

- prenatal care and obstetrical assistance; care of mothers and new-born infants;
- family planning information and services, including convenient access to pills, condoms, and voluntary sterilization, and advice on the health benefits of birth spacing and delaying motherhood until women reach their twenties;
- childhood immunizations and certain other vaccines;

- basic medicines such as oral rehydration packets, eye ointment, certain oral and topical antibacterial agents, and antiparasitic medications, as appropriate;
- first aid for emergencies and minor trauma;
- health education on:
 - a. family nutrition, including maternal nutrition during pregnancy; the benefits and practical aspects of breast-feeding, weaning, and introduction of supplemental foods (especially proteins); childhood dietary needs; relationships between malnutrition and diarrheal infections and fever more generally; food preparation practices that promote nutrition and lessen the spread of disease; and appropriate feeding during and after childhood illnesses (especially measles and diarrhea);
 - b. oral rehydration for diarrheal diseases;
 - c. management of simple respiratory and eye infections;
 - d. hygiene and sanitation to reduce the incidence of water-borne and diarrheal diseases and skin infections, including
 - i) safe storage and use of water and
 - ii) personal cleanliness;
- efforts to collect, at low-cost, baseline and service data to permit assessment of program efficiency and effectiveness for evaluation and planning purposes.

The specific mix of health services that is most feasible and necessary in a given country will vary, of course. For example, for practical reasons, "childhood immunizations" may consist of

only diphtheria-pertussis-tetanus (DPT) in some areas, but added protection against polio, measles, and tuberculosis should be provided wherever possible. A.I.D. believes primary health care should certainly include information on child nutrition and information and means to prevent and control diarrheal infections and to plan pregnancies.

A.I.D. concurs with the approach of developing countries and the World Health Organization to primary health care, that primary health workers should be organized in a "network" or pyramidal system. Such networks would rely heavily on large numbers of locally based "outreach" workers -- non-physician primary health workers, particularly women -- who can be particularly effective in delivering services to mothers and young children. Primary health workers, usually women, may often be from the communities they serve, with limited but sufficient training (not necessarily including literacy) to permit them to deal effectively with basic health, nutrition, and family planning matters. In some cases the link between the government-sponsored health care system and villagers is forged by village health volunteers or village health committees, providing support for the health system and even assisting as outreach workers.

The efforts of developing countries to upgrade the skills of traditional practitioners in the provision of primary health care are supported by A.I.D. Traditional practitioners are already widely utilized in their communities and may provide effective

care in many circumstances. Specific types of traditional practitioners who may be encouraged to participate in primary health care programs include midwives ("traditional birth attendants"), herbalists, and religious and secular leaders and counselors who already provide information and assistance on fertility regulation and maternal and child health. Traditional medicines also deserve further study as a readily available and inexpensive resource for combatting certain prevalent health problems. Local networks of pharmacies or small shops also merit further attention as centers for the distribution of simple medications and information as part of a primary health care system.

Primary health workers, and other local providers, can be backed by a smaller cadre of more thoroughly trained nurses, pharmacists, environmental sanitation personnel, paramedics, health auxiliaries, or physician extenders to provide logistical, managerial, and technical support and referral services. These may be backed in turn by physicians, sanitary engineers, and program managers to provide a final resource for referral, support and direction. Continuous, reliable supervision and logistical support are critical ingredients of successful primary health care systems.

A.I.D. strongly encourages governments to concentrate on achieving high coverage of low-income people with low-cost, locally-available basic health care services rather than through support and promotion of high-technology, mainly curative systems, which reach principally the urban and affluent.

Integrated basic health, nutrition, and family planning services have a number of advantages, not the least of which is cost effectiveness, over single-purpose programs operating side-by-side or autonomously. Many common health problems such as respiratory and diarrheal infections, malnutrition, and the effects of closely spaced births together constitute a package of related matters that primary health workers can readily approach in an integrated manner. By contrast, vertical programs with a single purpose, and specialized workers, have inherent disadvantages in developing countries. Each separate worker must cover a greater territory than a multi-purpose health worker, and is less able to respond to health needs as they arise.

Multi-purpose workers may encounter difficulties, however, in carrying out the full range of their responsibilities simply because they are overwhelmed by the demand for acute care. It may be advisable, particularly in densely populated areas, to support some single purpose health workers functioning in an essentially integrated context. Thus although the Agency does not generally favor categorical programs, it supports specialized activities where technological and cost-effectiveness considerations indicate such an approach or where political or bureaucratic impediments to integration exist at present. For example, under appropriate conditions, A.I.D. supports family planning programs separate from health. There is a role for the provision of family planning services outside the health system, through pharmacies, for example, to supplement health-related

efforts. The same would be true of nutrition interventions, such as school feeding programs or home gardening, which sometimes fall outside the health system. While immunization against certain communicable diseases common in developing countries--diphtheria, whooping cough, tetanus, and measles among them--should be incorporated into primary health care programs, vertical disease control programs are sometimes warranted. Selected disease control programs usually consist of intensive efforts limited in duration and geographic scope, and beyond the normal range of the primary health care programs. Nevertheless they should be coordinated with primary health care programs where possible to assure that the two are mutually reinforcing. Vertical programs and campaigns should be designed to foster the further development of permanent health infrastructures capable of reaching the population, particularly those without prior or dependable access.

Many of the fundamental health problems that exact a heavy toll in developing countries, especially among pregnant and lactating mothers and young children, can be alleviated and even prevented by providing greater access to basic medicines, contraceptives, and food supplements. Among the prime candidates for wider distribution are contraceptives, rehydration salts, chloroquine, specific antibiotics, certain food supplements, and some anthelmintics. In addition to established patterns of distribution throughout the health sector, private commercial channels and traditional practitioners may play a role in the distribution of these medicines. Other mechanisms for improving

access to basic medicines and related commodities include increasing their availability and lowering their cost through local production or formulation. A.I.D. supports developing country efforts to adopt measures that will build local capacity for production, formulation, or packaging of medicines, contraceptives, and other health-related commodities.

3. A.I.D. Support for Primary Health Care

A.I.D. will support primary health care systems by helping to finance:

- a. Basic as well as in-service refresher training for primary health workers (including traditional practitioners) as close as possible to the site of their future employment; training for paramedicals, nurses, health auxiliaries, and environmental sanitation personnel on a local basis wherever appropriate; and selective in-service training of physicians and other personnel to enable them to function effectively as technical and administrative supervisors in primary health care programs. We particularly seek opportunities to train women, who may be especially effective in providing health services.
- b. Health education materials necessary to teach family planning, basic nutrition, proper hygiene and sanitary practices, and simple disease prevention measures;

- c. Planning and evaluation of primary health care systems that are national or at least potentially replicable on a national scale; data collection management and analysis for planning and evaluation;
- d. Temporary provision of key commodities (e.g., contraceptives, rehydration salts, chloroquine, vaccines, and food supplements) while cooperating with developing countries to build self-sufficiency in domestic production of these commodities wherever feasible;
- e. Administrative and logistics support for the management of primary health care systems, including assistance for adequate supervision and for information systems that can yield valuable data on programs and health status;
- f. Research, principally operations and applied research, into major concerns related to the provision of primary health care, including alternative delivery mechanisms; cost effectiveness and long-term financing alternatives; effective management and referral structures; improved contraceptives, vaccines, etc.; and the influence of socio-economic conditions and development activities in other sectors (especially agriculture) on health. (A.I.D. is currently analyzing some of the "second-generation" primary health care issues likely to emerge during the next decade.)

The areas listed here which A.I.D. is prepared to finance represent those which the Agency deems most critical, and those in which A.I.D.

has been particularly effective. Clearly they do not exhaust the list of primary health care activities that may be necessary or desirable. For example, capital construction is not a priority for A.I.D., and other donor organizations have been traditionally willing to finance the construction of health facilities. Nevertheless, where construction or other infrastructure investments are clearly an integral part of a larger health sector activity, and where other sources of funding are unavailable, A.I.D. will consider providing capital support. While the Agency is principally interested in financing those aspects of a primary health care system closest to the level of small communities, A.I.D. is also prepared to fund activities or facilities at a higher level in the context of an adequate primary health care system.

In this section, emphasis has been placed on efforts that will lead to comprehensive national primary health care systems. The establishment of these systems involves considerable costs for the necessary elements of primary health care programs. Training and payment of start-up salaries for personnel, construction, medical and other equipment that must be imported, and training not available in the country largely constitute initial investment costs; others (supplies, salaries, repair and maintenance of equipment, transportation) are usually recurring costs. Both types of costs must be financed from a mixture of foreign-exchange and local-currency resources. Even among the poorest groups in developing countries it has been found that considerable

amounts of money are spent from private incomes on whatever health care services are available. To the greatest extent possible local residents should be encouraged to help finance the local health care system, through fees, local taxes, provision of goods and services in kind, and more.

A.I.D.-supported health programs should be designed to enable developing countries to sustain them independently. Little research has been done on this problem, and A.I.D. believes that attention should focus on health financing alternatives, including potential reallocation of existing public resources and systems of patient payment. The Agency recognizes, however, that many nations with scarce resources will, at least initially, be unable to assume full responsibility for financing recurring costs. In general the Agency believes that the users of a health care system should bear as much of its costs as is feasible. Their support, coupled with other resources from the community, the central government, or other local organizations, should reduce dependence on outside assistance to cover recurrent costs. In circumstances when resources are scarce, A.I.D. is prepared to help finance some of the recurrent costs of primary health care programs when they are initiated. However, there must be explicit plans for the gradual withdrawal of A.I.D. financing in favor of local funding, even though the transition may only be accomplished over considerable time. A.I.D. will not support highly sophisticated technology or large capital investments which have high recurrent costs and benefit relatively few people.



B. Water and Sanitation

1. The Scope of the Problem

Water related diseases are a major source of morbidity and mortality in developing countries. Good health is dependent, in part, on safe water and hygienic excreta disposal, because so many enteric infections are transmitted through contaminated water resulting from unsanitary waste disposal and nonhygienic food preparation and consumption practices. About three-quarters of the population of developing countries lack access to safe water and adequate means of disposing of human wastes.

Most experts agree that in view of the vast array of enteric and other infections transmitted as a result of contaminated water sources and inadequate means of human waste disposal, improvements in water supply and environmental sanitation should be a fundamental part of any integrated public health program and are extremely important to overall basic development efforts. While the quality as well as the quantity of water are factors in the disease cycle, greater health benefits seem to result from adequate assured supplies of safe water than from limited supplies of purer water. This is because health benefits derive from the hygienic use of water not only for direct consumption but for food washing, preparation, and storage, as well as handwashing and bathing. Water provided in the home, where it is readily available, cuts down on the likelihood of contamination and should be supported wherever it is economically feasible. And

safe water provided in conjunction with primary health care and adequate means of waste disposal will have far greater effect on health status than the provision of water alone, since the combined program ensures that people understand how water affects health and are therefore motivated to use and maintain water systems. Sanitary excreta disposal helps protect water sources from contamination and greatly reduces the opportunities for exposure to infections.

Many factors inhibit access to safe water and adequate basic sanitation. These include low levels of investment in water and sanitation programs, poor program planning, a scarcity of trained personnel, unsatisfactory logistic systems, scarcity of locally manufactured supplies needed for the construction and maintenance of these systems, and insufficient attention to the quality of services provided and to operation and maintenance activities. Rapid population growth exacerbates pollution and sanitation problems, and puts strains on natural supplies of water. Previously adequate local water supplies and sanitation services can now no longer meet the demands of burgeoning towns and villages.

As in primary health care, the chief constraint on the provision of ample safe water supplies and more widely available hygienic means of human waste disposal is not primarily a lack of acceptable technology. Relatively simple technologies have evolved through trial and error, in part through applied research by A.I.D. and other donors. Rather, the major obstacles to the success of water and sanitation systems involve operational and maintenance problems (such as those

discussed above) and the use of appropriate and affordable technologies in developing country programs.

The planner of rural water and sanitation systems must consider a great many factors in the design of these programs. For instance, population density is a critical factor: community systems of piped water, though desirable because they provide water to individual dwellings, are generally appropriate only for denser population settlements. For areas where homes are more widely dispersed, other types of water systems including community water points, roof catchments, wells, and springs may be the only viable and affordable alternative. Certainly the physical availability of water (including rainfall), soil patterns, and topography must be taken into consideration. The types of technology available, the availability of replacement parts, and initial as well as recurrent investment costs are all of concern to the planner.

Socio-economic and cultural factors must also figure in the design of water and sanitation programs. Community participation in the financing, initial construction, and operation and maintenance of low-cost rural water supply and sanitation systems is critical. Thus the motivation of individual communities to participate in and contribute to the design, operation, and maintenance of the system is a crucial factor. Planners should bear in mind the cultural context of water use and excreta disposal, including water taste preference, existing hygienic habits, and other cultural traditions. In many communities the

water source is a meeting place for women and serves an important social function. The level of income in the community and the community's links to markets and access to "modernizing" ideas are factors which encourage participation in water supply schemes and generate demand for higher quality services.

A.I.D. has a historical commitment to provide assistance to developing countries for the improvement of drinking water supplies and environmental sanitation. The United States subscribed to the goals of the International Drinking Water and Sanitation Decade, enunciated at the U.N. Water Conference at Mar del Plata, Argentina in 1977. There the United States joined with the developing countries and other donors in establishing the 1980s as the decade for expanding the availability of drinking water and sanitation. The goal of the decade is to provide "safe" ^{1/} drinking water and adequate sanitation for all by 1990.

2. Basic Components of Water and Sanitation Programs in Developing Countries

From the background and experience summarized above, A.I.D. has arrived at a series of guidelines that incorporate the essential

^{1/}"Safe" is a UN/IBRD term of art, subject to a variety of definitions ranging from "treated water" in urban areas to apparently "uncontaminated" water in rural areas. Safe water includes treated surface waters or untreated but uncontaminated water such as from protected borcholes, springs, and wells. Perfect cleanliness or purity may be unattainable; the objective is to improve substantially the quality and quantity of available water to promote better health.

ingredients of a successful water and sanitation program:

- In the design of water and sanitation projects the technology used should be appropriate to local circumstances, cost-effective, usually capable of being manufactured in the particular developing country, and demanding of maintenance no greater than can realistically be met by the community itself with periodic, routine assistance from the national or regional water and sanitation program.
- Appropriately trained, health workers must be available, not only at the national level, but at "intermediate" levels and at the village or community level. A.I.D. should not attempt to develop large water supply and sanitation projects without technically competent project managers within the A.I.D. missions or readily available on a short-term basis, and adequate technical staffs and consultants in AID/Washington.
- The national level program must have an adequate administrative, fiscal, and management capacity to provide logistic support for water supply and sanitation programs dispersed over large geographic areas.
- The national water supply program must have sufficient support at the national level, and national program administrators should understand the importance of continuing program maintenance as well as the initial construction of facilities.

- There should be cooperation and collaboration among national programs and with other international and bilateral aid organizations to discourage the proliferation of many diverse equipment standards and designs. Designs and equipment should be standardized to the greatest extent possible for ease of maintenance and repair.
- A.I.D. should subscribe to and support, to the extent possible, the application of the WHO Drinking Water Standards or equivalent national drinking water standards in urban, peri-urban, and rural water supply and sanitation projects.
- Local communities should be encouraged to participate in project design, construction, operation, and maintenance of water supply and sanitation systems through:
 - a. health education campaigns and information programs;
 - b. genuine community participation as a requirement for external involvement;
 - c. establishment and training of community committees to be responsible for water and sanitation systems. These activities should be preceded by careful studies of the social and cultural aspects of water supply and sanitation in community life, so that proposed changes realistically consider local implications and probable acceptability.

In short, a balance must be struck between funding of such

project costs as commodities and construction, on the one hand, and funding of other activities necessary for the success of the project: community social surveys, development of community participation, training in repair and maintenance, and the like.

3. Aspects of Water Supply and Sanitation Eligible for A.I.D.

Assistance

While water systems are far costlier on a per capita basis than primary health care, A.I.D.'s top priority in health, we will consider financing some or all of the following components:

- a. Support for the construction or rehabilitation of water systems serving the poor, with emphasis on integrated water supply and sanitation programs implemented in combination with primary health care.
- b. Education activities to improve hygiene and public health knowledge and practices in conjunction with the provision of safe water and sanitation facilities.
- c. Training of host country personnel in the management, technical, educational, community operation maintenance, and development skills necessary for the successful administration of water and sanitation programs.
- d. Activities that foster the ability of developing countries to plan, design, implement, operate, maintain, and evaluate improved water supply and sanitation projects, especially those that serve the nation's poorer groups.

- e. Encouragement for the local manufacture of the hardware required for the construction, operation, and maintenance of water supply and sanitation projects. Standardization of equipment within national or regional programs must be encouraged.

As in primary health care systems, recurrent costs are a substantial factor for the continuing operation of water supply and sanitation systems. Developing countries will need to design financing systems that enable them to support water and sanitation systems, even though complete self-reliance may only be attainable over the long-term.

3. Disease Control

1. The Scope of the Problem

The magnitude of the communicable disease problem, particularly in the tropics, is staggering: hundreds of millions of the world's inhabitants suffer the effects of parasitic and other diseases, and many more are at risk. Reliable epidemiological data on the prevalence and dynamics of communicable diseases in the developing countries are sparse. Estimates of the population infected by schistosomiasis range from 200 to 300 million, with estimates of 1.5 to 2 billion at risk. Malaria plagues at least 200 million people, and the variants of filariasis infect approxi-

mately 300 million people around the globe. Many individuals may harbor several diseases simultaneously. The toll of tropical diseases is greatest in Africa, although many of the same diseases, often in the form of local variants, are of significance in the developing nations of the Near East, Asia, and Latin America.

The principal tropical diseases have their effect on the quality of life of their victims, as well as on a country's national development. The individual suffers the pain and debilitation symptomatic of the given disease. For example, youngsters who constantly suffer from parasitic and diarrheal disease cannot learn as effectively as healthy children. The drain on the individual also results in diminished energies for productive labor, particularly in agriculture. Thus families afflicted with communicable disease -- the norm rather than the exception in many developing regions -- experience nutritional deficiencies as a result of decreased food production and disposable income. The effects of decreased production influence the pace of overall national development. And governments with scarce resources are faced with the additional demands imposed on their health and social welfare system by disease victims.

2. A.I.D. Support for Disease Control

Despite the magnitude of the problem, whose solution far exceeds the capacities of individual developing countries or donor agencies, A.I.D. believes that constructive attempts can be made

to control these diseases. A.I.D. favors the inclusion of immunization against common communicable diseases in primary health care programs. However, special and separate control programs are sometimes necessary for specific diseases. A.I.D. is concentrating on the conditions of greatest public health importance in developing countries: malaria, schistosomiasis (snail fever), and onchocerciasis (river blindness). A.I.D.'s approach to selected disease control is limited by the current state of development of technology to combat these diseases. Moreover, A.I.D.'s ability to address the problem of communicable diseases is limited by the Agency's competing priorities. A.I.D. will therefore support comprehensive malaria control programs and provide funding for carefully designed and monitored operations research programs in onchocerciasis and schistosomiasis control. As technically sound, low-cost approaches for the control of schistosomiasis, onchocerciasis, and other diseases become available and receive formal Agency approval, A.I.D. will consider funding more ambitious disease control programs. A.I.D. will continue to support the development of new approaches to the prevention of certain tropical diseases, exemplified by the Agency's involvement in research on a malaria vaccine.

A.I.D. also carefully designs and reviews its other development programs from the perspective of disease prevention and control. On the one hand, development projects (such as irrigation programs) can aggravate and sometimes even foster disease: both

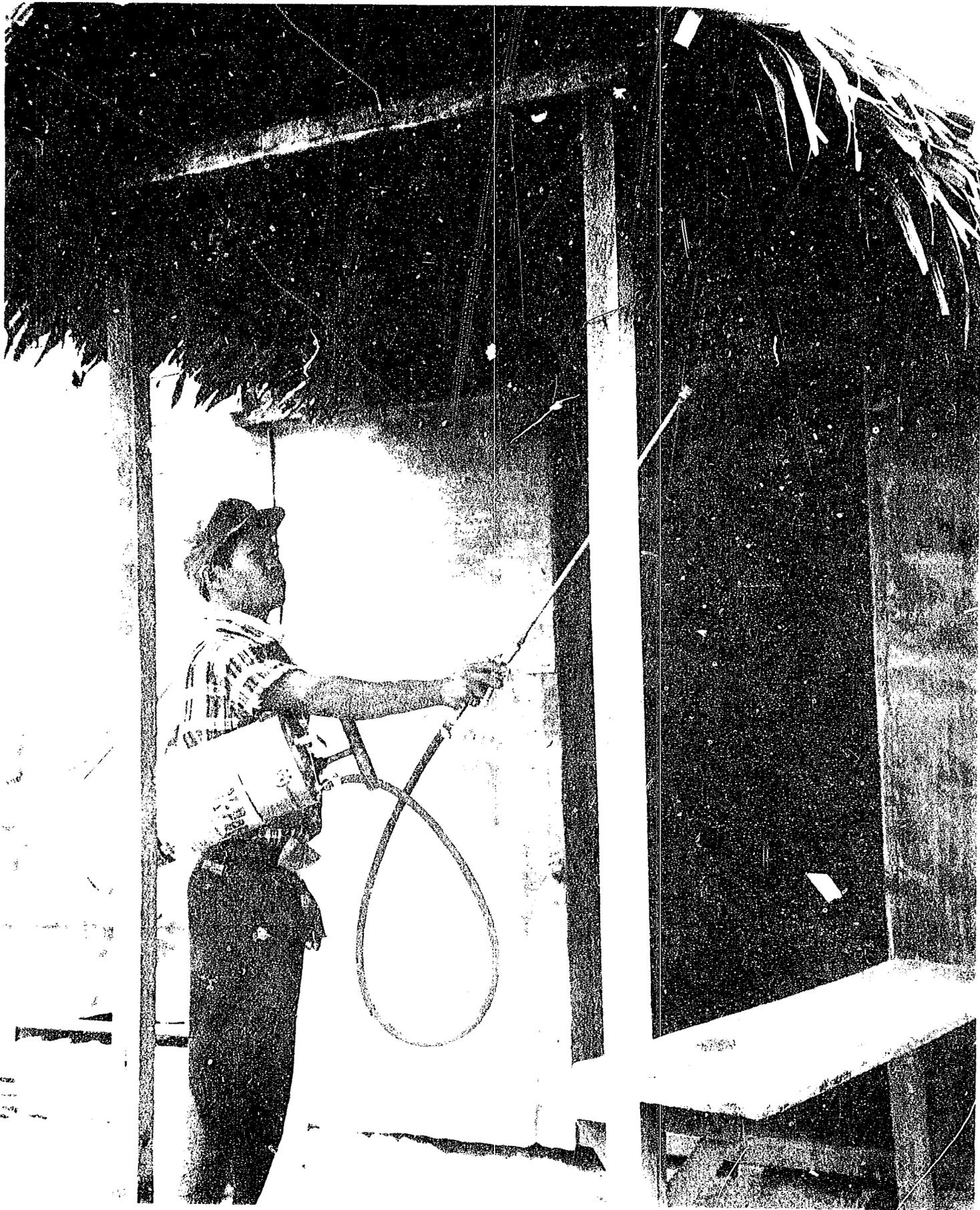
malaria and schistosomiasis often spread in this way. On the other hand, development may be inhibited by disease in areas where particular diseases (such as trypanosomiasis and onchocerciasis) are prevalent. The Agency must be especially careful that the development projects it supports have thorough environmental analyses so that A.I.D. does not unwittingly contribute to the spread of tropical diseases.

In addition to its own programs that address selected communicable diseases, A.I.D. supports multinational disease control activities. At present the most ambitious of these is the World Health Organization's Tropical Disease Research (TDR) program which involves biomedical and epidemiologic research on a variety of tropical diseases.

a. Malaria

Malaria is one of the most widespread parasitic diseases in developing countries in tropical and subtropical regions. It is prevalent on every continent and is found in 104 countries inhabited by over one-quarter of the world's population, or 1.4 billion persons. Fewer than one-third of those at risk are protected by any type of malaria control activity.

Of the approximately 200 million people currently infected by malaria, 80 percent live on the African continent. P. falciparum, the most virulent species of malaria parasite, remains endemic in virtually every country south



of the Sahara. Malaria deaths in Africa alone are expected to exceed one million during 1979, most of them children.

Despite the massive campaign in Asia and Latin America in the 1960s to eradicate malaria, a significant resurgence of the disease occurred in the 1970s. In general, following the initial successes in control programs, progress slowed, stopped, or was even reversed for a variety of reasons: complacency, lower priority accorded malaria control after initial success, or because of inadequate funding, delayed delivery of insecticides, political instability, and technical problems such as mosquito resistance to insecticides and parasite resistance to anti-malaria drugs.

With current technology, the control of malaria can be achieved in several ways, by: a) killing the malaria parasite within the human host with drugs (like chloriquine); b) controlling the adult mosquito vector with residual insecticides (such as DDT, malathion, or fenitrothion sprayed on the inside walls of houses); c) controlling mosquito larvae by use of insecticides or a biological control agent such as larvivorous fish placed in aquatic habitats where mosquitos breed; or d) the systematic elimination or reduction of mosquito breeding places. A comprehensive malaria control program features a combina-

tion of these methods in a program designed specifically for the individual country.

The seeming success of attempts to eradicate malaria during the 1950s and 1960s led to a reliance on the techniques of residual spraying with DDT and treatment with antimalarial drugs. In the wake of the recent worldwide resurgence of malaria, most malaria programs have adopted an interim objective of malaria control rather than immediate eradication. Thus applied field research and the training of malariologists, entomologists, engineers, and large numbers of field workers have assumed paramount importance.

A.I.D. plans to continue its support for malaria control programs subject to the availability of resources. Such programs may include training personnel necessary to conduct control programs, provision of commodities such as pesticides, support of applied field research, and health education activities to promote community involvement in malaria control. In the financing of malaria control programs, A.I.D. recognizes that commodities constitute a significant recurring cost factor, and the Agency is prepared to fund these requirements initially. However, malaria control is a protracted endeavor, and countries should aim for self-reliance over the long-term. Further, A.I.D. recognizes that other development activities, such

as agricultural development and rural resettlement projects located in malarial or potentially malarial areas, should work to inhibit the spread of the disease.

b. Schistosomiasis (Snail Fever)

Schistosomiasis is a chronic debilitating disease caused by several species of the nematode worm Schistosoma. The disease is prevalent in 71 developing countries; 200-300 million people are believed infected and between 1.5 billion and 2 billion are at risk. Schistosomiasis is one of the most common water-borne diseases in the developing world. Control of schistosomiasis can occur at a number of points in the life cycle of the parasite: i) destruction of the snail intermediate host through chemical, biological, and physical methods; ii) prevention of water pollution with the feces or urine of infected persons through safe water supplies, sanitation, and health education; iii) environmental modification to eliminate snail habitats and minimize human contact with the water; and iv) elimination of the parasite in infected humans through chemotherapy.

Molluscicides have the advantage of being a fairly effective means of eliminating the snail intermediate host. However, the use of these chemicals has a number of disadvantages. They are a relatively expensive means of control and affect other living things, such as fish and

crayfish. Because infected humans continue to excrete schistosoma eggs for years and because application of molluscicides rarely achieves complete coverage, the snail population continues to propagate, and repeated applications of molluscicides are necessary. Moreover, several of the widely used molluscicides lack specificity, and the toxic effects of repeated applications of molluscicides on the environment, particularly on humans, are unknown.

Another approach to controlling schistosomiasis is biological control. Non-infectious competitor snails, which crowd schistosomal snails out of their habitats, have been used successfully in several countries. While low in cost and easy to operate, such a program has had limited success, and more research is required in order to determine long-term environmental effects on livestock, crops, man, and other non-target organisms.

Environmental modifications, combined with health education to change patterns of human behavior, present viable alternatives to the use of molluscicides. A number of engineering measures may be applied to reduce or eliminate habitats favorable to the snail. Provision of safe water supplies and hygienic sanitary facilities can diminish human contact with infected water sources. Complementary health education activities are required

to encourage inhabitants to change water use behavior in ways which discourage the transmission of the disease.

Chemotherapy, the administration of drugs that interrupt the parasitic life cycle by eliminating or reducing the number of worms and, thus, the excretion of eggs from humans, is another currently used control method. There are sufficient major disadvantages associated with available drugs, however, to urge caution in their uncontrolled use. Some of the currently available effective drugs are difficult to administer to large groups of persons. They may be unpleasant to take and may produce serious side effects, even at the accepted therapeutic dose. However, recent field trials with some of the newer orally-administered drugs are encouraging, both in efficacy and cost-effectiveness.

A.I.D. will join in multi-donor activities, such as the Tropical Disease Research program, that involve research and development activities to determine the most cost-effective approach for controlling schistosomiasis. A.I.D. will also provide technical assistance to host countries for the design of certain types of schistosomiasis control programs. A.I.D. will consider support for components of control programs concerned with environmental (including engineering) modifications that make the snails' habitats less conducive to their propagation



and that facilitate separate sources of water for different hygienic and social purposes, complemented by health and sanitary education. Support may include training and commodities. A.I.D. will carefully review proposed rural development projects, particularly irrigation and other water related projects, for design features that might directly or indirectly contribute to the transmission of schistosomiasis.

c. Onchocerciasis

Onchocerciasis, or river blindness, is transmitted by the bite of the black fly, Simulium damnosum. It affects some 30 million people throughout the world, but primarily in Africa. In the Volta River Basin alone, more than one million people are affected; more than 100,000 of them are totally blind. Many fertile areas cannot be inhabited fully and may be actually uninhabited because of onchocerciasis.

Onchocerciasis is usually controlled by the elimination of the black fly vector and by drug treatment of infected persons with strict medical supervision. As in the case of schistosomiasis, there are numerous technical problems in interrupting the onchocerciasis disease cycle, including sky-rocketing costs of currently available methods. Currently available drugs should be administered only under careful supervision. Consequently, they are unsatisfactory for large mass treatment campaigns.

A.I.D. has been involved in a large multi-donor effort in the Volta River Basin to control onchocerciasis in seven West African countries. This project, which will span 20 years, has shown that vast infusions of funding will be necessary to control onchocerciasis. The Agency is also concerned about the side effects of the control methods currently available. In light of the complexity and cost of control efforts, it is not possible for A.I.D. to fund onchocerciasis control activities unilaterally. Rather, A.I.D. will consider joining with other donor agencies to help developing countries in their efforts to develop and mount well-designed, economical control programs that can, eventually, cover all of the major endemic areas of tropical Africa. A.I.D. also encourages research and development in onchocerciasis control and will continue to support programs such as Tropical Disease Research aimed at determining cost-effective approaches to control of the disease.

d. Other Communicable Diseases

Excessive mortality and morbidity from certain communicable diseases can often be readily prevented through a variety of simple measures. As previously stated, A.I.D. will continue to support immunization activities aimed at preventing measles and other communicable diseases as part

of primary health care programs, although complementary or supplemental immunization campaigns may be appropriate under certain conditions. The prevention of blindness and diarrheal diseases will be promoted by provision of safe water, education in hygiene to change unsanitary practices, and simple curative care, such as oral rehydration for diarrheal diseases, to be administered through a primary health care system. A.I.D. will also continue support for the International Center for Diarrheal Disease Research in Bangladesh during its initial five-year period of development.

D. Health Planning

A.I.D. recognizes that poor health in developing countries is not solely due to constraints on the health care system. A.I.D.'s health program encourages "planning for health" as a continuing process that takes into account the interrelationships between health status and overall development efforts. For example, provision of food and family planning may be the most important way to improve health especially in the poorest regions. Planning for health thus requires coordination between measures taken in the health sector and development activities in other sectors such as agriculture, education, population, and housing. Health planning should ensure that such measures work in tandem, are realistic, and are clearly related to operational program needs.

The intersectoral nature of effective "planning for health" should be approached in two ways:

1. By analyzing the causes of poor health related not only to availability of medical services but to problems caused by unemployment, poverty, crowding, inadequate housing, poor environmental conditions and landlessness, so that we determine the relative pay-off of different approaches to improve health, and
2. By institutionalizing health planning, at both national and local levels, in health ministries, planning commissions, health councils, finance ministries, or wherever appropriate.

A.I.D. views health planning in developing countries as a process of allocating available resources as efficiently and equitably as possible to promote health. While the health sector of most developing countries includes both public and private sources of medical services, the public component, under the supervision of the Ministries of Health, is usually responsible for serving the needs of the lowest income groups. All too often the health services available in developing countries are inefficiently organized, inequitably distributed, inadequately staffed with trained personnel, and lacking in management capability. As a result, the services are ineffective in improving the health of the poor. The bulk of the health sector's facilities and personnel are usually concentrated in urban areas. Because the costs of operating capital-intensive urban clinics and hospitals consume the largest portions of Ministries of Health budgets, the poorest people in both rural and urban areas are often

denied basic health services. Thus, while the burden of ill health is heavily borne by the rural poor, the benefits of health expenditures accrue largely to the more economically-advantaged in urban areas.

Generally, inefficiency in service delivery often results from over-reliance on "inappropriate" resources. That is, the personnel, facilities, and equipment generally used represent a highly sophisticated technology for which resources in developing countries are scarce and access is limited. For example, too many developing country physicians are trained to deliver medical services according to the conditions of care that exist in developed countries where, in many cases, they received their training. Developing countries have often overinvested in hospitals and sophisticated medical technologies and are experiencing financial problems in meeting their operating cost.

In order to bring about a more efficient, effective, and equitable allocation of resources to improve the health of the poor in less developed countries, A.I.D. advocates a health planning program that emphasizes three types of activities: (1) training of country personnel to design, implement, and evaluate strategies that promote health among the poor, with special emphasis on effective management of health programs; (2) the collection, analysis, and use of information from health projects in the field; (3) collaboration with other donors and developing countries in special studies that advance the state of knowledge of the health and non-health interventions most effective in improving health in developing countries.

(1) Training, the hallmark of A.I.D.'s health planning program, is essential for personnel of developing countries that have made a commitment to reallocate their resources towards improving the health of the poor. Trained personnel are needed at all levels in developing country health systems to plan, implement, manage, and evaluate programs. Direct support of training programs in health planning in developing country teaching institutions encourages self-reliance in articulating social welfare goals, formulating strategies for achieving those goals, and marshalling available resources--internally and externally--to implement appropriate health-promoting strategies. Particularly at the local level, where significant immediate increases in health b are unlikely, expertise is needed to design and implement integrated programs for basic health, nutrition, and family planning services.

(2) A.I.D.'s health planning program lends technical assistance to developing countries to design and implement data collection systems in conjunction with health activities. Reliable data collection systems can help health planners in their analytical capacity to identify the needs and preferences of rural people for health services, the extent to which services are being used by those for whom they are intended, their cost, and, ultimately, their effectiveness in meeting desired objectives. These data can also be used for project development, evaluation, and redesign.

(3) A.I.D. believes that it is important to identify and measure the interrelationships among variables that affect health status and to identify those areas (in health, agriculture, education, and so on) that offer the greatest potential for effective program interventions. Special studies should focus at the field level, and information collected at the point of service delivery should be analyzed and compiled in a format that is useful to program managers, health planners, and decision makers in less developed countries. Under some circumstances, health sector assessments can be useful as a means of gathering information needed for health planning or as a method for engaging host government leaders in the examination of existing health problems. A.I.D. believes that institutions in developing countries should be equipped to assume the lead in defining areas for study. Training indigenous health professionals in the techniques of conducting well-designed studies should be an integral part of the training programs in health planning and management.

Finally, A.I.D. supports collaboration among donor organizations in health planning activities. A significant degree of compatibility in the health planning methodologies of A.I.D. and WHO has been established, and still greater collaboration is anticipated in the future.

VI. HEALTH AS PART OF INTEGRATED DEVELOPMENT

A.I.D. is committed to a multi-sectoral approach to development, and nowhere is this more appropriate than in the field of health. Health has significant linkages to nutrition, to population, to education, and to agriculture. The policy implications of these linkages are reviewed below.

A. Health and Nutrition

Adequate nutrition provides the human body with energy, protein, vitamin, and mineral resources needed for internal metabolic processes, for growth, for work, for combatting infection and injury, and for reproduction. Inadequate nutrition manifests itself in many ways: reduced capacity to perform work, inability to concentrate in a learning environment, growth failure, and increased susceptibility to disease. Malnutrition encourages the onset of disease and increases its severity, while disease prevents the proper absorption of nutrients by the body and increases the demands of the body for energy. This interaction between disease and malnutrition is most evident among young children. It has been estimated, for instance, that two-thirds of all children in the developing world are malnourished to some degree; moreover, about one-half of all deaths among children under five years of age are due to respiratory and diarrheal diseases superimposed on varying degrees of malnutrition.

Because of the interdependence of health and nutritional status, A.I.D. supports health projects that involve a broad range of nutrition interventions. Important among these are efforts to promote breast-feeding. Breast milk is nutritionally adequate, is non-allergenic, and provides important immunities during the first six months of life. Other nutrition interventions include nutrition planning, nutrition education, nutrition surveillance and rehabilitation, development of garden projects, improvement of sanitation, and, in conjunction with breast-feeding, the provision of appropriate supplemental foods. Finally and most important, the concentration of primary health care programs on women of child-bearing age and children under the age of five has the effect of focussing health interventions on those most exposed to the risk of malnutrition.

B. Health and Population

The principal cause of increased rates of population growth in the developing world over the past several decades has been the general decline in infant and child mortality. In many countries, infant and child mortality has decreased far more rapidly than birth rates, so that population has grown quickly; moreover, the growth has come among the dependent age group, so that in many developing countries one-half of the total population is under 15 years of age. This places a heavy burden on the productive segment of society, and on limited resources in general.

High levels of fertility are likely to produce a wide range of health problems for mothers and children. The "maternal depletion syndrome," for example, describes a common situation in developing countries, where repeated pregnancies and lactation leave mothers in poor health and malnourished for long periods of time. These conditions are associated with low birth-weight infants, poor lactation, and high rates of child morbidity and mortality. This may lead cyclically to further pregnancies, as well as to further declines in health and nutrition.

A drop in birth rates must accompany lowered mortality if developing countries are to realize substantial per capita improvements in income, and if they are to meet the basic needs of the population for food, health, education, and shelter. A.I.D. advocates the integration of family planning with maternal and child health services and all components of primary health care systems wherever feasible.

To lessen the adverse impact of population growth on development progress as mortality falls, and to improve the health of mothers and children, every effort should be made to encourage voluntary fertility control. The provision of family planning information and services is essential, but it is also important to include development policies and programs that promote desire for smaller families. More equitable income distribution, improvements in women's education and employment opportunities, and equal access to education for boys and girls have all been associated with growing interest in family planning.

C. Health and Education

Education is a vital element in development strategies everywhere, but it is all too easy for the educational process to be undermined by health and nutritional problems. Unhealthy and poorly nourished children are apathetic, slow learners, who fail to make the best use of scarce educational facilities; moreover, ineffective education jeopardizes the future of both child and nation. Thus A.I.D. support for health and nutrition programs aimed at young children is in a real sense support for successful education.

Education and health programs are linked in other ways as well. Many health goals require changes in behavior that can be promoted through appropriate education. Primary health care facilities depend heavily on making people aware of and willing to change poor health habits; potable water projects require people to be informed about correct use of both water and equipment if full benefits are to be obtained; disease control campaigns require the ability to identify, isolate, and seek treatment for infected persons, while relying on media to transmit information about available services. A.I.D. believes that health professionals at all levels should be aware of the importance of effective communication and be able to make use of formal, informal, and non-formal educational systems; at the same time educational systems of all types should incorporate health information into the general learning process. A.I.D. supports programs that attempt to achieve integration along these lines.

D. Health and Agriculture

Without a thriving agricultural sector, good health for the majority is probably an impossible dream in most developing countries. Agricultural growth is needed to increase per capita food availability, which is directly related to nutritional status, to generate employment and increase incomes in both rural and urban areas, and to provide the internal revenue and foreign exchange needed to develop and maintain adequate national health systems. In the poorest countries especially, improvements in health are clearly dependent upon improvements in agricultural productivity. Thus A.I.D.'s efforts to further agricultural development throughout the developing world can support both agricultural and health goals.

At another level, efforts to promote agricultural change may actually endanger health and nutritional status. Irrigation programs, for instance, can create large areas of stagnant water where disease vectors breed freely; low-cost measures to eliminate such conditions can have a major health impact. In other cases, planned agricultural change can lead to altered consumption patterns and nutritional status among some or all segments of the target population; programs to increase the value of farm output must be tempered with a concern for consumption implications. Care must be taken to insure that the critical activities of food production, distribution, and processing and child feeding are not disrupted. A.I.D. procedures related to environmental impact assessment and social soundness analysis provide mechanisms for predicting and planning to anticipate and counteract potentially adverse effects of agricultural

development projects. Many project planners now attempt to take into account health impacts within these frameworks, and A.I.D. encourages this practice. In addition, there is scope for integrated development projects that incorporate more fully nutrition and health components into agricultural and other programs.

VII. THE DEVELOPMENT OF A.I.D. FUNDED HEALTH PROJECTS: A COOPERATIVE ENDEAVOR

In the design of health projects, as in all of its development activities, close collaboration between the Agency and individual LDC governments and other donor organizations is essential. The concept underlying specific health interventions should originate from within the developing country. Health programs should be designed so that a country finds them affordable and maintainable; whenever possible, their design should avoid the necessity of prolonged foreign financial and technical assistance. The precepts of any health project should reflect an understanding of the socio-cultural -- as well as economic -- reality of the country.

A.I.D., like other donor organizations, has its own requirements for the development of projects and its own internal review mechanisms. In general, the responsibility for the development of bilateral health projects lies with the A.I.D. field mission in the specific country, or with the regional field office in the case of projects addressing health programs on a regional basis. Throughout the process of designing a project A.I.D.'s central offices in Washington provide support as required.

While the bulk of A.I.D.'s activities in health take the form of bilateral projects, e.g., grant or loan agreements negotiated with the LDC government, a significant portion of A.I.D.'s health efforts take other forms. A.I.D. coordinates its programs with other U.S. government

agencies involved in international health -- for example, the Department of Health, Education, and Welfare's Office of International Health and the Peace Corps.

A.I.D. is also involved in a series of multilateral projects in health, including the Tropical Disease Research Program, the International Diarrheal Disease Research Center in Bangladesh, and the onchocerciasis control program. A.I.D. is interested in increasing its participation in multilateral projects and in cooperating with other donor agencies such as UNICEF and the World Bank in supporting health activities.

Finally, A.I.D. will continue its long history of collaboration with private and voluntary groups in the U.S. and elsewhere which have had extensive experience working in health programs in developing countries. The total yearly amount contributed by these organizations to health is substantial, and A.I.D. will continue to coordinate with and give direct financial support to their successful projects. A.I.D. will also continue to procure specialized, highly technical assistance from the U.S. academic community and from private consulting firms, as required.