Review of the AID Health Strategy: A Committee Report (1978)

Pages
38

Size
5 x 9

ISBN
0309336287

AID Health Strategy Study; Division of International Health; Institute of Medicine

National Academy of Sciences Institute of Medicine

REVIEW OF THE AGENCY FOR INTERNATIONAL DEVELOPMENT HEALTH STRATEGY

A Committee Report

of the

Institute of Medicine
Division of International Health

September 1978

Supported by Agency for International Development
Contract No. TA-C-1478

National Academy of Sciences
Washington, D. C.

NOTICE

The project that is the subject of this report was approved by the Governing Board of the National Research Council, whose members are drawn from the councils of the National Academy of Sciences, the National Academy of Engineering, and the Institute of Medicine. The members of the committee responsible for the report were chosen for their special competence and with regard for appropriate balance.

This report has been reviewed by a group other than the authors according to procedures approved by a Report Review Committee consisting of members of the National Academy of Sciences, the National Academy of Engineering, and the Institute of Medicine.

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2101 Constitution Ave., N.W.
Washington, D.C. 20418
202-389-6187

Publication IOM-78-05

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INTRODUCTION

In the winter of 1978, the Agency for International Development (AID) asked the Institute of Medicine to review and comment on two internal documents* that were developed to articulate Agency policy and program guidelines in health, population, and nutrition. AID programs in health related areas have been growing steadily in the past decade. In FY 1978, AID's budget for health, population, and nutrition totalled about $410 million, approximately double the amount available in FY 1976, and it appears that funds for this purpose may be further augmented. There is understandable concern that this money should be spent effectively.

In response to the Agency's request, the President of the Institute of Medicine established a Steering Committee in April, 1978 to review the AID health strategy documents. The Committee held two formal meetings to address this task. Because of the short time available, the Committee

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* 1) "United States Policy and Program on International Health as Related to Development Assistance," (Draft #2), Office of Health, Development Support Bureau, Agency for International Development, February, 1978.
  2) "International Health in Relation to Development and Supporting Assistance," Strategy Development Working Group, Subgroup on Development and Supporting Assistance, Bureau of Program and Policy Coordination, Agency for International Development.

met only briefly with representatives of the AID staff and was unable to visit actual field prcgrams or conduct additional discussions with personnel from various levels of this and other agencies. Consequently this report is not a definitive study of ongoing AID activities but rather a single point in time review of the program guidelines--i.e. the Agency's health strategy--as outlined by AID in the documents provided to the Committee. The opinions expressed in this report represent the consensus of a group with long experience in public health, medical care and tropical diseases, environmental sanitation, population planning, and development economics.

The consideration of a proposed strategy for United States assistance in international health requires perspective. Clearly there are some things the U.S. can do very well, and some that it cannot; some that developing nations can do very well, and some that are probably well beyond their current capabilities. Every country receiving assistance has its own ideas, concepts, and aspirations. So does each of the many donor countries and agencies, in addition to the United States Government, that contribute assistance. It thus seems wise for the U.S., which contributes a relatively small proportion of the total amount expended for health services in developing countries, to focus its attention on programs that make the most effective use of U.S. expertise and that emphasize collaboration with others, so the funds available have maximum impact on the problems addressed.

THE AID DILEMMA

In attempting to assist developing nations with improving their health status, AID is faced with a series of impressive obstacles. First and foremost is the enormous burden of health

problems and the limited resources--both indigenous and external--which realistically can be brcught to bear. A few stark statistics bear relating. Of the 150 countries holding membership in the United Nations, more than 100 are classified as "developing countries." They contain over three-fourths of the world's population. Life expectancy for their citizens averages 51 years compared to 72 years in industrialized nations. In these countries, the major mortality occurs among the very young. There are countries in which one-third of children fail to reach the age of 5. Malnutrition, principally protein-calorie deficiencies, coupled with infection, accounts for a large proportion of these deaths. Most of the less developed countries are tropical; high temperatures limit human energy and permit year-round breeding of disease vectors. Little money is available for health and medical care. Public expenditures for health constitute approximately 1 to 2 percent of the gross national product, and the ratio of private to public expenditures is estimated at about four to one. In the 40 poorest countries in which AID is concentrating its efforts, the Agency projects that a total of only about 17.5 billion dollars from both the public and private sectors will be available annually for health and medical care in the immediate future. (This is a small amount when compared with the 160 billion dollars spent last year for health in the United States.) Of this total, outside donor assistance in 1975 was just over 1 billion dollars. AID's contribution of approximately 400 million dollars was about 2 percent of the total expended for health in these countries. However, considering that local funds are largely locked into supporting salaries and other operational costs, the AID and other donor funds which are available for innovative purposes, potentially can have an important impact.

To improve health status will not be easy. Only 10-15 percent of the population in developing countries have access to "scientific" health services. Less than one-fourth of the

population has access to protected water supplies and sanitation. At least 50 percent of children do not finish primary school, and unemployment rates often range from 20-40 percent. Current growth rates of major cities in the developing countries are as high as 6 percent per annum, doubling their populations within 12 years. Forty percent of the population in the developing world has an annual per capita income of less than $200.00.

Projections for the future are not encouraging. Because of rapid population growth, the average increase in per capita GNP over the next decade in two-thirds of these countries is projected at 1.7 percent a year. Funds available for for health from government sources are expected to range from 50 cents to $2.50 per person per year. These then are the realities of the world in which AID must design, plan, and implement its program.

AID's ability to respond to these overwhelming realities is also complicated by the fact that AID is a creature of government, subject to shifting political and national priorities and agendas, statutory restrictions of considerable complexity, and an uncertain future budget. Thus, most of its projects are short-term in outlook. The centralization of project approval, and Congressional requirements that projects be approved by Congressional committees have led to gross time lags between recommendations developed in the field and implementation. The shortage of technical personnel within AID is a further deterrent to effective performance.

However, despite these problems and obstacles there have been significant and successful AID contributions to better health in developing countries. With the annual appropriation for health, population, and nutrition now approaching a half-billion dollars, proper selection of a limited set of objectives together with an appro-

priate strategy for achieving them, and the careful creation of linkages to the technical and scientific expertise available in the U.S. health, social science, and engineering communities, there are opportunities for AID to make yet more important contributions to improving health in the countries in which it operates.

The underlying challenge to AID is to develop ways whereby the people who have the problems--those in the developing countries--can be brought together with those who may be able to assist with developing solutions. As succinctly stated by Dr. Walsh McDermott some years ago, "The biomedical goal of international development, or purposeful modernization, is to modify the disease pattern of an overly traditional society to a disease pattern that will not act as a major drag on a modernization effort."* Expressed differently, the question is not merely 'how can the health of a population be improved?' but 'how can people be helped to obtain a level of health that is compatible with maximum development?'

PROPOSED AID STRATEGY AND COMMITTEE OBSERVATIONS

The documents reviewed by the Committee propose a strategy that would direct AID efforts into five major program areas: (1) health planning; (2) low-cost integrated delivery systems; (3) population planning; (4) nutrition; (5) environmental sanitation and tropical disease control. This section includes a brief description of the AID guidelines for each of the

* McDermott, W., "Modern Medicine and the Demographic-disease Pattern of Overly Traditional Societies: A Technologic Misfit." Journal of Medical Education, 41:137, 1966.

program areas, and the respective Committee comments. Two additional sections present Committee views on research and operations that relate to the entire program.

The Committee's principal concerns are: the emphasis on complex health planning exercises and integrated delivery systems; the lack of an adequate research effort and the need for a mechanism to manage research; the need to identify the areas of significant expertise within the U.S. and to involve that expertise in international health; and the failure of the AID documents to focus more sharply on U.S. support of institution building in the host countries.

(1) Health Planning

AID GUIDELINES

As an initial objective, AID outlines a program to support the development of a national health planning capacity in each AID assisted country. The argument is that there is limited health planning capability in the less developed countries. They often have little information on the nature or extent of health problems. There is a serious maldistribution of health resources which favors curative care and facility-based services for the more fortunate, and leaves the poorest and most isolated with few or no services. It is proposed that AID prepare country Health Sector Profiles which give an overview of current health status and health programs and identify areas for potential U.S. assistance, and that, in countries where health planning is inadequate, extensive Health Sector Assessments be produced in cooperation with host governments. The Assessment should inventory and analyze in detail demographic and health-related data preparatory to the development of a national health plan. AID proposes assistance with the development of a national health planning capability and support for training health planners in both U.S. and developing country sites.

Although the Committee agrees with the importance that AID attaches to health planning, the emphasis on paper planning exercises seems misplaced. According to the AID guidelines, two types of documents are suggested: the Health Sector Profiles, in which existing information on health status and host government priorities and policies are assembled by AID with the purpose of identifying appropriate areas for U.S. assistance, and the Health Sector Assessments, which are to be in-depth analyses of available data carried out by multi-disciplinary teams of technical advisors in cooperation with host country counterparts. The purposes of the Health Sector Assessments are to provide a detailed perspective of the health sector for planning purposes and, at the same time, to upgrade the planning skills of local personnel.

The Committee acknowledges the importance of rational planning in project development. Within the economic planning spectrum, health planning has been given low priority in most countries, and there still is a bias in favor of health expenditures for conventional hospital-based medical systems. Therefore, as AID has aptly recognized, there is a necessity to encourage the collection and dissemination of information which provides evidence of the areas of neglect, and argues in favor of a more reasonable apportionment of both internal and external funds. However, the Committee believes that the emphasis in health planning assistance should be heavily weighted in favor of building a health planning capability in the host countries, and that pre-project one-shot exercises of collecting and analyzing what often are inadequate and unreliable data should be minimized.

Health planning is an inexact and very complex process that involves changing the behavior of people, including politicians, health

professionals and development planners. There are always new data available and the realities of the current socio-political environment require continually revised interpretations and recommendations. Many of the prescribed changes are bound to be viewed as inappropriate and threatening by the parties concerned and are strongly resisted. Hence, even in countries where reliable data are reasonably abundant and skilled analysis is available, it usually takes years before noticable changes can be effected.

In most AID assisted countries there is inadequate expertise in the areas of data collection and analysis, and little experience with interrelating the data from health and other sectors. It is in the technical aspects of health planning that AID can provide useful and qualified assistance. The development of a health planning capability in which there are people with the necessary technical skills to influence the political process, will require a long, experimental joint effort by experts from the U.S. and other donor countries, and people in the host countries.

It is presumptuous of the U.S. to claim great success in this area, and there is not a large reservoir of proven health planning expertise in this country. However, there are many aspects of the problem for which the U.S. has developed appropriate technologies, particularly in the areas of management science and data handling, and there are talented people who could provide competent assistance in these fields. AID must draw upon appropriate management groups and development planning institutions in the academic and private sectors which can supply individual technicians and also provide training and other institution building services to relevant organizations in the the host countries.

The Committee understands the emphasis that AID has placed upon building host country health planning capabilities, but believes that

the production of elaborate planning documents is of dubious value. Health planning efforts should be carried out by host country people with U.S. technical cooperation being made available over the period of time required to build indigenous skills.

(2) Low-cost, integrated delivery systems for health, nutrition, and population.

AID GUIDELINES

Throughout the documents, AID takes the view that single purpose programs, i.e., those directed toward population planning, smallpox or malaria eradication, or other specific problems, have not provided basic health care coverage for the majority. Instead, they suggest over the next five years support of demonstration projects that develop locally acceptable, affordable, and replicable delivery systems for integrated primary health care, and support to all AID assisted countries in the development of national integrated health, nutrition, and population coverage within the decade. The argument runs that at present, less than 15 percent of the populations in these nations have regular access to health services. With much of the national health appropriations already committed, only about one dollar per person remains available for all health services for the majority. In order to extend coverage to this majority, AID proposes to emphasize the development of low-cost delivery systems which are planned and supported by local communities and utilize indigenous personnel. AID further suggests that such integrated programs be organized to provide services primarily to children under 5, and and couples of reproductive age.

The Committee is apprehensive about the high priority currently accorded the development of low-cost integrated health services to provide

health education and basic primary care to the poor majority, and particularly the pace at which the developing countries are being urged to move along this inadequately tested course. The ultimate goal is eminently reasonable and, today, internationally fashionable. It is promoted by WHO and endorsed by other donors and numerous developing country governments. Nonetheless, the documents suggest that the development of such systems is not only an ultimate goal but the next step to be realized within a few years in the developing countries. Although AID has sponsored a number of pilot projects since 1972, the Committee is not aware of any strong evidence that this approach has been demonstrated to be clearly cost-effective and ready for widespread and relatively rapid replication. The often quoted model of the day--barefoot doctors in China--evolved over 20 years under an efficiently controlled, decentralized government with a commitment to the widespread distribution of services, and in a unique society. Chinese health workers, even at the most peripheral level, are trained to provide basic curative and preventive services, have a steady supply of simple medicines, and can rely on a referral system that apparently works. However, even the Chinese themselves assert that their system is not replicable in other societies.

The problems inherent in introducing low-cost integrated village level health services must not be underestimated. Lacking in virtually all developing countries is effective management--leaders at each level who understand specifically what they are to do and how they are to do it. Lacking are systems of assessment and reporting to assure that what is intended is being accomplished. Lacking are programs for training individuals for performing the requisite tasks. Lacking are the communication systems and facilities for patient referral. Lacking also are basic distribution systems to assure that drugs, vaccines, and other required commodities reach

the point of delivery regularly and in satisfactory condition. The development of the support systems that are absolutely essential to the success of an extensive delivery system is a long, difficult, and expensive process.

The Committee agrees with AID that it is reasonable to initiate experimental integrated health service projects in countries where they have not been tried, but it is important that AID administrators--both in Washington and in the field--recognize that they are experimental projects, that they are very complex to set up, and that it is by no means certain that they will be either effective enough or low enough in cost to be worth replicating. AID should strongly resist pressures to expand beyond the experimental stage until there is reasonable evidence that it is useful to do so. This will necessitate very careful evaluations that continue <u>after</u> the major outside help is withdrawn.

The Committee believes that the experimentation should not preclude programs directed toward more categorical objectives. Programs to deliver contraceptive devices and contraceptive advice, nutrition supplementation, smallpox vaccination, and others have faced formidable tasks but they have achieved a degree of success. In such programs, auxiliaries, literate and illiterate, can and have played key roles. The development of a system directed toward multiple objectives vastly increases the complexity of the task while sharply reducing its probable sucessful implementation. The time honored axiom that one must first learn to crawl before learning to walk seems uniquely applicable to the development of a low-cost integrated health service scheme. In the Committee's judgment, it may make sense in some situations to develop an operative structure for the execution of one or two functions, gain experience and the trust of the recipients, then add an additional function, and later

yet another. Single function systems may be misfits if each is restricted indefinitely to a single purpose, but they need not and should not be.

In brief, although the ultimate goal of integrated low-cost delivery systems may well be appropriate, it seems utopian to believe that it is achievable in a matter of a few years or even a decade. The Committee believes that moving toward this goal in any country requires progressive, step-wise evolution, beginning first with hard-nosed proven technologies. One does not construct a building by commencing work on all floors simultaneously.

The Committee therefore recommends that AID proceed slowly in supporting the broad multi-purpose approach proposed in the strategy documents. Although experimental projects designed to provide integrated health services should be supported, they should be carefully evaluated and should not be replicated too hastily. Categorical programs should not be neglected during this period of experimentation.

(3) Population Planning

AID GUIDELINES

AID has rapidly expanded its population planning programs in recent years and now assigns the largest proportion of its funds for "health" to this sector. Program objectives are to create an awareness among developing nations of the critical significance of population growth to national developmental objectives, and together with other donors, to assist developing countries in implementing effective population policies and programs consistent with national goals. AID proposes to expand low-cost efforts to extend family planning services, support research and population program management, and further encourage developing countries to provide legal and

budgetary support for family planning programs. Integration of these services with other health and nutrition services is stated as an objective.

AID has become increasingly involved in population programs. Approximately 16 percent of all development assistance funds are now committed to this field. The data suggest that this targeted program has made substantial progress. The current strategy is to promote, where possible, the integration of family planning with health, nutrition, and other national development networks. The potential hazards implicit in moving rapidly toward integration without experimentation have already been discussed. The Committee therefore believes that AID should continue its present program while exploring alternatives on a pilot basis.

The integration debate usually focuses on whether integration will increase family planning participation, but if this is the objective, the debate is meaningless. A program structure will not insure effectiveness in and of itself and either integrated or single function programs that are poorly managed or insensitive to cultural needs or preferences can fail.

The AID documents indicate a concern with the problems of low rates of participation among women in the reproductive age. Arguments that improved economic, social, and cultural conditions in developing countries are a precondition to acceptance of family planning are partly refuted by studies suggesting that women from all social strata in many of the evolving nations want contraceptives but do not have adequate access to them. U.S. assistance in family planning should be given priority as a short-term objective while other long-range development programs that may help change people's socio-economic status and interrelated attitudes and behavior are simultaneously evolving. However, there is an important

caveat here. The proposed AID health strategy implies that behavioral change can be managed. In practice this has proven extraordinarily difficult and the U.S. has no particular expertise in this area.

The important factors affecting the success of family planning programs appear to be level of education, income, the infant mortality rate, urbanization, the status of women, and the general "climate of acceptance" to birth control, together with the availability of contraceptive information and equipment. It is difficult to assess the relative importance of the "climate of acceptance." However, the apparent failure of the AID program in an Asian country in which information and contraceptives were made available in the the absence of an adequate local commitment suggest that the "climate of acceptance" is a critical variable. A U.S. population planning effort should be adjusted to meet the specific needs of different populations, and it must be perceived by members of the population as being in their own best interests and as being controlled by organs of their own society.

The Committee believes that AID should support more prospective studies to test the behavioral and health effects of varied approaches to delivering health and population services. Additional research is needed on health beliefs and practices, morbidity differentials within developing countries, and the nature and consequences of migration.

While integration at the planning, programming, and service levels should be viewed more as an ultimate goal than a rigid guideline, integration at the research level may be feasible. Trained social scientists are relatively scarce in LDCs. Yet the scientific methods for carrying out competent social science or demographic research are similar whether the area is fertility, mortality, or utilization of health services.

Finally, the Committee believes that AID should continue, and preferably strengthen, its cooperation with other agencies involved in family planning. Programs of the World Health Organization, The World Bank, other multilateral and bilateral donors, and voluntary agencies, should be coupled with AID programs where appropriate.

(4) Nutrition

AID GUIDELINES

To assist developing countries to reduce malnutrition among the poor, particularly children under the age of 5, and women in the reproductive ages, AID proposes to help local groups develop nutrition planning capabilities, and to assist countries in integrating sound nutrition planning with other national development efforts. AID proposes to launch selected efforts to evaluate the effect of agricultural policies on the production and consumption of foodstuffs, and to assist those projects that appear to improve the quality, quantity, and distribution of foods produced. AID also proposes to utilize selected food supplements, such as vitamin A and iron, to improve the nutritional status of children and mothers, to encourage a return to breast feeding, to develop nutrition education programs, and to support research projects designed to develop low-cost nutritive foods. Research programs to study relationships between nutritional deprivation, health, and population growth are also recommended. As with population planning initiatives, AID plans to support integrating nutrition programs with health delivery systems.

Nutrition forms an important part of the AID program and in general the AID nutrition strategy that emphasizes the development of local nutritional planning capabilities seems reasonable. However, the Committee believes that the P.L. 480,

(Food for Peace) program should be more closely coordinated with the AID nutrition effort. Under Title II of P.L. 480, almost $400 million worth of food is distributed, of which nearly 40 percent is for maternal and child health feeding programs. Food supplementation is really only a stop-gap measure that often does not reach the most needy members of the community, and can interfere with indigenous agricultural efforts. Nonetheless, coupling the food distribution with educational measures, should result in more positive effects over the long-term. A formal linkage between the AID nutrition program and the distribution, largely carried out by private voluntary agencies and the World Food Program, would ensure that food supplements are accompanied by efforts to encourage improved dietary and health habits and local self-sufficiency. Furthermore, all P.L. 480 programs should be coordinated with national nutritional planning so that the agricultural and health sector implications are carefully assessed on a national level.

The World Food and Nutrition Study* recommends that American foreign assistance should put far more emphasis on nutrition-related research. The Committee concurs. The study recommends that AID support food and nutrition research in the following ways: 1) help establish research and development capabilities in the developing countries; 2) support further development of international research centers and programs; and 3) support the involvement of U.S. scientific groups in research concerned with food and nutrition in the developing countries.

Title XII of the Foreign Assistance Act of 1975 provides important legislative support for a major effort involving U.S. universities in long-term food production and nutrition research and in

* "World Food and Nutrition Study," National Academy of Sciences, 1977, pp. 140-145.

institution building of regional and national centers in the developing countries. If, as the NAS report suggests, AID were to support collaborative research programs linking U.S. and overseas researchers over a period of five years or more, this relatively long-term commitment could help provide the stability which would attract serious U.S. researchers and facilitate the training of developing country scientists. Joining forces with universities in such a program would have the additional advantage of developing closer linkages between AID and the U.S. scientific community.

The Committee agrees with the NAS suggestion that in order to manage such a program AID will have to increase its own technical staff. It further agrees with the recommendation that a joint AID-university committee be established to coordinate the training aspect of building research capabilities in the developing countries, and a small committee of government and outside people be set up to advise on the establishment and support of international research centers and programs.

(5) Environmental sanitation and tropical disease control.

AID GUIDELINES

AID proposes that it assist the developing countries to reduce the risks created by pollution of water and soil and by the presence of major vector-borne diseases. AID proposes to prepare environmental health assessments which include demographic and epidemiologic studies to determine the extent and nature of the biological impact of the environment on human life and the status of current programs and government priorities. Furthermore, all capital development project proposals are to be accompanied by an analysis of the potential environmental effects. AID proposes to concentrate on rural water and

basic sanitation projects, leaving urban programs primarily to IBRD and regional banks. AID suggests collaborating with other donors in supporting national water supply and sanitation institutes to provide the skills necessary to operate, maintain, and evaluate programs. Research on the development of appropriate technologies for water supply and basic sanitation measures, enteric disease prevention, and malaria control will be promoted. Studies on schistosomiasis and the development of plans for its control to be considered by AID and other donors are also suggested. Malaria control programs will be assisted in countries where there is a national commitment.

Environmental health--including tropical disease--is a very broad topic. The AID document discusses them together, focusing on water supply and basic sanitation as one component, and disease prevention and treatment as another. While environmental problems and control measures are often interrelated, these subjects will be considered separately in this section as the programs are distinct.

(a.) Water and sanitation

The desirability and benefits of providing a safe water supply are generally considered so obvious and important they are not subject to question. This initiative, however, needs to be evaluated with care. Although there is some empirical evidence that better access to protected water is associated with lower rates of diarrhea,* the provision of safe drinking water is

* "Village Water Supply," Robert J. Saunders and Jeremy J. Warford, A World Bank Research Publication, Johns Hopkins University Press, 1976, p. 39.

only part of the problem. The effects of environmental sanitation measures are inextricably linked with nutrition, population, health, and with other vector control strategies. The provision of safe water and sanitation systems must be complemented by enduring household and other environmental improvements, and by health education efforts to improve eating, bathing, and cleanliness habits. Thus, more attention should be given to developing and supervising an interdisciplinary approach.

A second consideration, which has been almost universally overlooked, but is a concern of the Committee, is the problem of maintenance. There are countries in which the landscape is littered with non-functioning wells or pumps that are in disrepair, either because no one knows how to fix them or spare parts are unavailable. Donor countries and agencies generally regard maintenance problems as either unattractive for assistance or as a responsibility of the national government concerned. The net effect, however, is quite the same whether the well is dry or doesn't function. Unquestionably, one essential missing element has been adequate involvement of the communities in which these pumps have been placed. The users of the "solution" must be made a part of the process by which corrective measures are identified, designed and constructed so that they will participate in the long term operation and maintenance of the system. The Committee believes therefore that AID should put significant emphasis on water and sanitation system programs that test the long term maintenance implications of alternative mechanical approaches and organizational arrangements.

(b.) Endemic disease control

Control of disease in the tropics may be a more apt reference than the control of tropical

diseases. Morley's table* of deaths among children in an African village shows that pertussis, measles, tuberculosis, and smallpox accounted for 26 percent of all deaths. In addition, tetanus is known as a major problem among newborns, and it is now appreciated that poliomyelitis with residual paralysis is far more prevalent than previously believed. These diseases are largely preventable by vaccines.** Although there are serious obstacles to implementing extensive vaccination campaigns in the developing countries, there is much to be said for an expanded immunization program serving as a primary skeleton for the development of a management structure that could eventually culminate in an integrated, more comprehensive basic health care program.

The World Health Assembly decided some years ago that an expanded program on immunization was a major priority, and projects have started in a number of countries. The AID documents are silent about this program, which clearly deserves substantial U.S. support.*** Moreover, the considerable experience that the Center for Disease Control (CDC) has had in the operational and surveillance aspects of immunization programs is almost unparalled, and the practical research

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* "International Health in Relation to Development and Supporting Assistance," (Draft #2), AID/PPC, (undated), Table 3.

** Oral polio vaccine appears to be less effective in children in developing countries than in the economically advanced countries, and this may also be true for other vaccines.

*** Secretary Califano announced at the World Health Assembly in May 1978 that a $200,000 contribution to the WHO Expanded Program of Immunization would be made from the DHEW/CDC FY 1979 budget.

which it is now doing is of inestimable value. While the CDC has been a resource to AID in this area, a significantly augmented joint program could have an important impact on the control of some preventable diseases.

The problem of infant diarrhea--a major killer of children when coupled with malnutrition--is dealt with only in the context of improved water supply. Clearly this is only a partial solution. The considerable potential for local treatment of diarrhea through the use of oral rehydration fluids receives too little attention in the AID documents. The value of this approach as an inexpensive, simple, and effective measure--and the enormous importance of infant diarrhea as a cause of mortality--justify support of specific national programs to disseminate the packets of salt/sugar and instructions on their use. Various marketing schemes could employ local workers, local retailers, and the like. Infant rehydration could be an effective early function in the step-wise development of a basic primary care delivery system.

The documents reviewed by the Committee do not place sufficient emphasis on a strategy for combatting the classical tropical diseases. There is an urgent need to apply recently developed techniques from immunology, biochemistry, and pharmacology to the study of diseases that are extremely serious problems in the tropics, but long neglected in research (e.g. malaria, trypanosomiasis, leishmaniasis, onchocerciasis, schistosomiasis, and leprosy). The Committee views tropical diseases research as a high priority program deserving significant support, particularly since much of the necessary competence in this area is concentrated in the United States, and a major effort could result in an important contribution to international health.

Available control measures, such as those for malaria and schistosomiasis, should be supported as proposed by AID, but with the caveat that the DDT malarial control strategy needs reconsideration. Biological and engineering approaches that do not rely on insecticides should be more intensively investigated. AID makes only tangential reference to this need.

ADDITIONAL COMMITTEE OBSERVATIONS

(1) Research

Research is needed to develop prophylactic, therapeutic, and control measures for the major infectious tropical diseases, most of which are not important in the more advanced countries and therefore have not been investigated on a significant scale by the U.S. scientific community. AID recently earmarked $800,000 from the FY 79 budget for the WHO Tropical Disease Research Program and will ask Congress for a total of $20 million over the next five years. The Committee heartily endorses AID support of this program by which WHO is attempting to develop a network of collaborating laboratories for research and training that link scientists in developed and developing countries. However, the Committee believes that this effort by itself is inadequate. In view of the particular expertise of NIH and CDC in biomedical and epidemiological research, the Committee supports a recent Institute of Medicine study* recommendation that Congress authorize DHEW to undertake research and development on the disease problems of the developing world, and that this be funded under a special chapter of the Foreign Assistance Act. If Congress does not enact the legislation, AID should consider

* "Strengthening U.S. Programs to Improve Health in Developing Countries," Institute of Medicine, National Academy of Sciences, April, 1978, pp. 16-17.

transferring funds to NIH and CDC from its own budget.

Health services research involves investigations concerned with developing effective health and health-related programs, and the attendant planning, support, and ancillary services. It is in this area that AID should play a major role. The goal is to develop host country capabilities to do research. An immediate objective is to work in concert with host countries to develop, test, and evaluate various schemes for delivering health and environmental services, and to build a data base for health planning purposes. This Committee suggests an increased effort in these areas, particularly in view of the importance that AID attributes to the introduction of integrated low-cost health delivery systems, and to developing comprehensive health planning capabilities. The Committee also believes that there should be increased AID funding of social science research to study characteristics and behavioral patterns of the population that are related to program and more general development planning. The emphasis again should be on building indigenous research skills.

An increased AID commitment to research would require 1) legislative authority for the establish ment of long-term relationships with U.S. institutions, and 2) a mechanism for sound administration of the research program. Congress has already set a precedent under Title XII of the Foreign Assistance Act of 1978, which enables long-term linkages with academic institutions involved in research on the food and nutrition problems of developing countries. If this type of authorization were extended to health science research and development, it would make possible the kinds of arrangements that would encourage commitments by faculty and students, and enable U.S. universities to become seriously involved in research training and institution building activities in host countries.

The specifics of the organizational arrangements for administering the AID research program are outside the purview of this Committee. However, the Committee notes that the long history of research administration in the U.S. Government and elsewhere proves one important principle: an agency primarily responsible for extensive field operations cannot effectively administer a research program because there is a powerful variant of Gresham's Law at work--operations drives out research. The bias toward field performance and the continuous burden of administrative responsibilities that characterize any operational program, constitute an environment that is antithetical to effective administration of research. Yet research should be a very important component of AID's program and therefore merits administrative arrangements to ensure that it is performed effectively. The Committee agrees with a Brookings Report* that recommends an organization to manage research distinct from the organization that manages the regular AID programs. The proposed Foundation for International Technological Cooperation, currently under consideration in the Executive Branch, might be the appropriate organization.

The principal functions of the group administering research would be: to determine research priorities and encourage development oriented research; to establish peer review of research proposals and project performance; to stimulate the involvement of U.S. universities and other research oriented institutions; to support research training and institution building abroad; and to synthesize and disseminate research findings so that the continuously

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* "An Assessment of Development Assistance Strategies," (an interim report), The Brookings Institution, 1977, pp. 24-30.

expanding body of knowledge is systematically organized and made available.

The Committee believes there must be a substantial increase in funds available for biomedical, social science, engineering, and health services research related to international health. It further recommends that AID be given legislative authority to establish long-term linkages with U.S. research institutions and that appropriate mechanisms for the sound administration of the AID research program be set up.

(2) Modus Operandi - Getting the Job Done

AID has outlined a formidable program that would be difficult to carry out even under the most favorable circumstances. Further, AID functions under tremendous internal and external bureauratic constraints that give it a very short-term outlook and seriously inhibit operations. The Committee's primary concerns are: 1) the complex project development process prevents AID from being able to respond quickly to proposed requests or suggestions; 2) AID is not able to mobilize adequate numbers of talented people in the health sciences who are willing to carry out field programs and research in international health; and 3) the mechanisms for supporting local institution building and training are inadequate.

AID is inhibited by its limited statutory authority. Every single project must be justified to Congress annually and AID has agreed not to make major modifications in approved projects without notifying the appropriate congressional committees. In addition, each project proposal has to provide documentation indicating compliance with numerous congressional requirements ranging from environmental issues to the role of women. This has forced AID into a cumbersome internal project development and approval

process. The result is a minimum of 2 to 3 years start-up time for most projects.* These delays mean that AID, in comparison with other donors, is very slow and unresponsive to immediate needs. The Committee therefore recommends that Congress should be asked to give up overseeing individual projects and instead to approve broad sectoral programs, thus providing longer term stability to AID projects and the flexibility necessary for streamlining the planning and implementation of field operations.

We have already discussed the relationship between AID's short-term outlook and the difficulties of attracting able talent from the U.S. biomedical, social science, and engineering communities. Added to this is the fact that the AID program is not sufficiently selective of those areas in which the United States has particular expertise. The U.S. has a clear comparative advantage in both biomedical and social science research. An advantage also exists in the field adaptation of technological advances. American technicians, by virtue of their training and background, often excel at pragmatic problem solving--the appropriate applications of plans, techniques, and apparatus to unexpected or different socio-economic and cultural settings. It is important that AID provide technical assistance in areas which there is competence in the U.S., so that we we do not find ourselves doing an amateur job that is embarrassing to the U.S. and humiliating to the host country.

In this vein, the suggested use of young generalists from the Peace Corps seems risky. If these individuals have no special skills to offer, nations may query why their own very numerous unemployed young people are not utilized instead.

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*"An Assessment of Development Assistance Strategies," (an interim report), The Brookings Institution, 1977, p. 20.

Further, although the pay scale of Peace Corps volunteers is modest, it is often comparable to or even higher than that of professional persons in many countries in which they work, and almost certainly higher than that of persons of their own age and training. Where possible, volunteers who are qualified technicians should be recruited; if generalists are used, their role must be well defined, they must be well supervised, and their position must be acceptable to the communities in which they are placed.

Institution building in the biomedical, public health, social sciences, and environmental health fields in the developing world has been slowed, in part, by the lack of authority for AID to assure long-term linkages with U.S. institutions that could provide the necessary training and technical assistance. In part this may be an an understandable reaction to former failures. Previous strategies overemphasized the role of foreign training at the graduate level, particularly in the U.S. and other industrialized nations. The few in-country training programs that were established too frequently followed Western models rather than being adapted to developing country needs. The result was a brain drain of highly skilled personnel to industrialized countries, and a lack of appropriately trained manpower at home. Rather than identifying those aspects of the institution building process that were inadequate and correcting them, many foreign assistance agencies, including AID, abandoned developing country institution building in the 1970s. Consequently, there is a dearth of training and research facilities in key areas. For example, "No developing country today has an institution which provides comprehensive training in the

relation of health to development planning."* The Committee therefore believes that if AID is going to make an impact on developing host country self-sufficiency in the planning and delivery of health services, institution building must be a very high priority.

Several principles should act as guidelines in the establishment of an appropriate institution building strategy. In-country training should be encouraged over foreign training. When foreign training is required, students should be selected on the basis of their ability and affiliation with a home institution. Foreign students who have a job waiting back home are more likely to return than those who do not. While local training programs at all levels are required, emphasis should be given to the preparation of middle-range manpower, such as paramedics, extension agents, technicians, and managers. Programs beyond the masters level should be supported only for those who are being prepared for senior research and faculty roles in host country institutions.

FINAL COMMENTS

Recognizing the serious limitations of funds and the constraints under which AID must operate, the Committee commends its dedicated efforts to date and its lofty aims for the future. However, the Committee is generally agreed that certain components of the proposed program as outlined are not sufficiently oriented toward the areas in which we are confident there is a strong potential for success.

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* "United States Policy and Program on International Health as Related to Development-Assistance," (draft), AID, 1978, p. 42.

We do not yet know how to mold or shape the growth of nations through science and technology, although we are struggling to learn. In general, social change has followed the introduction of a new technology, not the other way around. Houses with floors, windows, and flush toilets, the telephone, and the automobile changed our world and our disease problems. In our case it was an unplanned process that occurred over a period of generations, and is still going on. What we are trying to do in the developing countries is to telescope development and associate social change with planned technological interventions, in the hope that social change will, in turn, accelerate development.

Health planning is a complex exercise. The U.S. has not distinguished itself in developing or implementing comprehensive plans for dealing with its health problems. This is not to deny the need in the developing countries for careful collection of data on the nature and extent of health hazards, disease problems, births, deaths, fertility rates and so forth. Such information is critical to the design of appropriate health strategies and interventions and continuing efforts to upgrade the data base should be encouraged. We do have the necessary knowledge and skills in the U.S. to train others to gather and interpret such data. However, it seems unwise to move too quickly. Comprehensive health planning is a gradual process, and developing the necessary skills in the host countries will take time.

The Committee has serious reservations about AID emphasis on the development of low-cost integrated primary care systems in nations where expenditures on health are so desperately limited, and managerial talent is in such short supply. The Committee fully understands AID concerns here. The tendency for less developed countries to invest in high cost curative medical facilities and systems which rapidly exhaust resources and thereby block the transfer of public health services to those in most need, is a serious

and ever present problem. However, integrated personal health care systems which are effective, may also be expensive--irrespective of what kind of health worker one substitutes for the doctor. They are very difficult to design and even harder to implement, and will require considerably more experimentation before expansion is merited.

In attempting to be responsive to the mandate to bring more health services to the poorest citizens in the poorest countries, AID has focused primarily on rural citizens. However, all projections suggest rapid urbanization in even the most primitive countries. A recent analysis suggested that 42 percent of people in the developing nations will reside in the cities within the next 25 years.* In Latin America it is estimated that 75 percent of the population will be urbanized by the year 2000. This projected urban shift and the resultant problems it will create needs more attention.

By virtue of its nature and its mandate, AID will always be short of personnel with the kinds of research expertise required to attack effectively the long-range health problems of developing countries. Better research leading to more knowledge about appropriate interventions is the missing ingredient in many aspects of AID concern, particularly in the areas of tropical disease control and health delivery systems. AID clearly recognizes this vacuum and the documents suggest further critically needed research. To accomplish this, AID needs to be imaginative and aggressive in joining forces and welding close liaisons with scientists in other sectors of our society. The proposed Foundation for International Technical Cooperation might well be the

* "The Task Ahead for the Cities of the Developing World," World Bank Staff Working Paper No. 209, 1975, p. 3.

appropriate enabling institution that can bring together the people who have the problem and those who may know something about its solution.

The underlying objective of the AID health program is to bring about self-reliance within the countries themselves. Hence, AID provides financial and technical assistance where there are deficiencies over the near term, anticipating that ultimately these countries will have the necessary human and economic resources. Within the last decade there has been a quantum leap in the amount of qualified talent, experience, and adroitness existing in the developing world. If, in the next decade, AID provides opportune assistance with the development and application of effective low-cost technologies, and with the further advancement of host country capabilities, perhaps the U.S. can make a major contribution toward another giant step forward within the next ten years.