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**Application of A Strategy to
Reduce Infant and Young Child Mortality
in Asia**

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**APPLICATION OF A STRATEGY TO REDUCE INFANT AND YOUNG
CHILD MORTALITY IN ASIA**

ABSTRACT

The paper summarizes the health strategy of the United States Agency for International Development (AID). The goal of the strategy is to assist developing countries to (1) reduce mortality among infants and young children, and (2) reduce disease and disability among selected population groups. The main strategy elements include: (1) Improved and expanded use of available technologies; (2) Development of new and improved technologies; and (3) Strengthening human resource and institutional capability.

A more in-depth look is taken at how AID implements its strategy in Asia emphasizing the primary goal of infant mortality reduction. The paper provides a demographic overview of the nine AID-assisted Asian countries. A summary of AID's program support in Asia showing levels and trends by sub-category is provided. Particular attention is paid to projects supporting selective primary care.

Finally, the paper discusses the difficulties of implementing the strategy in Asia and speculates on the chances for success.

I. AID Health Sector Strategy¹

The AID health strategy sets forth strategic guidelines for Agency health programs and policy implementation. The overall goal of the strategy is to assist developing countries to (1) reduce mortality among infants and children under five years of age and (2) reduce disease and disability in infants and children, women of reproductive age and other members of the labor force. While it is recognized that health status is closely related to levels of socio-economic development such as maternal education and household income, this strategy considers only the more direct means of achieving its goals. Given resource limitations in AID and in developing countries, emphasis is placed on the most cost-effective means of achieving the goal, that is, the primary health care (PHC)

¹This section of the paper is taken directly from the AID Health Sector Strategy, Agency for International Development, May 27, 1983.

approach. PHC is defined in the strategy as including "increased access to basic and affordable health-related services, community participation, reliance on para-professional workers, adequate referral and support facilities and systems, and inter-sectoral coordination, as opposed to hospital services dependent on high technology and specialized manpower and available to only a small proportion of the population." The strategy emphasizes collaboration with developing countries to improve PHC services through: (1) the improved and expanded use of available technologies; (2) the development of new and improved technologies, and (3) the strengthening of human resource and institutional capability.

Under the strategy for improved and expanded use of available technologies AID "assists countries to improve and expand the coverage of PHC services through the transfer and further development of selected cost-effective technologies, in direct response to country health needs and resource constraints." The appropriate mix of PHC services is determined by in-depth country assessments, including epidemiological, technological, economical, and organizational analyses. However, AID promotes the use of selected technologies which have general applicability, demonstrated capacity and high potential to reduce infant and young child mortality and to cure and prevent morbidity. Thus, the AID strategy emphasizes assistance for: (1) the "systematic immunization of infants and young children against diphtheria, whooping cough, tetanus, measles, poliomyelitis, and tuberculosis, as well as immunization of pregnant women to prevent neonatal tetanus;" (2) the expanded use of oral rehydration therapy (ORT), a simple solution of water, sugar and appropriate salts, to manage diarrheal disease and prevent death from dehydration; (3) family planning² information and services where close birth spacing, high parity or unwanted pregnancies contribute significantly to poor health; (4) the integration of basic nutrition measures into health service programs to combat the interactions between malnutrition and infectious diseases emphasizing growth monitoring of at-risk pregnant women and young children, promotion of breastfeeding, education regarding weaning, and the provision of food supplements.

²Family planning is mentioned because of its significance as a health intervention. The important role of population dynamics and family planning in economic development is recognized by AID such that there are separate strategies and funding accounts for population and health. The funds spent for population activities far exceed health expenditures. However, because this paper focuses on AID health strategy and health account expenditures, a detailed analysis of population and family planning will not be included.

In addition to the four priority areas, AID provides assistance for other significant public health activities when warranted, including: malaria control, prevention and control of tropical diseases, preventive and promotive health education, and water supply and sanitation projects.

Under the second major strategy element, the development of new and improved technologies, the Agency has increased its assistance for research to develop and adapt health technologies appropriate for developing countries. Emphasis is on biomedical research to develop new and improved drugs, vaccines and diagnostic methods that can be ultimately adapted for use in basic health service delivery systems for the control of diseases and reduction of mortality. Country-to-country assistance is emphasized and international collaboration is welcomed for institution building. For example, the Agency continues to expand its preliminary efforts to develop a vaccine against human malaria.

Assistance is also be provided for related research in epidemiology to monitor the impact and operational research to improve cost-effectiveness of AID funded programs.

As part of the strategy for strengthening human resources and institutional capability, AID assists developing countries "to effectively deliver existing and improved health care technology through policy reform, manpower development support, management improvement and institutional development and promotion of private sector participation in financing and service delivery." AID advocates the following approaches:

1. AID creates a policy dialogue with countries about host country commitment on key strategic issues, including the principles of the PHC approach, the allocation of resources within the health sector, private sector participation in health programs, and community based support for PHC services.

2. Support for manpower development is provided on a short term basis for in-country training of community and mid-level health workers, and their supervisors and for central manpower planning units. Although support is also provided for long-term overseas study, of highest priority is development of local training institutions.

3. Assistance is provided for improving developing country management capabilities for designing and implementing PHC programs. AID's support for institutional development is designed to improve planning, project design, financial management, supervision, logistical support, and information and evaluation systems.

4. To ensure long-term financial viability of PHC delivery systems new AID assisted projects take careful consideration of recurrent cost considerations and attempt to identify financing problems prior to project approval. Alternative sources of financing and greater private sector involvement are studied and often supported on a pilot basis.

AID also promotes greater donor coordination especially with WHO, UNICEF, World Bank, and the organizations often referred to as NGOs.³ In addition, AID encourages integrated development planning and coordination of health programs with activities in other sectors.

II. Implementation of the Strategy in Asia

This section will describe in more detail the Agency's experience in Asia implementing the strategy, with a primary focus on reduction of infant and young child mortality. While the Agency strategy is relatively new in its current form, AID's Asia Bureau adopted a similar selective care/infant mortality reduction strategy in 1979.

A. The Epidemiology and Demography of the Asia Region

Before reviewing AID's experience with its program assistance, a brief description of the demographic and epidemiologic setting is provided (see Table 1). Asia, as defined here, is limited to the nine countries of South and Southeast Asia where AID has country-to-country assistance programs. These include Pakistan, India, Nepal, Sri Lanka, Bangladesh, Burma, Thailand, Indonesia, and the Philippines.⁴ As a group these countries, with a total population of 1.2 billion persons, contain 1/3 of the population of the developing world, or excluding China around 45%. The number of children under age five in these countries exceeds 180 million.

The region as a whole has a very high infant mortality rate (IMR) of around 105 deaths per 1,000 live births; however, the country specific IMRs vary from a low of around 40 in Sri Lanka to a high in Nepal of about 145.

³NGOs - Non-governmental organizations including private voluntary, non-profit, and profit organizations.

⁴AID also provides limited assistance for health activities in the South Pacific, to ASEAN, and on a regional basis. Support for these activities accounts for less than 2% of the total budget.

The nine countries can be disaggregated into three categories based on national IMRs as follows: very high mortality countries with IMRs over 100 (Nepal, Pakistan, Bangladesh, India); high mortality countries with IMRs between 60 and 100 (Burma, Indonesia); and middle mortality countries with IMRs less than 60 (Philippines, Thailand, and Sri Lanka). Health status, health conditions, and quantity and quality of health services vary as greatly as socio-economic and environmental conditions within each of the countries, especially in India. Thus, group or country level generalizations can be misleading. Furthermore, data quality for the mortality, health status, and health service variables is poor. Reliable data on causes of deaths are particularly difficult to obtain. The data can, therefore, provide only rough estimates or approximations but, nevertheless, are useful for comparative purposes.

The very high mortality countries, not surprisingly, are all located in South Asia. Gains in mortality reduction have come relatively slowly, in this region, and the UN projects that at best by the year 2000 the four very high mortality countries will still have infant mortality rates of at least 80. The main cause of infant mortality is neonatal tetanus, with diarrheal diseases (diarrhea, gastroenteritis, dysentery), and acute respiratory infections (ARI: pneumonia, measles, pertussis, influenza, and bronchitis) being the other two major causes of post-neonatal infant death. Perinatal mortality, due to a variety of causes including prematurity, low birth weight, and complications of labor, delivery, and pregnancy, is also a major contributor to infant mortality. While specific causes of death are mentioned here, the actual mortality situation is very complex. Any given infant death most often has multiple interacting causes and many contributing factors. One example is pneumonia, often cited as a primary cause of death. It is likely that decreased resistance of the host has resulted from previous cases of measles, diarrheal diseases, nutritional deficiency and other respiratory conditions, all contributing to greater susceptibility to pneumonia. Thus, citing a specific cause of death tends to neglect the complexity of mortality in infancy. The data is particularly negligent of the important role played by nutritional status in infant deaths. In Latin America, it was found that nutritional deficiency was a contributor to over half of all infant deaths.^(A) Malnutrition is a major contributor to ARI and diarrheal disease deaths and to perinatal deaths from low birth weight. In Table 1 it can be seen that the percentage of low birth weight newborns is extremely high in the very high mortality countries, varying from roughly 30% to 50% of all births.

(A) See References.

As expected this group has poorly developed PHC systems that effectively cover only small portions of the rural areas. Immunization coverage levels and usage of oral rehydration therapy also remain low. In a region of the world where neonatal tetanus is the major cause of infant death, country coverage levels for this vaccination range from 27% in Nepal, to a mere 1% of the pregnant women in Pakistan and Bangladesh. Coverage levels for infants for the two other vaccines which could have a major impact on infant mortality, i.e., measles and DPT, are no more than 3% for measles and between 2% and 35% for DPT. ORT usage levels are also extremely low, with national coverage levels below 10% in all countries; that is, less than 1 in 10 diarrhea cases of children under age five is being treated with ORT.

The data on access to potable water and sanitation facilities remain mixed. Roughly 30% of the population in the group has access to potable water. This is relatively high when compared to other "better off" countries in the region and may be due to inconsistencies in the data. Of course, access to potable water is much lower in rural areas than in urban. The group has very limited access to sanitation facilities with country levels varying from a high of 20% in India to a low of 1% in Nepal.

The high mortality group consists of Indonesia and Burma. The UN projects that by the year 2000 these countries will improve sufficiently enough to reach middle mortality status. The main causes of infant mortality appear to be the same as in the very high mortality countries, i.e., diarrheal diseases, ARI, perinatal mortality, and neonatal tetanus. However, the relative importance of neonatal tetanus is less, such that diarrheal diseases and ARI are the main causes of infant death with nutritional deficiency being a significant contributing cause. Roughly 1/5 of the babies are born with low birth weight.

This country group generally has more established national basic health systems with broader coverage than the very high mortality countries. However, the administrative structures and support systems remain relatively weak. Immunization and ORT coverage is also very low. There are no national programs to immunize against measles. Neonatal tetanus coverage remains around 10% of the pregnant women and that of DPT varies between 10% and 25%. Use of ORT is between 5% and 15%. While a fifth of the population has access to sanitation facilities, roughly only one in seven has access to potable water.

The middle mortality country group consists of two of the more developed South East Asian countries, the Philippines and Thailand, and of Sri Lanka, a low income country with relatively high levels of expectation of life, nutrition, and literacy. The UN projects that the infant mortality rate in these countries will improve to levels between 25 and 30 by the year 2000. Neonatal tetanus is not a major cause of infant death for this group. Perinatal and neonatal deaths are the major contributors to infant deaths. However, diarrheal diseases and ARI remain major problems for infants and young children.

This group can be characterized as having established and developed health services systems with fairly comprehensive coverage. Low birth weights make up more than 15% of all births. Immunization and ORT coverage levels are higher than in the other countries in the region but, with the exception of DPT, are still quite low. Thailand and Sri Lanka still do not have a national measles immunization program. National ORT usage levels are below 30%. More than half the population has access to adequate sanitation facilities; however, only roughly 1/3 of the people have access to potable water.

B. AID Asia Region Programs and Projects

The total AID assistance package for health as a percentage of total resources for health in the nine countries is quite small, i.e., less than 2% of the total. AID's level of assistance for health in Asia has been on the average less than \$50 million per year during the last six years; whereas the nine governments alone are spending in excess of the equivalent of \$3 billion per year.^(B) This does not include private sector payments, which are substantially more than public expenditures, nor does it include other donor support.

The AID program assistance is usually provided in country-to-country project agreements. These agreements vary in length and level of funding but are usually for three to six years and include AID support of \$5 million to \$50 million, in addition to a country counterpart contribution. As AID projects tend to be rather complex and contain many components, it is difficult to place projects into a single category. Appendix I provides information on the projects AID supports in Asia. A summary of AID's financial assistance for these projects by sub-category for the period 1979 to 1985 is provided in Table 2.

Several general statements about AID assistance for health and nutrition in Asia can be made:

(1) From 1979 to 1983, funding levels were relatively constant at around \$40 million annually; however, expected funding levels in 1984 or 1985 will jump to over \$50 million a year.

(2) Between 1980 and 1985, excluding small scale PVO projects, twenty country projects⁵ will have been started, including eleven health/nutrition service delivery, four water supply and sanitation, two malaria control, one disease control research and two health education projects.

(3) Since 1980, when the Asia Bureau Strategy focus on infant mortality was implemented, almost 2/3 of all support has been for health/nutrition services.

(4) The level of support for health services as a percentage of total health support has increased substantially from 29% during 1979/80 to 51% in 1984/85.

(5) Funding for malaria control decreased significantly from 1979 until 1983. The level of funding for malaria since 1983 exaggerates the priority of the disease within the strategy as most of the funding for malaria since 1983 has been for the relatively costly purchase of commodities for Pakistan.

(6) There has been little support for health education and disease control research since 1980. These two components were not emphasized in the prior Asia region strategy but are two key components of the new Agency strategy.

The above summary of AID assistance in Asia provides only a limited understanding of the AID program for health and nutrition. A closer examination of the sector sub-categories and specific projects provide a much clearer picture. A description of program sub-categories with examples of ongoing project support follows:

(1) health/nutrition services - includes support for expanding and improving PHC programs in general or specific PHC interventions such as immunization or ORT. AID funds are

⁵This includes an already completed PHC Project in Burma and three other projects planned for 1985 not listed in Appendix I.

provided for training, informational programs, logistics, management information systems, drugs and other commodities, research, evaluation and monitoring, planning, and construction (low priority). Specific examples include:

(a) support for PHC service delivery in seven of the nine countries in the region: in the Philippines, Indonesia, Thailand, Burma, Nepal, India and Pakistan;

(b) in Indonesia, support for specific elements of PHC through the Expanded Immunization Program Project and for diarrheal disease control and ORT;

(c) projects in India and Indonesia supporting nutrition surveillance and targeted feeding programs;

(d) a project in the Philippines and studies in Pakistan to address the problem of financing health services. The purpose is to support studies and experiments to look for alternative sources of financing (local government, private, user's fees) to relieve the long term recurrent cost problems for the central government;

(e) two projects in Indonesia to improve the long term planning and management capabilities in the Ministry of Health. One is at the central level; the other at the provincial; and

(f) support for the addition of oral rehydration salts to family planning social marketing projects in Bangladesh and Nepal.

(2) water and sanitation - includes support for provision of potable water and sanitation facilities and systems. Funding is for technical assistance, training, monitoring, commodities, and construction. The assumption is that much of the infrastructure for the basic water supply and sanitation systems is in place, or is to be financed elsewhere, and that a strong commitment exists for maintenance. New construction is a low priority. New projects are planned for Sri Lanka and Thailand which will help to improve the institutional capability to maintain and finance water supply systems.

(3) malaria control - support given to malaria control programs is similar in nature to that provided for PHC. AID provides support for malaria control in Pakistan, Sri Lanka, Indonesia, Thailand, and Nepal. The purpose is to improve the cost-effectiveness of malaria control spraying and treatment

programs by improving institutional capability to make better use of epidemiology and operations research. Substantial support is provided for pesticides, spraying equipment and related transport.

(4) disease control research - includes support for basic biomedical research to develop and test new vaccines and new therapeutic and diagnostic technologies for disease control for PHC systems. AID plans to support the development of new technologies for PHC through the Biomedical Health Services Project in India and through the addition of a research grants funding program to the PHC Financing Project in the Philippines. A second project in India supports research on maternal nutrition, low birth weight and perinatal mortality.

(5) health education - includes support for the development of institutions of higher learning (schools of public health, nursing schools, medical schools) which train health officials and provide technical assistance and research to organizations implementing health programs;

(6) planning/policy - includes a variety of small research studies and analyses for AID missions for program and project design;

(7) Private Voluntary Organizations (PVOs) - support is for a variety of small scale health projects of PVOs;

C. Special Initiatives

A special commitment has been made by AID to place top priority on increasing support for expanded access to ORT. ORT has tremendous mortality reducing potential: it is a simple technology that is easy to deliver; it can be applied in the household; and it is highly effective in preventing death from dehydration.

As in other regions of the world, AID has made extra efforts to increase its support for ORT in Asia wherever feasible. A plan for increasing our support in Asia includes a regional analysis of: (1) the scope of the problem; (2) current levels of coverage; (3) government programs and policies; (4) other donor support; (5) constraints to successful widespread use of ORT; (6) actions to be taken to overcome constraints; and (7) possible areas for additional AID support. The regional analysis has led to support for much more detailed country assessments. AID and the Governments use the ORT country assessments to program additional AID support for ORT.

It is possible that the current process to expand access to ORT will be followed by similar approaches for other key interventions, such as immunizations and nutrition growth monitoring and food supplementation.

III Thoughts on the Strategy for Asia

The first two sections of the paper presented AID's overall strategy, described the status of health and health services in Asia, and discussed the approach taken by AID in Asia to implement the strategy. This section will do two things: (1) very briefly touch on the difficulties of strategy implementation; and (2) provide some thoughts about the soundness of the AID Asia strategy. The comments and judgements in this section are those of the author and do not reflect views of AID.

Several additional points regarding the nature of AID's assistance in Asia need to be made before proceeding with the discussion. First even before 1980, AID supported health service delivery projects. These projects included assistance for the expansion and improvement of basic health care services for the most significant health problems. The activities often had a rural focus, as do the current PHC programs. The main difference between the "old" approach and that of the current strategy is in the degree of specificity. Generally speaking, the health and nutrition projects begun after 1980 were focused on fewer services. Furthermore, before 1980/81 when the current strategy had an effect on budgetary allocations, a smaller percentage of the total program support for health was for health services. Much greater proportions of the budget were used for malaria control and water supply and sanitation. The "old" pattern of expenditures ended in 1980, as can be seen in Table 2.

One other point about AID's assistance for health in Asia deserves mention. Given the limited resources for AID programs for health in Asia, AID has focused its support on selective care. However, it is also worth noting that 1/3 of program resources are being spent for other health activities including the improvement of water supply and sanitation systems, biomedical research, the improvement of health education institutions, malaria control and for small-scale PVO activities. For the most part these activities are indirectly

related to and supportive of the main thrust of the selective care strategy; that is, infant and young child mortality reduction.⁶ While these other activities are important, selective care is the centerpiece of the strategy.

A. Implementation Difficulties

Since much has already been written about the difficulties of implementing health projects in developing countries, the subject will be only briefly discussed here. One of the best summaries on problems with implementation of health services projects is contained in a recent American Public Health Association summary of AID experience with PHC.^(C) Major problems include: (1) inadequate provision of essential support services for PHC (supervision, drugs, transportation, etc.), limited national funding, projects too complex, lack of long term community commitment, uneven performance and acceptability of community health workers, weak, overly complicated monitoring systems, and poor project design.

In addition to inherent problems of PHC projects described above, there are special difficulties that are faced by AID as an organization in the implementation of health projects. There are questions of adequacy of human and financial resources, bureaucratic complexity, conflicting political and economic interests, constantly changing policy priorities, and questions about the relative priority of health programs in economic development. These must also be considered.

Many of the constraints to successful implementation of PHC are related to the complexity of the approach. There has been a tendency to try too much all at once. Implementing institutions have great difficulties in dealing with so many problems simultaneously. Experience indicates that greater concentration is required. A more selective, simpler program which is easier to control and monitor should stand a better chance for success.

⁶Malaria control is an exception. In Asia, malaria is not a major contributor to mortality. However, the Agency has a long history of support for malaria control programs in Asia; and it is likely that such support, while limited, will continue. Furthermore, in selected areas malaria morbidity is high and needs to be controlled. AID's Asia Bureau is currently reviewing its malaria strategy and searching for ways to program funds more cost effectively. However, because of the strategy focus on infant and young child mortality reduction, there will not be further discussion on malaria control.

B. Soundness of the Strategy

This section will discuss the plausibility of the selective care approach as a means to reduce infant and young child mortality. Since 1981, which is really the first year that the selective PHC strategy adopted by AID Asia Bureau could have any discernible program effect, over 2/3 of AID's support for health in Asia has been programmed for PHC. There is a strong interest within AID to make the selective care approach even more selective, focusing particularly on strengthening "key" interventions such as ORT and neonatal tetanus. The argument for selectivity is that: (1) AID and developing countries have limited resources to invest in health and a selective approach is the most cost-effective; (2) there are a limited number of existing technologies (ORT, immunization, family planning) that can potentially save millions of lives and which can be easily delivered and are socially acceptable; and (3) that the rapid and highly visible progress that can be made in mortality reduction will instill a sense of confidence in beneficiaries, service providers and policy makers that will lead to development of a much more successful health system and, ultimately, improved health status.

The above hypothesis is one that has been widely accepted in the scientific community and among donor agencies including UNICEF with their "GOBI"⁷ approach. There are, however, some serious questions about the validity of the selective care approach that need to be considered. Basically these are: (a) Can the selective care strategy be implemented? and (b) Will it reduce mortality? There are a very limited number of studies that document the relationship between PHC, or basic health services, and infant and young child mortality reduction. The success of a number of pilot PHC projects in effecting mortality reductions, at least in the short term, has been shown.^(D) The evidence of this relationship was most convincing for those pilot projects which included strong nutritional components. Furthermore, while it is true that China, Sri Lanka, and Kerala State in India have been successful in achieving relatively low levels of infant mortality given their overall economic conditions, the exact role of service delivery in the mortality decline is unclear. China is a special case given its unique political setting and its long term commitment to improve social services. Thus, there is a lack of evidence at the national level establishing a causal relationship between service delivery and mortality reduction. In fact, data from two very

⁷GOBI meaning: G=growth monitoring; O=oral rehydration therapy; B=breastfeeding; and I=immunization.

comprehensive, well documented large PHC pilot studies, the Lampang Health Development Project and the Bohol MCH/FP Project, very clearly showed that the projects had no measurable mortality reducing effect.

A second question about the PHC approach has been raised by Henry Mosley^(E) who claims that the complete PHC concept is not really being implemented and PHC programs are often nothing more than lay-workers delivering new technologies. The other central components of PHC as envisioned at Alma Alta, that is community participation, intersectoral coordination, and the use of traditional practices, are generally not included in national PHC programs. Thus, the effectiveness of PHC is based on a cause of death model that is too narrow in its focus. Infant mortality is usually due to multiple causes. For example, while ORT may prevent a death from a particular bout of diarrhea, the typical infant remains at high risk of death due to a variety of other factors (malnutrition, frequent bouts of respiratory and diarrhea disease, etc.). Thus, Mosley argues that the "selective approach will be effective only when a specific disease has a high prevalence coupled with high fatality among otherwise healthy persons, e.g., neonatal tetanus and for falciparum malaria."

Mosley proposes that a broader determinants of mortality model be applied in planning health strategies. Such a model would examine the interaction of social-economic determinants with biological intermediate variables and their demographic effects. As an example, Mosley cites that Kerala and West Bengal in India have similar coverage levels of medical facilities. However, the significant differences in health status between the two states is due to differential use of facilities which is directly related to differences in levels of social development. In the same paper Mosely argues that most of the declines in mortality in Kenya in the last 20 years are due to changes in maternal education and household income. Thus, Mosley concludes that health services delivery programs can be improved if they are designed on a scientific basis based on a broad determinants of mortality model.

John Briscoe^(F) and others claim the PHC approach is unlikely to be successful since many governments are not seriously committed to it. Briscoe argues that comprehensive PHC has been successful in reducing mortality when a strong and lasting commitment has been made to it, as is the case in China. He claims that the standard excuses for failure for PHC programs, that is, scarcity of financial resources and lack of political will, confuse the real problem. He argues that adequate

financial resources for PHC are available; however, most of the resources for health will continue to be spent in large urban hospitals catering to the curative health needs of the middle and upper classes. He feels that selective PHC will not be any more effective than comprehensive PHC under these conditions. Furthermore, he argues that selective care as an approach will not have a significant mortality reduction affect. Thus, he feels that support should be directed only to those countries which show a serious commitment to the health of the rural population.

These are strong arguments that must be considered seriously. The rate of the mortality decline in developing countries in Asia and worldwide is levelling off.^(G) The changes appear related to a decline in the capacity of health programs to deal effectively with evolving disease problems in the developing world and to a slow down in health related economic and social progress. Diarrhea, pneumonia, and malnutrition which now predominate the developing world are problems which are less susceptible to public health interventions. Creative approaches to health care are needed.

The selective care approach should be given a fair chance. The greatest chance for long term success is in demonstrating short term progress. The advocates of selective PHC argue that a dramatic demonstration in mortality reduction will influence policy makers to reallocate health resources to the rural area while simultaneously motivating service providers and stimulating demand among service users. Thus, after the initial success, a much more favorable climate would exist for the improvement of health; one in which the concerns of Mosley and Briscoe would be addressed. The above argument is curious in that it proposes a process that runs counter, or opposite, to the normal development process; that is, it proposes that development proceed policy.

The verdict on selective care is not out. The greatest chance for success lies with the power of demonstration. However, Mosley and Briscoe argue that chances for success are related to external variables, including government commitment and the socio-economic determinants of mortality. These concerns could be best addressed by establishing the initial selective care activities in specially chosen demonstration areas with favorable environments. Initial successes would provide the impetus for expanded coverage.

More needs to be known before reasoned judgement can be passed on the validity of the selective care approach. In particular, answers to the following must be sought:

(1) Can government PHC programs provide quality selective care services?

(2) Will, and under what conditions will, the selective care approach, if implemented successfully, reduce mortality measurably?

(3) Will a dramatic demonstration of mortality reduction from selective care stimulate demand of the client and increase the motivation of the service provider?

(4) Will a successful selective care program influence policy makers to reallocate health money to rural areas?

It is the task of all of us to ensure that the above questions are answered fairly and completely.

TABLE 1

Health Status and Coverage for Asia

| Country | Total Population (millions) | Infant Mortality Rates | | | | Causes ^{a/} in Rank Order | Immunization ^{b/} Coverage Percentage | | | ORT ^{c/} Usage Levels Percentage | Low ^{d/} Birth Weights Percentage | Percentage of Population With Access to: ^{e/} | |
|-------------|-----------------------------|-------------------------------------|---------|------|-------------------|------------------------------------|--|------------|----------|---|--|--|-----------------------|
| | | Deaths per 1000 live births 1970-75 | 1980-85 | 2000 | | | Measles | N. Tetanus | DPT | | | Safe Water | Sanitation Facilities |
| Nepal | 15 | 167 | 144 | 104 | DD, NT, ARI PERI | 2 | 27 | 17 | 0 to 5 | 1 | 8 | 1 | |
| Bangladesh | 91 | 150 | 133 | 97 | NT, ARI, PERI, DD | 2 | 1 | 2 | 5 to 10 | 50 | 56 | 5 | |
| Pakistan | 85 | 140 | 120 | 83 | NT, DD, ARI | 1 | 1 | 3 | 5 to 10 | 27 | 25 | 6 | |
| India | 690 | 133 | 118 | 78 | NT, ARI DD, PERI | 3 | 17 | 35 | 0 to 5 | 30 | 31 | 20 | |
| Burma | 34 | 121 | 94 | 58 | ? | 0 | 9 | 8 | 5 to 10 | 20 | 17 | 33 | |
| Indonesia | 150 | 112 | 87 | 53 | DD, ARI NT PERI | 1 | 12 | 23 | 15 | 18 | 11 | 15 | |
| Thailand | 48 | 65 | 51 | 29 | PERI, DD, ARI | 0 | 29 | 56 | 20 to 30 | 13 | 25 | 40 | |
| Philippines | 50 | 68 | 51 | 29 | PERI, ARI, DD | 22 | - | 51 | 20 | 20 | 50 | 56 | |
| Sri Lanka | 15 | 56 | 41 | 25 | PERI, ARI, DD | 0 | 41 | 77 | 5 to 10 | 21 | 19 | 59 | |

^{a/} Causes of Infant Death are: NT=Neonatal Tetanus; ARI=Acute Respiratory Infections (pneumonia, bronchitis, measles, influenza, pertussis); DD=Diarrheal Diseases (diarrhea, dysentery, gastroenteritis); PERI=Perinatal Mortality (prematurity, low birth weight, complications of pregnancy, labor and delivery).

^{b/} Percentage fully vaccinated. For measles and DPT percentage refers to infants under age one year. For neonatal tetanus refers to percentage of pregnant women.

^{c/} ORT use level refers to the percentage of diarrhea cases of children under Age 5 which have been treated with ORT.

^{d/} Low Birth Weights refers to babies weighing under 2,500 grams at birth.

^{e/} Reasonable access as defined by WHO. Data refers to urban and rural areas combined.

Sources of Data for Table 1

1. World Development Report, 1983, World Bank, Washington, D.C., 1983.
2. Population Bulletin of the United Nations, No. 14-1982, United Nations, New York, 1983.
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TABLE 2
AID Health/Nutrition Sector Funding in Asia by Sub-Category^{a/}
(\$ millions)

| <u>Subcategory/Year</u> | <u>FY 79^{b/}</u> | <u>FY 80</u> | <u>FY 81</u> | <u>FY 82</u> | <u>FY 83</u> | <u>FY84</u> | <u>FY 85</u> |
|---|---------------------------|--------------|--------------|--------------|--------------|-------------|--------------|
| Health/Nutrition Services | 5.8 | 17.3 | 28.7 | 24.1 | 31.4 | 30.2 | 25.9 |
| Water & Sanitation | 3.5 | 16.1 | 9.4 | 3.0 | - | 8.5 | 3.1 |
| Malaria Control | 30.5 | 3.6 | 1.2 | 1.5 | 11.3 | 9.8 | 13.1 |
| Disease Control Research | 1.4 | - | - | - | - | - | 6.5 |
| Planning/Policy | 0.9 | 0.6 | 0.8 | 1.0 | 1.1 | 1.6 | 1.3 |
| Private Voluntary Organizations (PVOs) | 1.3 | 1.6 | 1.1 | 1.6 | 0.7 | 1.3 | 1.0 |
| Health Education | - | 0.5 | - | 1.7 | - | - | 6.5 |
| TOTAL | 43.4 | 39.7 | 41.2 | 32.9 | 44.5 | 51.4 | 57.4 |

^{a/} From AID Bureau of Program and Policy Coordination, February, 1984. Includes funds from the Health (104) and the Nutrition (103) Accounts and the Economic Support Fund.

^{b/} FY Fiscal Year October 1 to September 30. Funding levels for FY 79 through FY 83 are actual obligations for FY 84 estimated, and for FY 85, proposed.

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APPENDIX I

Current AID assisted Projects in Asia
(Excluding PVO Projects)

Nepal

Integrated Rural Health/Family Planning (1980-85)

The project will improve the management capacity of the Government of Nepal's Ministry of Health (MOH) and integrate several distinct ongoing health and family planning activities under one administrative/management organization. Additionally, the project will assist in expanding the health delivery and family planning services to a larger segment of the rural population. The areas to be supported are (1) management and planning; (2) delivery of rural health services including malaria control activities; (3) delivery of family planning services; (4) training and health education, and (5) community participation in health services.

Banladesh

None

Pakistan

Primary Health Care (1982-87)

This project is designed to build on the accomplishments of the previous AID-financed basic health services project to assist the Government of Pakistan (GOP) to improve the quality and expand the coverage of Primary Health Care Services in the rural areas. Components to be financed include: (a) program management; (b) medical technician and community health worker training; (c) program operations; (d) research and evaluation; and (e) accelerated expanded program for immunization and oral rehydration therapy and for training TBAs.

Malaria Control II (1982-87)

The purpose is to assist the GOP implement its Malaria Control Program (MCP). The Malaria Control II project will build on the achievements of the previous project by assisting the GOP to contain or further reduce the incidence of malaria.

This will be accomplished by: (1) increasing the capability of the federal, provincial and municipal health services to effectively control malaria; and (2) assisting the MCP move from a vertically organized program emphasizing total coverage house-spraying and active case detection surveillance methods, to an integrated program utilizing a selected mix of vector control measures and a better balance between active and passive case detection and treatment methods.

India

Integrated Rural Health/Population (1980-85)

The purposes of the project are to: (1) improve access to health and family planning services that promote fertility and mortality reduction, and (2) improve and expand the services and support systems of the Government of India's (GOI) model health plan. The project will assist the GOI to implement its model plan for basic health and family planning services in 13 districts in five states selected on the basis of economic and health needs.

Biomedical Services for Health (1985-1990)

There are two main purposes of the project: (1) to provide assistance for basic biomedical research for the development and testing of new diagnostic and therapeutic technologies that can be delivered through PHC systems for the control of major disease problems of infants and young children; and (2) to assist the Government of India (GOI) improve the capabilities of selected state health departments in the application of epidemiological and diagnostic techniques.

Integrated Child Development Services (1983-88)

The project has two main purposes: (1) to assist the GOI effort to coordinate its feeding programs with nutritional surveillance activities to target food supplementation and (2) to support research on maternal nutrition, low birth weights, and perinatal mortality.

Burma

Primary Health Care II (1983-87)

This project supports a long term Burmese effort to reduce infant and young child morbidity and mortality by expanding the coverage and improving the quality of the Government's PHC

system. Particular emphasis is placed on improvement of training, management, and supervision and the purchase of PHC commodities.

Indonesia

Health Training Research and Development (1978-87)

The purpose is to strengthen: (a) The Ministry of Health (MOH) institutional capability to plan, implement and evaluate the planning, recruitment, training and management of public health personnel; (b) the client-oriented design and implementation of applied intramural and extramural research and special operational/policy studies; (c) a Ministry management information system with special emphasis on subsystems relating to the management of public health centers and to health personnel; (d) the MOH institutional capacity to plan and implement a national program aimed at the reduction of mortality/morbidity from diarrheal diseases.

Comprehensive Health Improvement Program (1981-86)

The project is designed to assist the Government of Indonesia (GOI) strengthen provincial capabilities to delivery health services in three outer island provinces. This is to be done by increasing the number of paramedical personnel and by improving the capabilities of provincial officials to target, manage and evaluate their health/nutrition activities.

Expanded Immunization Program (1979-85)

The project is designed to accelerate and expand the present national immunization program throughout Indonesia. The project objectives will be accomplished by: increasing immunization coverage; building an effective national immunization organization and infrastructure; and improving "cold chain" technology. The expected outputs include: (a) a basic capability of the Indonesian Ministry of Health to manage a nation-wide immunization program including the training of vaccinators, establishment of an effective transportation network for vaccine distribution, and establishment and maintenance of refrigerated facilities for vaccine storage; (b) an increase in local production capacity for high quality tuberculosis, diphtheria, pertussis, and tetanus vaccines; (c) a strengthened epidemiologic surveillance system for vaccine preventable childhood diseases.

Village Family Planning/Maternal Child Welfare (1980-85)

This project integrates simple health, nutrition, and income-generating activities with the well-established village family planning network. Expected outputs are a village-based program that regularly delivers basic health and nutrition information and services to mothers and small children; a series of research subprojects to promote community management and support of nutrition activities; evaluation studies and workshops to assist the Government in designing and implementing village health and nutrition services.

Timor Malaria Control (1981-85)

The objectives of the project will be accomplished by developing a self-sustaining malaria control program on Timor Island that will lower the prevalence of malaria. The expected outputs include: malaria studies and control measures selected; personnel trained; houses sprayed and other preventive measures taken; persons treated with anti-malaria drugs; a proven system for logistical support; commodities delivered; and effective system of program management; a functioning surveillance system to monitor incidence of malaria; and laboratory technicians in health centers and hospitals trained in the ability to recognize the malaria parasites.

Thailand

Rural Primary Health Care (1978-1985)

The main purposes are: (1) to make PHC services more readily available to the rural poor; (2) to improve the quality of service delivery through training of paramedical personnel; (3) to improve the nutritional status of children under age five years through growth monitoring, local food production, and nutrition education; (4) to improve monitoring and information systems; (5) to provide maternal education on water and sanitation; and to improve upon the distribution of ORT.

Anti-Malaria (1979-83)

The project is designed to reduce morbidity and mortality due to malaria. The principle strategy is to interrupt parasite transmission by establishing a network of treatment clinics and a cadre of 25,000 village malaria collaborators.

Water and Sanitation (1984-1989)

The purpose is to improve the institutional capability of the National Water Supply and Drainage Board to design and maintain cost-effective water supply systems in rural Thailand. Focus is on operations and maintenance and long term financial self-sufficiency.

Philippines

Primary Health Care Financing (1983-1988)

The purpose of the project is to improve access to and utilization of sustainable primary health care services managed and financed by communities and by the Government. AID inputs: (a) technical assistance to design and evaluate approximately 24 health care financing schemes; (b) funding for eight major health sector studies; (c) technical assistance, training, and other costs involved in (1) developing improved village health workers (VHW) and midwife training, supervision and support protocols, (2) purchase of VHW kits, (3) improving the information campaign for selected PHC services and (4) improving support to the National Botica SA Barangay Program.

Panay Unified Services for Health (1978-1984)

The purpose is to improve the health conditions in 600 depressed villages on Panay Island through the installation of a village-based Health Care Delivery system that will provide, in an integrated fashion, basic preventive, educational and health promoting services and essential environmental sanitation infrastructure.

Bicol Integrated Health, Nutrition and Population (1979-1984)

The project purpose is to deliver basic health, nutrition and population (HNP) services to targeted villages through an economical delivery system; to improve environment and household water supplies; to increase local government financial support for HNP programs; and to increase participation of village workers and residents in HNP programs.

Barangay Water II (1980-85)

The purpose is to assist up to 100 local government units (LGUS) in the planning, construction and operation of rural waterworks.

Sri Lanka

Malaria Control (1978-84)

The purpose is to control the incidence of malaria and to institutionalize an effective malaria control program (MCP). Support is provided for commodities for spraying and training and technical assistance to improve the institutional capability of the MCP administration.

National Institute of Health Services (NIHS) (1980-84)

The purpose is to strengthen the NIHS as a national training center for PHC personnel.

Jaffna-Market Town Water Supply (1980-1984)

The objectives of this project are to improve the quality, availability and reliability of drinking water for the people on the Jaffna Peninsula by (1) improving the design and construction of drinking water supply systems for the two market towns; (2) the preparation of a master plan for drinking water systems and sanitation facilities for the peninsula; and (3) the development and implementation of long and short term training course in public health, water supply and sanitation.

Regional and Other Projects

Interregional Malaria Training Secretariat (1982-85)

The purpose is to institutionalize training programs for personnel in malaria control programs (MCP) to ensure that sufficient, adequately trained staff are available to staff MCPs in Asia.

Loan Financing and Health Technology (1984-1986)

The purpose is to transfer appropriate health technologies from the US and other developed countries to Indonesia and Thailand. Private sector production of health products directly related to the basic health needs of the poor majority will be financed by loans from local banks. Technical assistance will be provided by the project.

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