

THE PRIVATE ENTERPRISE INITIATIVE IN HEALTH

1. Introduction:

Good health and freedom from disease are major components of the quality of life and a healthy population is necessary for increased productivity and economic growth. Health, therefore, is a major objective of development assistance.

Over the past decades, the eradication of diseases such as smallpox, the control of malaria, the use of oral rehydration therapy in preventing infant deaths from diarrhea, the extension of primary health care and family planning to many rural areas, have all had a noticeable impact in decreasing mortality and morbidity in less-developed countries (LDC's). However, far more remains to be done if health in LDC's is to improve to levels more commonly found in industrialized nations. The task is great because the major health problems of LDC's are not medical problems. They often involve environmental factors that are dependent on economic development. For example, in many LDC's, until population is controlled, and until people have adequate diet, water, sanitation, and education, health status cannot be significantly improved.

Although the explosive growth in new biotechnologies promise impressive new techniques for improving health in LDC's

in the future, as yet, many of the most basic available technologies and know-how remain unutilized or under utilized in most LDC's. This is so because the capital and skilled manpower necessary for the transfer of technology, its adaptation to local conditions, and the facilities and organizations for the delivery of health care and services to the majority of people in poor countries, are astronomical in comparison to available resources. Thus, the crisis in health care in most LDC's comes not from a lack of knowledge about what needs to be done, but from finding the resources to do it, and organizing delivery mechanisms that deploy them efficiently for maximum impact on targeted beneficiaries.

Assistance from foreign donors, including AID, represents but a small and dwindling fraction of health expenditures of most LDC's. This suggests that AID can at best play only a supportive role vis-a-vis indigenous efforts. As the Foreign Assistance Act points out, the ultimate responsibility for health status in a country must remain with its people and their government.

### 1.1 The Health Sector in LDC's:

In a free market system, the provision of "personal" goods and services (e.g. most types of curative care and some preventive care where benefits accrue directly and primarily to the individual) can be left to a market mechanism that is regulated to ensure competition and consumer protection. Of course, groups of consumers may find it advantageous to band

together into collectives to achieve efficiencies in distribution or to improve their bargaining with suppliers. The appropriate role of governments (local or national) in such a system is to provide "public" goods (e.g. the eradication of mosquitos), where marginal costs are zero and a mechanism to enforce prices does not exist; to subsidize the consumption of goods with significant externalities (e.g. family planning, education, immunizations); and to ensure fair trade and competition.

However, the poor majority in most LDC's have traditionally been unable to access or afford adequate health care and as a result the the Ministries of Health (MOH's) in most LDC's (except in some Latin American countries with significant social insurance programs) have assumed a major role in the provision of not only public, but also personal health care services to the people.

The MOH is the major provider of health care in many LDC's, owning, particularly in African and Asian countries, as much as 80% or so of hospital beds and primary health care centers. LDC governments allocate anywhere from 3 to 9% of their budget on health and these amounts are unlikely to increase significantly due to competing priorities. These amounts are woefully insufficient to provide adequate health care for all. Furthermore, the bulk of the government expenditures for health are spent on capital intensive curative facilities including expensively equipped large hospitals in major cities. The budgetary allocations for these curative services cannot cope

with the increases in population and the rising demand for health care. Consequently, curative services offered by the MOH in most LDC's have poor geographic distribution, and are plagued by shortages of trained personnel, shortages of supplies, deteriorating equipment, inefficiencies, and overcrowding.

Furthermore, the MOH pays inadequate attention to its more critical role, i.e. the provision of "public" and preventive health services.\* Thus, as incomes rise, populations increase, and the awareness of the benefits of modern health care spreads, there is a growing demand for improved health services among the working poor. Since this growing demand for improved services is not being met by central government bureaucracies, there is a need for promoting private enterprise and community-based approaches to health.

Although the MOH is the major health provider there usually exists in most LDC's a significant private sector accounting by some estimates for as much as half or more the total expenditures on health. The health private sector includes pharmacies, health co-operatives, PVO's, programs of large corporations (particularly multinational corporations) to provide health to their employees, etc. However, in most countries, private sector health consists primarily of private hospitals and individual practices (in major urban areas) which cater to the more affluent class, and an assortment of traditional practitioners and quacks of varying degrees of efficacy serving

the poor or uneducated in both rural and urban settings. There is a significant gap in the development of private sector mechanisms that can provide improved low cost health care to the working poor on a self-sustaining basis. (e.g., in spite of the enormity of health problems, total expenditures on health are less than 3% of GDP in most LDC's compared to over 10% in the U.S.)

Thus, apart from strengthening existing institutions by helping them to improve their effectiveness and efficiency through better management, and to expand their services based on market analyses and new technology, AID has a significant high impact role to play in promoting new self sustaining private or community based enterprises that provide improved health care to the working poor.

#### 1.2 Balance Between Preventive and Curative Services:

AID must provide assistance not only for preventive services but also for promoting private enterprise ventures in curative health services as well. Since prevention often requires an enlightened and longer term perspective, the demand for preventive services can develop more fully only as income and education (particularly health education) levels rise and as more and more people become familiar with science based curative services.

As a country progresses, infant and adult mortality decline and the disease risk shifts from predominantly acute and infectious, to one with more chronic conditions and higher morbidity, as more and more persons survive diseases that once were fatal. Hence, as one report\* words it:

"This growing and shifting morbidity pattern requires that curative health services be developed and maintained in parallel with preventive health services. The notion that prevention vigorously applied can do away with or even substantially decrease the need for most curative and hospital services is exaggerated. Furthermore, the relief of pain and suffering (whether or not pain and suffering were preventable) is legitimately demanded by all people everywhere. That demand warrants being fulfilled through the development and support of curative health services. Such curative services, properly managed and integrated with preventive services, are supportive of and strengthen preventive health services. In fact, if curative services are perceived by the population and political leaders as needlessly inadequate, there will be neither consumer demand nor budgetary support for preventive services. The support of curative services, including carefully selected referral services, is not only humane, but also necessary for the development and maintenance of adequate preventive services."

## 2 Consistency with the Foreign Assistance Act:

There is a growing recognition that in most countries, including LDCs, the indigenous private sector has a major role in improving the health status. Thus, promoting the growth of the health-related private enterprises is an effective way for AID to meet its developmental objectives in health and indeed, as Figure 1 points out, to carry out the full intent of the New Directions Mandate.

\*"A Review of Health Issues in Southern Africa", Family Care Inc. & Africare. Submitted 1/30/79 to AID.

Figure 1

Consistency of the Private Enterprise Initiative with FAA

<u>Sec. 101</u> Major Goals of Assistance	<u>Comments</u>
1. Emphasizes assistance to the world's poor majority.	Poor majority includes middle income in many LDC's because they are poor in absolute terms.
2. Promotion of self-sustaining growth	} Support private enterprise initiative.
3. Enhancing individual economic rights.	
4. Integration of LDCs into the world economy.	
<u>Sec. 102a.</u> Has phrases such as: Need for marshalling their own economic and human resources; facilitate access to private capital markets, investments, technical skills; expand productive investment and services to towns and rural areas; growth through productive work.	Support private enterprise initiative.
<u>Sec. 102b</u> Cooperate in development to the maximum extent through the private sector; To maximum extent possible involve U.S. private investment; Encourage regional cooperation.	Emphasizes private enterprise initiative. Supports joint venture with U.S. firms. Needed for economies of scale in some ventures

Sec. 104c

-- Emphasize self-sustaining community based systems

Private firms have to be self-sustaining and responsive to local markets. PRE definition of private firms includes community based firms.

-- Projects that can be replicated a broad scale.

Only self-sustaining projects, i.e., private sector ventures, can be replicated broadly. Otherwise more and more (LDC) taxes or foreign assistance may be needed to subsidize accelerating recurrent costs and growth.

-- Integration with other programs in nutrition, etc.

Marketplace does the integration for private enterprise initiatives.

Sec. 104d.

Emphasis on services to the poorest particularly mothers and infants using paramedics, health posts, commercial distribution.

Difficult for for-profit firms, PVO's or community organizations can play a major role here.

Sec. 128 Bread for the World Amendment

40% of AID to absolute poor. This should not include research unless directly or primarily useful to the absolute poor.

AID already does more than 40%. Absolute poor includes middle income in many LDCs. Private enterprise strategy emphasizes low cost services. Private enterprise initiative emphasizes assistance to operating businesses and de-emphasizes research studies.

According to the testimony, the motivation for this clause was to move AID away from aiding bureaucracies to the poor themselves.

Private enterprise also de-emphasizes aid to central government bureaucracies and emphasizes provision of goods and services through businesses.

In the past, the New Directions Mandate has often been interpreted by AID officials as an emphasis on serving "the poorest of the poor." As figure 1 illustrates, the language of the Foreign Assistance Act, on the other hand, is fairly clear on its emphasis on private enterprise and self help measures and refers to the needs of the "poor majority" (i.e. inclusive of middle income and working poor) rather than the poorest of the poor. Further, even the more "liberally" motivated Bread for the World Amendment uses the term "absolute poor" as defined by WHO (i.e. poor by world standards) rather than the more restrictive term "relative poor" referring to the poorest fractile in each country. Absolute poor, according to WHO, includes a majority of the people in many AID countries (and as much as 86% in Bangladesh or 72% in Haiti).

Serving the poor is a worthy and humanitarian AID objective and assistance to alleviate the suffering of the poor, particularly through PVO's and indigenous charities, should be encouraged and included as a part of AID strategy. However, given limited resources, the emphasis should be on providing the very minimum to as many people as practical since the free provision of health services entails substantial recurrent costs and it is not an effective long term solution for fostering growth and development. Food and shelter for survival, emergency care, and jobs, not improved health, is the preoccupying concern of the very poor.

The private enterprise approach, on the other hand, emphasizes self-help and self-financing health programs, particularly among the working poor and their families, i.e. where there is some income to support services and where there is an effective demand for health care. Further, if the health services discussed on this paper are carefully targeted, they would include services to significant and increasing portion of the very poor as well. Hence, PRE recommends that AID also emphasize promoting self sustaining health services (among the working poor in the short term) as part of its overall long term developmental strategy.

### 3 The Private Enterprise Approach to Health Sector Assistance:

#### 3.1 Objectives:

The private enterprise approach to health assistance seeks to improve health care delivery to the poor majority in LDC's by promoting the growth of indigenous health related private enterprises and improving the management (and thereby the productivity) of existing (both private sector and government) health providers. The objectives of the private enterprise initiatives are to:

- 1 Convince the Ministries of Health in appropriate LDC's of the significant contribution the private sector can make (including the leverage and other advantages it offers) in the delivery of health care services. Further, to encourage and assist the MOH in removing barriers and

creating a favorable climate for promoting the growth of private or community based enterprises -----i.e., enterprises which can complement its own efforts in providing public health and improved services to the poor majority.

2. Promote and assist the start-up of new self sustaining private enterprises or community based ventures in health care delivery, either directly, or through financial intermediaries, credit institutions, etc.
3. Strengthen existing private sector enterprises that provide health and assist them in growth and expansion of their services to larger/poorer segments of the population.
4. Improve the management and organization of existing parastatal insititutions (e.g. encouraging decentralization, divestiture, sound business practices) so that they may improve their effectiveness and efficiency (i.e. improve quality, increase capacity utilization, lower costs).

### 3.2 Design of Private Enterprise Projects:

Not all of health care, as argued earlier, belongs in the private sector. Private enterprise opportunities exist primarily in the provision of "personal" health care goods and services. Provision of public health services or the promotion of health consciousness, hygiene, and good nutritional habits are public goods for which the MOH must take the lead.

However, even in the public sector, private enterprises may have significiant opportunities to serve as sub-contractors,

managers, or suppliers. For example, the purchasing, leasing and maintenance of hospital equipment (including that in facilities owned by MOH) could be a viable business which would be worth promoting if it improves the efficiency and quality of hospital care to the people.

Some services like public latrines in a village may be considered private goods from a central government perspective but are a "public" good at the local community level. This too could provide an opportunity for a business venture, i.e., to manufacture and install latrines in rural areas, selling them to each community as a whole, which in turn raises the revenue through taxes, contributions, or fees. The appropriate role for the MOH, in this case, would be to launch educational programs that communicate the impact of sanitation on health (and thereby stimulate demand) or to assist the entrepreneur or the communities in obtaining credit for financing installment sales.

Apart from jobs and rising incomes, the evolution of a vigorous private sector in health in any country requires:

- a). An expansion of the demand for health care. This may require investments (in consumer education, promotional subsidies, transportation or other infrastructure) which the entrepreneur may not be able to recoup if competitors can freely enter once the market is developed. Hence these investments are an MOH responsibility in cases where there are no barriers to market entry. Alternatively, the government could grant temporary or partial

exclusivity/monopoly to an entrepreneur for developing the infrastructure or market demand. Apart from the public investments, the market for health care can also be increased through ventures that provide for consumer credit, through appropriate pricing strategies, through broader and more efficient distribution, etc.

- b). An expansion of the supply for health care products and services. (Increased supply and availability or lower prices would increase demand and consumption.) This may involve improvements in the business climate of the LDC, investments in productivity improvement or in new manufacturing or service facilities, attracting foreign investment and technology, training professionals and para-professionals, Government divestiture and decentralization or community takeover of MOH run facilities. etc.
- c). Promoting in LDC's the growth of viable suppliers and support organizations (to the health care delivery industry) including health consultants, hospital management companies, equipment leasing, etc. This is all the more important since in most LDC's, much of the health care delivery is currently in the public sector.

All the examples listed in section 5 fall in one or other of these categories.

### 3.3 Eligible Institutions:

Thus, unlike the top down centralized planning and the comprehensive national health systems operated by the Ministries of Health (MOH), the private enterprise initiative in health will emphasize assistance directed to the creation and growth of individual health-related businesses in the indigenous private sector. Project proposals will be solicited from both for-profit and self sustaining not-for-profit health providers (such as consumer cooperatives, employee health programs of corporations, etc.). Proposals that build on the programs and available infrastructure of existing institutions will be encouraged in order to reduce costs, redundancy, and business risk. Furthermore, since the projects should complement rather than duplicate existing MOH services, participation in projects by parastatals or government programs (and also other donor programs) will also be considered. In some cases, concurrent proposals may be solicited for a group of synergistic or interrelated businesses, or assistance may be given to MOH or PVO's to carry out public health programs that complement a particular private enterprise venture. Further, proposals will also be solicited for projects directed to improving the productivity of existing health institutions and put them on a more self-sustaining basis, or permit them to improve or extend services to more people.

While AID focus will rightly be on developing indigenous private enterprises in LDC health sectors, joint ventures with

U.S. firms as minority shareholders may also be eligible for PRE assistance in cases where the U.S. firm's technology, management know-how, or market access can contribute significantly to the venture. Most LDC's lack foreign currency and joint ventures, as well as opportunities for countertrade or barter, may provide possible ways of overcoming foreign exchange barriers to LDC imports of needed health technology, products, and services.

#### 3.4 Types of Assistance:

The private enterprise initiative will emphasize well focused projects that directly or indirectly (e.g., through a financial intermediary) increase the supply of specific health-related goods and services. Loans provided to business ventures will require equity participation by the entrepreneur (or cofinancing by the intermediary if loans are provided to it for on-lending) in order to ensure realistic appraisal of opportunity, sound business planning and high performance in project implementation. Management training projects may also be eligible, if directed to training health providers in cost control, analysis of market needs, pricing, and financial planning (in order to improve their performance and ability to access capital markets). Studies will be funded if necessary to evaluate the feasibility of specific ventures or to conduct market tests or operational experiments (where one learns by doing) in order to improve management.

Focus on the development and commercialization of specific opportunities is a microeconomic approach that would complement the macro policy and national systems approach of the MOH and would lead to enterprises that are decentralized, that adapt to local markets and conditions, and that are more likely to expand or be replicated if successful (rather than be limited by budgetary constraints).

### 3.5 Selection Criteria:

Because the various health care market segments and services are interrelated (e.g., sanitation and health education), coordination among projects and with existing programs will be encouraged. Ventures in all market segments will be eligible for assistance and the evaluation will be made on a project by project basis by assessing the proposal venture:

- (1) As a self-sustaining business, i.e., in terms of market size and penetration, sources of revenue, pricing policies, cost effectiveness or competitiveness, market risk, technological uncertainty, growth potential, synergy with other projects, etc. Also, strengths and weaknesses of the entrepreneur such as motivation, experience, infrastructure, fit with existing businesses, management skills, stability, etc.
- (2) Its consistency with AID objectives and its potential impact on improving health for the poor majority. For example, preference will be given to high volume low-cost and critically needed products (rather than expensive and specialized care) affordable by the middle income and

working poor rather than only the rich. Innovative high impact ventures, or ventures that have potential for growth/replication (without large and continuing subsidies) will be encouraged, even if the business risk is large. (Indeed, too low a failure rate on AID loan portfolio may be an indication of excessive conservatism rather than high performance.)

- (3) The amount of AID assistance requested (so that AID can maximize the impact of its limited resources.)\*

Requiring a proposed venture to be self-sustaining to the extent possible is necessary to motivate efficiency and high performance, and to increase the likelihood of both continuing survival and the replication or growth that extends service to larger/poorer segments of the population. Further, such a requirement would tend to deemphasize the reliance on mere commodity transfers and channel assistance more directly to the transfer of managerial and technical skills which are the prime engines of developmental growth. (Also, in supplying these

\* While quantitative assessment are unlikely to be available, in choosing among independent projects, PRE may make (informed) subjective guesstimates in order to relatively rank projects with a "return on AID investment" criterion as follows:

$$\frac{[tpn(uw- c)]_i \text{ summed over all market segments "i"}}{\$ \text{ value of AID assistance}}$$

where n = expected number of consumers served eventually if successful .....(in market segment "i")  
p = probability of success.....(")  
t = a time discount factor....."  
u = value of health product to the consumer....."  
w = weight, higher for poor consumer segments...."  
c = unit cost of providing the health good/service."

skills, AID will be transferring those resources for which the U.S. enjoys a distinct comparative advantage.)

Priority will be given to ventures that promote or respond to the evolutionary growth in markets for health care rather than projects that attempt to immediately provide comprehensive health services for all. This would ensure that the services offered are integrated with the process of overall development and that one is not offering services that cannot be supported (e.g., due to lack of trained personnel or transportation) or services that are unlikely to be utilized (e.g., due to lack of consumer education).

Thus, the private enterprise approach focuses attention on taking one step at a time and doing limited things well, rather than failing at ambitious goals. Limiting the objectives initially to fulfilling the demand for established (commercially viable) products and services or to serving the middle-income, the working poor, and the more accessible geographical locations (e.g., semi-urban) may prove the most cost-effective strategy for reaching the absolute poor. Such a strategy would permit the necessary facilities and service operations/ business organization to be already in place and paid for from sales revenues. The existing business would then find it cheaper (and could be more easily motivated/induced) to provide improved or more comprehensive services, or extend services to poorer or more rural areas since it could take advantage of economies of scale or lower marginal costs, and market segmentation (i.e., offering various levels of services and/or charging different prices to different market segments).

### 3.6 Role of Subsidies:

AID should make it clear as a matter of policy that:

- The MOH, and not AID, has the major responsibility for subsidizing health care where necessary; that AID subsidy can only be a temporary measure or a catalyst; and, as far as possible, the MOH should be encouraged to share the cost in any AID subsidy .
- There must be a clear rationale for the subsidy and it must be well targeted so as to minimize market distortions.

Although the emphasis will be on self-sustaining projects, AID grants and subsidies may often be necessary, for public goods and for institutional building, training to upgrade the skills of health workers, infrastructure, etc. For example, promoting health awareness among the rural poor with travelling 'health fairs' is something AID and the MOH might together subsidize since it would increase the market for health and preventive services.

Until poverty is reduced substantially, consumer subsidies (even for "personal" health products and services) may also be necessary for humanitarian reasons, to population segments too poor to afford an urgently needed basic health care product or service. However, because government resources are limited, such services can seldom be provided for free to all the needy. Hence, if the demand has some price elasticity, and given limited resources (and therefore inelastic supply), even partial cost recovery (where it can be achieved cost effectively) is better than free distribution

because it would lead to more judicious use and distribution, and because the revenues would permit expansion of the services to more people.\*

Subsidized care provided for humanitarian reasons to a target population of absolute poor (under Section 128 of FAA) can also be accomplished by piggy-backing on an existing or proposed business because of lower marginal costs and ability to price discriminate. A grant could simply be made to an existing or proposed venture for charging a lower price, to a targeted group of poor users, and making up the difference with a subsidy. The subsidized product/service ought to be differentiated (e.g. through less added features or simpler packaging\*\*) if possible, if distribution of the subsidized product to those that can afford to pay the full price is to be minimized. (Alternatively, the advantages and disadvantages of distributing discount coupons or "health stamps" to the poor may be evaluated.)

Temporary subsidies or even giveaways may also be justified if they are deemed necessary to test a new product, to overcome consumer uncertainty or resistance to a newly introduced product or service (e.g., contraception/), or in cases where the benefits are long-term or not readily apparent

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\*The MOH and PVO's should be encouraged to promote increased charitable giving and include partial cost recovery in health care operations. However, direct and expensive interventions by AID to establish cost recovery schemes can be justified only where the income potential is large (not, as AID found, in the mountain villages of Nepal).

\*\*For example, colored or ribbed condoms for sale versus subsidized ones that are plain and unlubricated.

to the consumer (e.g., nutritional products). In these cases, the subsidy may be regarded as an investment in developing the latent demand for a significant product and a trade-off may exist in the extent of subsidy and speed of market penetration. However, if the value of product or service can be communicated to the consumer without a trial experience (or a demonstration of effectiveness), then subsidizing greater consumer education and promotional activities may be the preferred/cost effective alternative. Early adoption among the more affluent users would facilitate sales to the poorer segment which may be selectively charged a lower price, if necessary. [Evaluating the appropriate trade-offs between price and market penetration, or between price and media expenditures, need not warrant separate studies. The evaluation can be conducted by including operational experiments (i.e., varying price, promotion, or service) in the design and implementation of ongoing projects.]

If the venture is subsidized with grants, however, the MOH should be encouraged to share in the cost (particularly if the MOH is providing the same service at other locations on a subsidized basis) and the venture proposal should include a long-term business plan showing projected deficits and how recurrent costs will be met once AID assistance is terminated. Also, details must be provided on the purpose of the subsidy, how it works, the target population, and the incentives and disincentives it has for efficient allocation of scarce resources, or the distortions it may create in the market place.

It should be the responsibility of the MOH to provide partial subsidies for goods with significant externalities, i.e., goods where others also benefit as a result of an individual's consumption of the good. For example: innoculating everybody against some infectious disease may be more than twice as effective as innoculating only that half of the population which is willing to pay for it; the welfare and service burden on all taxpayers and society is decreased as a result of a poor family's use of contraception. In deciding whether to subsidize and the amount of subsidy, the MOH must (at least qualitatively) assess:

- (1) the significance of the externality;
- (2) price elasticity of demand (i.e., impact of subsidy on increasing consumption);
- (3) distributive efficiency (e.g., if milk is subsidized, the rich may consume a lot more of it rather than it going to more poor children due to supply constraints or cultural factors);
- (4) opportunity cost of the subsidy, i.e., using the subsidy monies for some other more useful public purpose.

### 3.7 MOH Policies

Within the existing policy and economic framework of most LDC's, there exist significant opportunities for private enterprise ventures that may be undertaken with the support or concurrence of the MOH. However, if the success of the private enterprise initiative is to be more pervasive throughout the

health sector, it will often require a change in existing government policy. Specifically, these changes may include: increases in the health budget, greater allocation of MOH resources on public health issues (such as epidemiology, vector control, health education) and less on curative services, divestiture, decentralization (or local control) of facilities and programs (e.g., reliance on loans and matching funds grants, or capitation based on income levels, to local institutions/governments rather than direct provision of services\*), tax incentives for alleviating shortages and improving geographic distribution, removal of unnecessary constraints or regulations on health providers\*\*, increased regional cooperation on specific health programs and joint ventures in manufacturing and research.

While a continuing dialogue with the Government on economic philosophy is necessary to bring about change, major policy revisions are unlikely to be effected abruptly and on the basis of generalities. This implies that some private enterprise proposals in health may encounter specific LDC

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\*This would promote greater effectiveness and efficiency through either control or voice by local users as in a cooperative, or availability of competing choices for consumers.

\*\*As the role of the private sector in health grows, the MOH may need technical assistance in strengthening its programs for consumer information (or education) and programs for consumer protection including those for accreditation, quality control and standards, prevention of monopoly pricing or malpractice, etc. Such activities, although not discussed in detail at present, are necessary for a viable private sector in health. Technical assistance for them should also be an integral part of AID's private enterprise strategy.

policy barriers. AID can use these examples as opportunities to discuss the removal of the identified barriers particularly in view of the expected (and more easily demonstrable) benefits of the proposed projects. Thus, the project specific private enterprise strategy will also provide AID with an effective basis for negotiating incremental changes in LDC policy that improve the climate for the growth of the private sector in health.

4. PRE Role:

PRE's budget to further the private enterprise in health, is small in comparison to the overall spending on health. Further, PRE's resources and capabilities lie in business and finance rather than the technical aspects of health (and health related R&D) or the detailed knowledge of the local health needs and conditions in each country. Hence, the major role PRE expects to play is a supportive one, assisting the missions and bureaus to further the private enterprise initiative in their own programs. To do this, PRE will provide:

1. General assistance - in incorporating a business perspective in AID health programs and assisting the missions/bureaus to identify opportunities or develop a private enterprise strategy for health.
2. Project Funds - to selected proposals for health related private enterprise ventures (in target countries) that can be replicated broadly if successful.

3. Project Development -- explore with the missions/bureaus new private enterprise approaches to projects in specific areas of health care.

#### 4.1 General Assistance:

The most important contribution that the private enterprise approach (and PRE) can make to AID's health programs is to promote sound management analysis and business planning in the generation, design and selection of AID's health projects and programs in order to maximize their long-term impact on health and development. These management techniques include demand analysis, marketing (including pricing) and distribution, operations analysis, managerial accounting, long range forecasting and planning, sensitivity analysis, financial planning, etc.

To assist AID missions and bureaus in developing a private enterprise approach to health, PRE will:

1. review and help in the development of the health component of their CDSS strategy;
2. develop a format for analysis of private enterprise ventures in health (see outline in Figure 2); review health PIDs and recommend ways to incorporate the private enterprise initiative in the design of the project.
3. assist the S&T Bureau in developing a patent policy and including in the PIDs a strategy for the commercialization and dissemination of the results of R&D.
4. conduct seminars, workshops, and provide consulting assistance to impart business skills to AID health staff



VENTURE ANALYSIS

Market Analysis, Size of Target Population  
Pricing strategy

Cost Volume Relationships & Choice of  
technology  
resources required/available , e.g.,  
manpower, raw materials, capital

Proforma cash flows/sensitivity analysis

Uses & and sources of funds  
Synergy with other projects & plans for  
development

Long range planning & growth potential  
Strengths and weakness of the entrepreneur  
seeking assistance.

Consistency with AID's developmental  
objectives, impact on health status.

Assess appropriate:

AID role  
Other donors  
MOH role  
Local Government/  
cooperatives

Sales revenues/  
market

5. assist PPC in the evaluation of private enterprise health projects and the design of operational experiments or surveys of the demand for health care in selected countries.
6. acts as a clearinghouse among the various bureaus on examples of successful private enterprise ventures in health.
7. At the request of mission, send a team of consultants and business experts from health related industries to the country, in order to:
  - a. survey the climate for (and barriers to) the growth of the health related private sector;
  - b. meet with MOH and recommend ways that they may improve policy and encourage the growth of the health private sector;
  - c. identify and develop private enterprise opportunities in health.
8. Survey the U.S. industry and U.S. multinational firms for products, services, and skills applicable to LDC's in order to identify new opportunities for health assistance.
9. Develop and suggest new mechanisms for private enterprise ventures in health.

#### 4.2 Project Funding

The major type of financial assistance that PRE will provide is loans to selected proposals from indigenous entrepreneurs in PRE target countries for creating or expanding a health related business enterprise.\* Preference will be given to projects that

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\* The project proposals will be solicited through a variety of sources including: missions; various regional and S&T bureaus; local chambers of commerce; trade publications, and the Voice of America programs. Consultative committees of health, industry experts in the U.S. and host countries may also be established (perhaps patterned after the Joint Agricultural Committee model).

have a significant impact on the health of the poor majority in priority health areas and to projects that can serve as demonstration projects with a high chance of replication or growth.

Direct loans will be made up to \$2.5 million, with emphasis in the range from \$250,000 to \$1 million but no more than 25% of the total cost (i.e., capitalization) of the project. The general eligibility criteria, application requirements and the terms and conditions of financing are given in the Investment Opportunity Proposal prepared by PRE (see Attachment A). If there is significant demand for smaller loan amounts within a country then a co-financing arrangement with a local private sector financial intermediary, to create a health business financing window, may be established. The financial intermediary mechanism may be used not only to cofinance and supervise loans to health related business, but also for credit for installment purchases of health related equipment and facilities (e.g., village wells), tuition loans for entry level training to health providers, and loans for management and technical training to health sector businesses.

Study grants may also be provided to evaluate the feasibility of specific ventures. Up to \$50,000, but no more than 50% of the cost of the feasibility study will be provided as a grant. Should the study result in a follow up venture, the grant would be refunded to AID (or it could be treated as part of the direct loan).

#### 4.3 Use of Counterpart Funds in Private Enterprise Health

##### Initiatives:

Rapid change in AID's health program portfolio towards private enterprise initiatives can only be achieved if PRE can leverage its

resources and influence more programs than its own meagre health budget would allow. The need and opportunities (as discussed in the next section) for private enterprise initiatives are large and numerous, and many of the opportunities sketched in section 5 below need local currency funding more than dollars. Hence they would be an ideal investment vehicle for counterpart funds generated by CIP/P.L.480 title programs. PRE expects to work closely with FVA, regional bureaus, and missions for the programming of counterpart funds for self sustaining private enterprise initiatives, such as those in the health sector. This would be responsive to the recent policy directives of the Administrator with respect to the programming of counterpart funds.

#### 4.4 Project Development

From time to time, PRE will offer suggestions on private enterprise initiatives and opportunities in specific areas of health. PRE recognizes that expertise in health technology lies with the S&T Health Bureau. Further, health conditions and the climate for private enterprise differ from country to country and detailed knowledge of health issues in each country lies with the missions and regional bureaus. Hence, the examples offered below are suggestive. Not all the examples may apply to any one country. They are intended primarily to stimulate discussions of new approaches to health assistance which incorporate the Administration's private enterprise philosophy. (The discussion of specific health sectors below is also indicative of the types of health related ventures that PRE is interested in developing further and funding in cooperation with other missions and bureaus.)

5. Examples of a Private Enterprise Approach to Selected Health Sectors:

5.1 Oral Rehydration Therapy

Oral rehydration therapy is a simple low cost way to treat diarrhea which claims the lives of 4 to 6 million people annually. Children are particularly susceptible to diarrhea, and 10% of the children in LDC's who die before the age of 5, die due to dehydration from diarrhea. Donor agencies have attempted either to purchase unit dose packets of ORT salts and distribute them through a chain extending top down from the MOH in some LDC's, or have attempted to train families in the correct preparation of homemade ORT solutions from salt and sugar. Both of these programs are too expensive to attempt on a universal scale. For example, although the packets distributed by UNICEF cost only 8¢ each, each child suffers on an average 2 to 5 bouts of diarrhea annually and the total need for ORT packets is estimated to be 2.4 billion packets per year (of which UNICEF can now only provide and distribute 24 million).

Hence, what is needed is a greater reliance on private enterprise approaches to the packaging, distribution, and dispensing of ORT salts. (Private entrepreneurs in some countries such as India, have already begun to sell ORT salts, and similar ventures can be promoted in many other LDC's.)

The major problems encountered in trying to reduce diarrhea

related mortality in LDC's are:

- (1) Lack of clean potable water which is the cause of diarrhea and other water borne diseases.
- (2) The cost of even cheap medication when multiplied by the frequency of occurrence can be substantial. Hence, what is needed is an efficient distribution system and self-sustaining locally packaged products, some very low in-cost, so that even the poorest can afford some kind of treatment.
- (3) Lack of consumer education. Each person in an LDC suffers from diarrhea very frequently but 98-99% of the cases are not life threatening and get resolved by themselves. Hence, diarrhea is not taken as seriously as other diseases even though its cumulative toll is large. Consumer education is needed for early recognition of the severity of the attack, extent of dehydration and weight loss, etc. Education is also needed on the choice of treatments available, appropriate diets, nursing, etc.

While issue (1) will be discussed later under water and sanitation, and issue (3) is the responsibility of MOH, the private enterprise initiative will focus on promoting indigenous entrepreneurs interested in manufacturing and distributing ORT salts. PRE will fund these proposals directly (if the venture is national in scope) or through local private sector financial institutions.

Project design will include:

Manufacture: Mixing the salts and packaging them is a simple operation that can be done in the least developed countries. Two kinds of operations may be eligible for assistance: (a) automated packaging facility in major cities; or (b) geographically distributed network of cottage type packaging operations and distribution centers by individual entrepreneurs, or cooperatives.

Products: Several different products may be offered simultaneously to permit consumer choice and appeal to different market segments and income levels. For example, the UN formula for more serious cases or those who are willing to pay for it, the cheaper sugar-salt formulation (or formulations based on local substitutes) for milder stages, or the poor. (A disinfectant may be provided, if desired, to make the treatment water safe if boiling is a problem.)

Distribution: Practically every village in most LDC's have access to some retailer that stocks and sells rations such as koresene, cooking oil, etc. These people are usually knowledgeable about weights and measures, and they can be supplied with standard containers. They would be easier to train in ORT preparation than the general rural public. They offer a cost effective mechanism (over and above existing

channels) to promote and distribute ORT. (Co-ops could be others.) To reduce costs, they could measure out pre-mixed ORT salts from jars and even rent containers on deposit. They can also be educated to impart or distribute information on dosage, diet, cases deserving medical attention, etc. These local retailers could, in turn, be served by suppliers in market towns acting as wholesalers and, if economies permit, packagers. The entire network could thus provide an opportunity for a private enterprise venture that can provide ORT to more people than that which can be provided through existing PHC's.\*

MOH Role:

Apart from restricting unfair prices, spot checking for quality, and subsidizing at the margin (if necessary), the major role the MOH can play is to strengthen consumer education programs on diarrhea (and the importance of clean water), thereby developing the demand for ORT salts.

AID Role:

Promote indigenous private enterprise ventures and investments in ORT distribution, assist MOH in strengthening consumer education programs (particularly in coordination with the ORT distribution projects), sponsor research (including that for early recognition of serious cases).

\* PRE is meeting with representatives of some international drug firms for their assistance in refining this marketing approach.

## 5.2 Water and Sanitation

Water and excreta are prominent factors in the transmission of most of the more serious and debilitating diseases in developing countries. And yet, fewer than 25% of the people (less than 50% in urban areas and less than 20% in rural areas) in LDC's have safe drinking water and sanitation. This is so because the investment required is enormous -- some \$30 billion is needed each year if the UN Drinking Water Supply & Sanitation Decade is to meet its goals by 1990.

Given the magnitude of the problem, it is imperative that a self-sustaining, or at least a private enterprise "approach" to assistance be developed in order to provide safe water and sanitation to as many people as possible. Since the greatest need is in rural areas, and the World Bank is a major lender for urban water and sewer systems, AID should place its emphasis on rural systems.

Among other things, the WASH Project at AID has done considerable development and testing of a hand pump. It has also found that job shops in even some of the least developed countries are capable of making parts of the AID pumps. What is now needed is a more integrated entrepreneurial approach to the delivery of safe drinking water in rural areas.

The provision of village water systems and/or sanitation systems can be viable business ventures in many LDC's (as in

Malawi, India, etc.). The manufacture\*, sales, installation, and maintenance of water pumps; the design and construction of wells (or supervision of well construction by villagers); the capping of springs or the covering/fencing of sources of surface water; the installation of standpipes and perhaps simple sources of power (e.g., animals, motors); the construction and installation of pit latrines (or other simple sanitation systems) form a complementary set of businesses in a region. They can be undertaken by a single firm, through joint ventures, or by a group of related businesses working closely with one another. They could sell complete systems together with maintenance arrangements to the village decision-making bodies. The village, as a whole community, would be the purchaser. It in turn would raise money in the form of taxes, fees, or user charges. (Part of the payment could be in terms of labor.)

The technology requirements for such a business are modest and they can be minimized by sticking to simple alternatives. AID (WASH Project) or the U.S. private sector can provide the necessary assistance in technology transfer and management. The financial requirements for such a business, however, may be quite large for an LDC entrepreneur. Two types of financing may be necessary:

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\* If the scale of the operation is too small, e.g., initially when demand is growing, imports from other countries, or establishing a regional plant may be necessary. Imports should also be considered if local manufacturing costs are too high (e.g. AID had to pay four times as much to have pumps manufactured locally in Tunisia than it would have cost to import them from Sri Lanka.)

- 1) Financing the manufacture's investment in facilities, equipment, working capital, and building up a sales/distribution network;
- (2) Credit to permit installment purchases by the villages. This can be provided through a local commercial lender. Collection risk could pose a serious problem and the lender may require some assurances or risk insurance from the national/local government if suitable private insurance cannot be found.\*

AID should assist in providing loans for both types of financing. If such a program is undertaken, a concurrent agreement will also be sought from the MOH to strengthen its educational efforts that point out the benefits of clean water in terms of lower disease and death rates and lower costs on curative services. (These programs directed to increase the demand for clean water and sanitation could also benefit from AID assistance.) The MOH may also provide partial subsidies to poorer villages for humanitarian reasons (or for equity reasons, if it has provided free water and sanitation in other regions in the past).

Indigenous entrepreneurs may also find opportunities in urban water and sewage systems to provide contractual services to national and local governments that can help them lower costs and improve efficiency. These opportunities could be in the design, construction, and planning of systems; and mass education on good

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\*Indeed, reducing the riskiness of such business ventures (rather than total subsidization) is an appropriate role for the government.

hygiene habits. PRE will assist indigenous entrepreneurs desiring to establish or expand such ventures and assist them in obtaining managerial and technical assistance through a suitable U.S. business partner.

### 5.3 Diagnostic Labs

Unlike the U.S., acute shortages of physicians will continue to persist in most LDC's. Because of the scarcity of doctors even in many towns in the interior, most patients will receive treatment by paramedics and auxillary nurses in primary health care clinics. Strengthening the diagnostic and treatment capabilities of these paramedics, at least in those regions accessible to modern transportation, through the provision of regional clinical lab centers, may be a promising way to improve the quality of health care. The paramedics need to be trained only in obtaining appropriate patient specimens (in cases where the symptoms indicate something more serious or unusual).

Further, many people, particularly children, in LDC's may suffer from other maladies and malnutrition over or above the immediate symptoms for which they are being treated. Hence, a small group of (simple and relevant) low cost\* tests and kits made available as back up services to PHC's and rural hospitals may assist early detection, prevention, and cure.

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\*e.g., cheaper reagents, less prepackaging, automation only if cost effective, etc.

Even in the urban areas, as recent studies by CDC and others have found, the public and private clinical labs suffer from poor operating conditions, obsolete methodology, deteriorating equipment, lack of standards, and trained staff. Strengthening their capabilities is necessary for improving preventive and diagnostic services and conducting epidemiological surveys. It is also necessary if the LDC is to have an infrastructure that can utilize the new diagnostic procedures that are expected in the future from the applications of advances in hybridoma research.

PRE will assist indigorous entrepreneurs in establishing ventures for the improvement and expansion of clinical lab facilities in LDC's. PRE may also explore the commercial feasibility of multiphasic screening for urban areas, development and sales of diagnostic kits for specific diseases, etc. (The Center for Disease Control, as well as industry groups such as the Pharmaceutical Manufacturers Association, have expressed an interest in helping to identify such opportunities.)

#### 5.4 Hospital Management

Most hospitals in LDC's are owned by the MOH, the social security administration, or other government agencies such as defense. MOH hospitals (apart from those for defense and/or government employees) and private charitable hospitals usually provide subsidized care to the poor. Hospital operations consume a large part of the government health budget, as noted earlier, and reducing their costs through increased efficiency would free resources for improved services and disease prevention programs.

Most hospitals in LDC's, including many of the more affluent private hospitals as well, are often characterized by poor management, inefficient scheduling, improper maintenance, lack of service planning, and poor collection of revenues. Average length of stay is often more than twice that in U.S. hospitals for comparable ailments and in spite of overcrowding in some areas, occupancy rates are as low as 50%-65% in others, comparing very poorly indeed to the over 90% occupancy and reduced costs achieved by many hospital management firms in the U.S.\* Thus, improving capacity utilization and efficiency of hospitals in LDC's is particularly important if we consider that:

- (1) improving their productivity by 5% may be equivalent to increasing the supply of new medical doctors by as much as 50%.
- (2) some LDC's continue to plan and build large new facilities at significant costs when what may be needed is greater efficiency and a network of small regional centers.
- (3) resources freed up by better management and planning can be used to lower prices or be used in providing more preventive services.
- (4) apart from labor savings and increased capacity utilization, significant savings are also possible in terms of inventory control, less material wastage, bulk purchases, etc.

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\* Hospital management/consolidation is one of the fastest growing U.S. industries and countries such as Egypt, Pakistan, and Brazil are already working (i.e., have management contracts) with U.S. hospital management companies.

AID should assist LDC's interested in: (1) public divestiture of MOH operated hospitals; (2) consolidation of hospital services to reduce costs; (3) ventures that transfer hospital management and technical skills from U.S. firms or hospital consortia.

An LDC usually also has a large number of PVO's of different nationalities providing health care to the poor through independently operated facilities. The same is true for multinational industrial firms operating health programs for their employees. Consolidating some of their operations or promoting self-sustaining service firms that can support their operations (e.g. drug purchases, equipment maintenance, training, sharing of specialists) more efficiently, may also be a fruitful opportunity.

### 5.5 Primary Health Care

Paramedics, auxillary nurses, health workers, mid-wives and other paraprofessionals serve the majority of the poor in most LDC's. They provide these services for the most part through government health posts, clinics, and where these facilities are not available, from their own homes. The MOH in most LDC's supports these volunteers and paramedics from its own budget and the services are usually provided free to the consumers or heavily subsidized. The recurrent costs of training these health workers and supporting them is large and it is a major drain on the MOH budget. As a result, not only do the number of PHC's established fall far short of the number needed but the clinics also lack equipment and supplies. In some cases, (e.g., Pakistan), health

posts have been abandoned by the MOH for want (fo) funds and manpower. (Often the trained workers sent from the city dislike living in the village and return to the city.) The quality of care provided in these clinics/or by these workers is also less than desirable because the PHC workers receive little or no supervision or continuing education from the MOH, and in many rural towns and villages, there is no competition to the MOH services if any, other than tribal practitioners. On the other hand, there often is an abundance of private physician practices in the major cities.

One approach to taking advantage of the abundance of doctors in the city is to require them to extend services to the rural areas. Presumably, private physicians dislike rural practices because the financial rewards from a regular rural practice are not as attractive and because the doctors do not like to live in rural areas. To overcome this, the MOH in many LDC's require a compulsory term of service in a rural area before granting a medical degree or license to practice, to new graduates. This can only take care of part of the shortfall and more important, it may not provide the proper motivation (as observed, for example, in Mexico) for high performance or adaptation to the local market.

An alternative mechanism would be to set up a high volume low price clinic in a rural town or village (or a rural cooperative) run by auxiliaries and supported by a group of urban doctors on a rotational basis so that any one of them spends but a short time say 6-8 weeks per year at the rural clinic. Good recordkeeping procedures can ensure continuity of services to the patient.

Leave from running the MOH facilities in the city or tax and other incentives could be offered to doctors serving in this "rural" group practice on a self-sustaining basis.

Another alternative would be to encourage urban physicians to have "auxillary private practices" commissioned by them (or associated with their own practices) and staffed by paramedics who work for them in rural areas. The doctor would be responsible for the quality of care delivered by his/her staff in the "auxillary private practice" bearing his name. Since the practice is run as a self-sustaining business (which with proper government incentives or marginal subsidies if necessary) could generate income for the doctor, the latter is motivated to train and supervise his auxillary staff, visit his practice periodically, keep them well supplied and handle referrals, emergencies, and difficult diagnoses. Competition between auxillary practices of different doctors is also possible in this free market system and the delivery costs would be low because of the emphasis on high volume and the use of paramedics who can continue to receive on-the-job training in the doctor's urban practice.

Both the above schemes, if proven feasible, would require an increased supply of paramedics and a private self-sustaining program could be developed for this purpose at a new, or preferably existing, education institution. The graduates would finish the clinical part of their training with the existing practices of the doctors with whom they expect to work. Tuition loans can be provided to the students to support them during their studies and the repayment clauses structured to discourage high turnovers.

AID should assist interested missions in testing such schemes and establishing cofinancing arrangements with local commercial lenders/private banks for providing credit for tuition and for establishing auxillary practices.

### 5.6 Equipment Leasing and Maintenance

A recent conference on international health sponsored by Project Hope concluded that the poor state of medical equipment was a major problem in delivering quality care and treatment in many LDCs. The equipment (e.g., cardiovascular, lung function, radiology) particularly in MOH hospitals and clinics, was often out moded, poorly maintained, at times improperly operated, in frequent disrepair or out of use, etc. Apart from a continuing shortages of funds, a major reason for this is the shortage of trained technicians who can provide guidance on decisions regarding the choice of equipment, and assist in its proper operation and appropriate maintenance. If this is so, then rather than have each hospital hire or attempt to hire its own specialists, it might make sense to consolidate the equipment purchases, training, and maintenance functions among several different hospitals (or clinics) through an independent supplier or group of suppliers. This would permit economies in purchasing. This would also allow a comparative evaluation of different types of installed equipment under local operating conditions. Further, it would permit greater coordination in purchase plans among hospitals, permitting standardization, increased sharing of specialized high ticket equipment (or

facilities) among nearby hospitals, or the recondition and resale of old or surplus equipment at major hospitals to the smaller or less endowed ones.

Thus, in LDC's lacking hospital equipment suppliers, assisting hospitals with: the choice of appropriate medical equipment; importing new or reconditioned equipment from abroad, training staff in the use of the new technology or equipment, financing the equipment costs through rentals or leases; and servicing the equipment on a regular basis; are a related set of businesses that may be supported by AID. (Also, some U.S. hospitals supply companies are expanding into products designed for home rather than hospital use in the U.S. Many of the smaller clinics in LDC's may find some of these products applicable to their needs.)

PRE will assist private entrepreneurs in establishing businesses that supply/lease/maintain or service, hospital equipment in an LDC. PRE will provide loan co-financing for the leasing operations and work with the missions, bureaus, and interested U.S. firms to provide supportive training in equipment evaluation, use, and maintenance.

### 5.7 Indigenous Manufacture of Health Products

#### Pharmaceuticals:

Manufacture of pharmaceuticals in an LDC is often not feasible because of: an inability to purchase foreign proprietary technology; a lack of production know-how and skilled manpower; an inability to control quality; or or absence of an economic size

market. The most important limitation may be the absence of a broad based chemical industry infrastructure, leading to a dependence on imports (or unavailability) of high purity intermediates or basic chemicals, and in some LDC's, even standardized packaging materials. However, the importation of pharmaceuticals is a significant drain on the foreign exchange reserves or budgets of most LDC's. Hence, if the cost of drug imports can be reduced through bulk-purchases and local packaging or through purchases of intermediates for indigenous conversion into final products, then the drugs could be made available to a wider group of people in the LDC.

PRE will encourage indigenous private entrepreneurs to seek/develop the following types of opportunities or joint ventures with the U.S. firms.

- 1) Manufacture, in relatively advanced LDC's critical (essential) drug under license if the technology is available on a cost effective basis (without violating intellectual property rights).
- 2) Tableting and package from bulk imports if economically feasible.
- 3) Extraction and production of biologicals (e.g., sera, antivenoms) for domestic and export markets.
- 4) Manufacture of nutritional products such as baby foods, iodized salt, etc.

Non-Pharmaceuticals:

Non-pharmaceuticals (i.e., medical supplies, equipment, or devices) perhaps offer greater opportunities for indigenous manufacture than pharmaceuticals. Many LDC's import a significant fraction of their non-pharmaceuticals needs and these would be more cheaply and widely available through local manufacture or assembly. Many non-pharmaceuticals have a higher labor content than drugs and they offer greater potential for cost reduction and employment generation. They may also involve less complex and more easily available technology and some may be more amenable to small scale manufacture. Opportunities may exist for:

- o Manufacture of supplies such as bandages, gloves, sutures, IV solutions, syringes, kits, etc.
- o Manufacture (or assembly) of: medical equipment including lab equipment; packaging material; hospital furniture; surgical instruments; dental equipment; etc.
- o Manufacture of simple devices, i.e., assistance, corrective or prosthetic products including eye glasses, splints, crutches, etc.

PRE will work with the missions and bureaus, U.S. firms and trade associations, and other donors such as the Program for Appropriate Technology in Health (PATH) to assist indigenous entrepreneurs with partial funding for feasibility studies and provide loans, either directly or through co-financing arrangements with local private banks, for manufacturing projects. It will also assist them in locating suitable U.S. business partners or licensors.

In most LDC's, a trade-off may exist in scale economies versus fair competition. The LDC market may be too small to permit more than one efficient sized manufacturer, thereby creating a monopoly. PRE will assist the MOH in designing policies and regulations that prevent price gouging and assure quality. PRE will also assist the MOH's with strategies for divestiture of parastatals (e.g., in Egypt), attracting foreign investment and technology through appropriate policy incentives, and catalyzing the gradual development of a viable manufacturing industry in the health sector.

### 5.8 Drug Distribution

In many LDC's the high cost and unavailability of drugs and medicines in general, are compounded by inefficiencies in their distribution.\*\* One problem is often the lack of trained pharmacists and AID can assist the start up of self-sustaining

\* In LDC's where the market is too small to support a domestic manufacturing venture by itself, export market access or regional cooperation and trade/barter may be necessary to capture economies of scale. For example, the manufacturing of one product in one country and another in a neighbouring country would permit the two to barter health care products with one another. Another alternative is joint ventures with entrepreneurs from both the countries.

\*\* Over prescription, unauthorized prescriptions by retailers and lay individuals, adulteration, local monopolies, and unfair trade practices are some of the major causes of misuse and misallocation of drugs in many LDC countries. These can only be corrected through education, training, and appropriate regulation (or licensing) and its enforcement. The cooperative village pharmacies and the consolidated drug wholesaling ventures recommended here will facilitate the regulatory functions of the Government. (The former because of consumer control and the latter because of centralized records and management.)

institutes offering abbreviated courses in pharmacology (along the lines indicated in example 5).

Another problem is that, due to lack of transportation or sufficient economic incentives, few of the city pharmacies venture to establish branches in rural areas. To overcome this, in some LDC's, particularly in SE Asia, village cooperatives have successfully taken over the retailing of drugs to their community on a self-sustaining basis, often generating a profit for use in supporting other community health projects or services. PRE will work with the missions and local private banks to assist the establishment of such self-sustaining retailing mechanisms for drugs and medicines.

A third problem that affects drug distribution in LDC's, even those with a well developed retailers is the wholesale supply system. Poor records, inadequate inventory control and management lead to significant spoilage, frequent stockouts both at the national and local levels and high carrying costs. What is needed are well managed consolidated and sufficient-sized wholesalers to franchise new pharmaceutical outlets or to service existing retail outlets with an effective inventory management system (such as the one developed by PMA for Gambia) and a lucid drug manual written for the local pharmacists. PRE will work with PMA and the missions to support profit or not-for-profit ventures in drug wholesaling distribution (including packaging operations, if feasible) in LDC's.

### 5.9 Cooperatives & Health Insurance Programs

As noted earlier, the hierarchical system of hospitals, clinics, posts, and health workers run by the MOH in many LDC's are often insufficient to meet the health needs of the poor majority. The centralized planning and control makes the system less responsive to local needs. Moreover, the large and continuing drain on the government budget limits the expansion of system to cover more geographic areas, limits the quality of care provided, and often leads to misallocation of resources.

Private clinics and hospitals operate on a fee for service basis and they may not be available in many rural areas. Further, the working poor and middle income people who are the major users of private health sector, need protection against major medical bills in case of serious illness or accident. Hence, promoting a vigorous private sector in health in an LDC may require the development of private enterprise organizations that provide health insurance to individuals, and/or the development of community based organizations or cooperatives that can protect consumers against local monopolies and bargain collectively for the provision of health products and services to their members at reduced costs.

On a limited scale, consumer cooperatives, unions, or farmer's cooperatives do in some case provide programs of varying degrees of medical coverage for their members. In some cases, these may take the form of drug stores owned by the village cooperatives (e.g., Botica Si Baryo in the Philippines), neighborhood family planning associations (usually supported by PVOs or the

government), or arrangements with some private clinics to provide services at a discount to the members of a cooperative (e.g., La Merced cooperative in Bolivia). These programs are usually not comprehensive and they do not provide health insurance.

Nevertheless, they are useful and they need to be replicated more extensively and encouraged to provide more health benefits.

More comprehensive medical coverage including health insurance is often offered by large employers (particularly multinational corporations and government agencies) to their employees as part of their compensation package. These programs need to be encouraged and spread to smaller firms either as independent ventures which market health insurance to indigenous firms and individuals, or by the client firms themselves forming consortia for the provision of joint health programs for their employees.

Health programs offered by governments to their employees are also usually comprehensive but they often suffer from cost containment problems since the benefits are often paid out of general revenues and provided through special government run facilities. Where possible, the governments should be encouraged to recognize these costs explicitly and to place these programs on an independent basis using private enterprise mechanisms, or at least sound business practices.

Thus, AID has a significant role to play in expanding the services of existing health programs and promoting their replication on a wider basis, including their introduction to other LDC's. In cooperation with the missions and regional

bureaus, PRE will provide loans\* and technical assistance for the start-up of viable, self-sustaining health insurance firms or health care delivery programs by employers, unions, or cooperatives.

Apart from the decentralized, non-governmental efforts described above, many Latin American countries have significant "social insurance" programs that are national in scope and many cover large portions of the population. Workers and their employers are taxed a percentage of wages as part of a health and retirement benefit program run by a national social security institution. Some of these programs provide reimbursements to the individual for health products or services purchased from the private sector. Others, operate their own facilities to provide medical services to the members (with reimbursement provided only to members in outlying areas) and are therefore akin to the health maintenance organizations (HMO's) in the U.S.

While cost reimbursing health benefit programs offer greater user choice, not limiting one to captive facilities, the HMO's provide better incentives or opportunities for containing costs and preventing abuse and fraud. In practice, nevertheless, a wide variety of hybrid systems can be designed, including ones providing limited choice among preselected private clinics/hospitals, etc.

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\* Arrangements may be made, for example with a local private bank, so that the bank has a line of credit from AID, for cofinancing such ventures (if and when proposed) subject to a pre-negotiated set of terms and conditions.

However, the distinguishing features of the social insurance schemes in most Latin American countries are that they are administered by national quasi-government institutions whose continual deficits are made up from general revenues. The lack of user choice in terms of alternative or competing health programs together with government underwriting of cost overruns may have created problems of cost containment, misallocation of resources and poor management in many cases. Collections are reported to be a frequent problem and the benefits focus primarily on curative services. The lack of any copayments by the user leads to an overuse of health facilities. Further, as these social insurance schemes are expanded to cover the general population or to rely on general MOH facilities for delivery of health benefits, as in the case in some countries, they appear little different from a general MOH administered health system except that some preferential treatment is given to workers (who are taxed) and their families. In the HMO type schemes, for example, users may have no voice in determining the product mix or levels of service and hiring or firing decisions based on performance. Thus, opportunities exist for AID to assist Latin American LDC's to decentralize the control of their health benefit (i.e., this does not apply to retirement and disability) programs and/or improve their management with greater user participation in the decision making.

[Decentralization does not rule out sharing special facilities and experts among programs to reduce costs. Further, given that introducing copayments in the existing systems is reportedly a

sensitive issue, decentralizing its control by providing matching or "block" (based on capitation, income, etc.) health grants from the MOH to local institutions, will be a more politically acceptable way to encourage fiscal responsibility and improved management.]

#### 5.10 Biomedical Technology Development

That technology is the key to combating disease and malnutrition has been obvious long before the days of Lister, Pasteur, or Flemming. Today, the application of new biomedical technologies offers opportunities for even more dramatic improvements in the health status of the world.\* Opportunities exist for the development of vaccines, early diagnoses, and treatments for major human diseases such as schistosomiasis, onchocerciasis, malaria, leprosy (and animal diseases such as foot and mouth diseases or east coast fever). Opportunities also exist for applying technology to the development of improved contraceptives, more effective medical equipment, and devices, cheaper production of more nutritional foods, more efficient processes for waste treatment and recycling, etc.

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\* "Priorities in Biotechnology Research for International Development" National Academy of Science, 1982, report to the Office of the Science Advisor, AID.

The U.S. comparative advantage -- in contrast to other donors -- is the technological knowledge and capability which we can develop and transfer from the American academic and business worlds to LDC's. U.S. medical research is unsurpassed in the world and some of this directed to third world needs can have a dramatic impact on their health status.

One approach, that AID has taken in the past is to establish and support government (or quasi-government) research centers in LDC's or provide general funds to multidonor efforts. The problems with such an approach are:

1) Many LDC's lack the necessary infrastructure to work effectively on advanced or high technology research. While hybridoma technology and clinical trials can easily be done in many LDC's, other technologies may require advanced equipment, synergy with other labs and high technology firms, economies of scale, or proximity to major scientific institutions for maximum effectiveness. While some LDC institutions do excel in basic research, they often lack the ability to exploit it fully on a worldwide scale.\* Further, unlike agriculture, the efficacy of most medical technology products (e.g. insulin) is not location specific.

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\*For example, in her technology policy speech on January 3rd, Mrs. Gandhi commented that although India had eminent scientists, a large pool of technologists, and excellent government labs, it had failed to reap the full economic benefits from the new technologies because of the lack of commercial R&D by Indian industry.

2) Focus, in the development context, needs to be placed not on basic research, but on applied research for basic needs. The latter emphasizes technology development and commercialization. There is growing recognition both in the U.S. and elsewhere that governments have a significant role in supporting basic research. LDC's can and do benefit from basic research such as that conducted or sponsored by the U.S. Dept. of Health & Human Services. However, the issue is whether LDC governments should invest substantially in basic research themselves. The availability of basic research findings from developed countries through publications, exchange scholars, and the like, together with the long time lags involved in realizing the benefits of basic research, argue that LDC's may be better off by focusing on technology transfer from other countries and on the more immediate or applied research, or on commercializing imported technology (at least until they become more industrialized). Governments, however, are poor at commercializing civilian technology. Commercial technology, as the U.S. experience indicates, is best left for the private sector to develop, and the U.S. indeed has the most innovative biomedical industry.

3) Funds for applied technology development are limited and they need to be leveraged for maximum impact. AID participation in multidonor programs, however, often leads to property rights controversies (e.g. the current malaria vaccine dispute among AID, WHO, and NYU) which hinder effective

commercialization. Patent protection and exclusivity are necessary to motivate private firms to invest in the development and commercialization of new research on a self-sustaining basis. (Unlike U.S. laws, which leave the rights to commercialize federally funded technology with the contractor, other donors make the technology available to everyone and thereby preclude, in many cases, investment by private firms in further development and commercialization of the technology.)

Hence, a complementary approach to technology development for AID would be to harness the leverage and the ability to create, develop and market technological innovations offered by U.S. industry, and to couple them with the low cost scientific and technical manpower available in many LDC's. Unfortunately, many tropical diseases do not have a significant U.S. market and restrictions on trade and intellectual property rights abroad have made R&D investments in tropical medicine unattractive to most firms. However, the new tax laws provide added incentives for private sector R&D and this has enlarged the pool of venture capital available in the U.S. Hence, AID could play a positive role in encouraging firms, limited research partnerships (LRP's)\*, and university based consortia to undertake applied R&D directed to LDC needs and to link up with research institutions in LDC's for joint development, adaptation, and commercialization.

LRP

AID can assist in the formation of LRP's directed to LDC needs as follows:

Step 1: . AID can offer technical assistance and pre-start up organizational grants to individuals, firms or universities interested in acting as a general partner in the establishment of an LRP in the U.S. which is focused on biomedical technology applied to LDC needs. Technical assistance may be offered in terms of help in identifying LDC needs, research priorities, and commercialization opportunities, assistance in organization design and in identifying LDC firms or institutions that can serve as partners or contractors for portions of the R&D. If AID approves of the research agenda as meeting its developmental criteria, AID could offer (if needed) a cost sharing non-recourse loan (i.e., loan is

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\*A limited research partnership (LRP) is a tax sheltered investment vehicle whereby a general partner raises funds from investors (limited partners) in order to undertake or contract out a specific research agenda. The limited partners benefit from immediate tax write-offs and from the proceeds from royalty or manufacture and sale of new products/processes resulting from the R&D. Many firms are active in establishing LRP's, for example, Merrill Lynch established Computer Trilogy and, more recently, one on wind energy research in California.

forgivable if the venture fails) to the general partner for a feasibility study or venture design, preparation of the prospectus, and placement of the investment offering.

Step 2: The general partner uses the funds obtained from private investors to undertake the specified R&D or to contract for it with research institutions including those in LDC countries.\* The general partner provides the R&D agenda, the transfer of relevant prior technology, and management of the R&D and its commercialization. AID can also provide loans/grants (from its programmed or counterpart generated funds) to the LDC research institution (preferably a private enterprise) for working with the U.S. based LRP to develop and commercialize the new technology.

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\*The added benefit would be that in working with the LRP, LDC research institutions would enhance their skills for applied commercial R&D. Some portions of an R&D project may clearly be conducted more cost effectively at some noted LDC centers of excellence. In other cases, this issue could be part of the financial negotiations among AID, LRP, and potential LDC partners.

Step 3: The results of the successful R&D belong to the LRP. The potential profits to the LRP from domestic and foreign licensing royalties or manufacture and sales would generate funds for repayment of any AID loans (for start-up), and then, for returns to investors. The LDC partner or contractor would obtain the rights to exploit the new technology in its own markets, the returns from which would allow it to repay any loans obtained from AID.

Before funding a LRP venture, AID will try to obtain participation, or approvals and agreements by as many LDC firms or governments as possible in order to facilitate the eventual commercialization of the technology in their respective countries.

Thus, the LRP concept would rely on the profit motive to significantly leverage AID resources and harness the technological expertise and creativity of the U.S. private sector in the development of commercial technology directed to LDC health needs. PRE will provide 50% (up to \$50,000) of the cost of feasibility studies as a grant, and loan amounts to LDC research institutions of 25% (but no more than \$2.5 million) of their total capitalization for establishing such international R&D ventures.

University Based Industry Consortia for R&D

A variation of the LRP concept, that is applicable to research that is more basic or further away from commercialization is NSF's cooperative generic R&D centers which have a university as a general partner and contractor, and there are only corporate investors i.e., firms that expect to further develop and commercialize the R&D. In this case the motivation for the organization comes from cost sharing rather than tax savings. The university makes the technology freely available to all the members of the consortium who are then free to develop it further for commercialization.

AID should explore such opportunities provided they involve loans or conditional loans rather than grant subsidies. In this case, AID could use Title XII funds since the assistance would be directly to universities interested in organizing such R&D consortia directed to LDC needs.

Revolving Fund for Industrial R&D

A third option for promoting applied, private sector R&D for LDC markets is to create a bilateral revolving foundation for such a purpose. The most successful example of such a foundation is the U.S.-Israeli Bilateral Industrial R&D (BIRD) Foundation. The unique feature about the BIRD foundation is that, though it was created by funding from the two governments, it is managed independently, it provides non-recourse loans directly to private for profit enterprises to conduct applied commercial R&D in selected (i.e.,

non-defense) areas, and it combines the use of dollar funds with local currency funds in a novel way that maximizes technological innovation and cooperation between U.S. and Israeli firms.

The Foundation was established in 1976 with contributions of \$33 million from the U.S. (generated by prepayments of P.L. 480 loans by Israel) and \$27 million in local currency from the Government of Israel. (In the AID context, programming of counterpart generated funds could serve in part for the cash contributions by the LDC.) The contributed funds have been set up as an an endowment and the interest earned on the principal is available for funding cooperative research projects proposed jointly by a pair of U.S. and Israeli firms. The Foundation provides loans and grants of up to 60% of the total R&D costs. Conditional grants by the Foundation are repayable up to the loan amount (or more, as is now proposed) as a set percent of sales if the project is successful. Each firm retains the exclusive rights to any resulting patents in its own country and rights for third countries are divided equitably between the two in proportion to their contributions. Repayments are used for funding additional projects and should the capital accumulate above a set ceiling, the Foundation has to redistribute the excess funds to the two governments.

The Foundation is an independent entity (subject to audits by both governments) and each side has named three officials to form its governing board. An individual familiar with

industrial R&D in both countries has been selected by the governing board to serve as the managing director.

Since July 1979, the Foundation has provided grants to about 50 pairs of companies. In spite of its brief history, the Foundation has established a highly successful track record in fostering increased cooperation in industrial research and promoting high potential but risky industrial R&D. Some of the companies have already commercialized their joint research and are beginning to repay their grants from sales revenues. The incremental taxes generated by just one of the resulting new ventures has alone begun to exceed the net interest loss to each of the governments due to their contributions. (For further details see annual reports of the BIRD Foundation.)

Other

Other possible activities for PRE in encouraging greater private sector R&D in the U.S. directed to LDC needs, promoting technology transfer, and strengthening the ability of LDC firms to undertake applied research or commercialize new technology include:

- 1) Publicizing LDC research needs and opportunities (as assessed S&T Bureau) to the U.S. business community through its Office Business Relations.
- 2) Facilitating transfer of developmental technology to LDC firms through such things as technology fairs (directed to LDC need marketing of relevant spin offs from federally funded technologies (e.g., the Navy developed a harmless and cheap chemical that spreads on water surfaces and kills mosquitos) LDC firms, facilitating private sector to private sector technology transfers (including the R&D sponsored by AID in LDC to other LDC's), further development and commercialization university based research which has LDC applications, etc.
- 3) Strengthening its patent policy so as to extend and interpret the new patent laws for the international context so that AID funded research abroad and multidonor funded research projects are commercialized promptly.
- 4) Requiring that any new R&D funded by AID have, as mandated by P.L. 480, a technology application statement and a commercialization strategy.

6 Closing Remarks:

The examples provided here are by no means an exhaustive list. Other opportunities can be explored such as: retail marketing of contraceptives; the use of international medical publishers in disseminating manuals or publications on health and nutrition\*; the use of advertising/media firms in mass education; the use of MNC's in expanding self-sustaining health services in the communities in which they operate\*\*; the use of microcomputers in improving management and planning of health programs and services; low cost modular or prefab health clinics or mobiles; occupational health and safety\*\*\*; oral cancer detection;\*\*\*\* etc. PRE will continue to work with the missions and bureaus in defining and developing these and other private enterprise initiatives and in designing an implementation strategy that will further the health status of the poor majority in third world countries.

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\* Many U.S. publishers such as Intermed, Scott Foresman, Harcourt Brace Janovich, Scholastic, are also active in publishing/distributing health related publications in LDC's. For example, the best selling manual on midwifery in Malaysia (priced at \$5.95) is one published by a local McGraw Hill subsidiary. Working through such regional private sector publishers may be a more effective way of producing, translating, or distributing health literature in LDC's.

\*\* PRE is working with the Conference Board and chief medical officers of several U.S. multinational firms on this issue.

\*\*\* In LDC's, because of unemployment and keen competition in the labor market, occupational safety and hazards (e.g., black lung, cotton dust) usually do not receive sufficient attention. A policy dialogue is necessary to strengthen appropriate regulations and develop the market for goods and services related to workplace safety (i.e., supplies, equipment, consulting and design, insurance, etc.)

\*\*\*\* A growing concern in S.E. Asia and parts of Africa.