

The purpose of this work is to address the deceptively simple question: "What is the cost of primary health care?" As evidenced by the content of this paper, the answer to this question is neither simple in definition, in estimation, nor in evaluation. To establish a common starting point, primary health care is defined; here is stated not one, but three definitions of primary health care -- basic, comprehensive, and selective basic. Thus, the cost question is already a three-pronged question.

The provision of primary health care rests heavily on the development strategy and the level of development within a country. (In essence, comprehensive primary health care encompasses the development of all segments of the economy.) Whether or not the infrastructure that is necessary to deliver primary health care already exists in the country has vastly different cost implications for health care projects. Two primary health care projects, alike in all respects (objectives and philosophy) except for the countries in which each is implemented cannot cost the same. Why? First, what are the needs of the population, i.e., what level of health care services has this population previously received? If a population has previously received no care, then changes in mortality and morbidity may be effected at minimal cost and effort. For example, in such a case, one health hut may have a significant impact on the village's health. For populations that have received some minimal level of health care, additional resources are needed to see a like change in morbidity and mortality. In short, the cost of bringing about a decrease in morbidity and mortality rises as the population is exposed to increasing amounts of health care.

Secondly, what is the current structure of the health services sector? If no such structure exists, i.e., if the country is lacking this crucial infrastructure, then the development of such a structure is a cost of delivering primary health care and must be included in all calculations. Likewise, if the existing infrastructure must be expanded to meet the demands placed on it by the new (or expanded) primary health care program, then these costs too must be included in the cost of the primary health care program. The Ministry of Health is not the only limiting infrastructure; transportation, personnel, education, foreign trade, domestic manufacture are all elements of the infrastructure that is crucial to the delivery of primary health care. In short, there are many inputs into the production of primary health care. Should any of these inputs become nonexistent or grow scarce, an infrastructure bottleneck has developed that must be alleviated for the health care project to be successful. And, this alleviation of bottlenecks is a cost item for the primary health care project.

Thus, the production of primary health care produces not one, but many outputs. First is the distinction between the actual health services themselves and training, infrastructural development, public health education, and sanitary facilities. Even within the health services themselves many outputs are produced. First, there are diagnostic, curative, and preventive services. Even within the curative sector, a multi-product output is produced. The resources needed to cure vary dramatically depending upon the age, sex, general health of the person, and other disease-specific characteristics. Obviously, the actual cost of providing primary health care will vary directly with these multi-product outputs.

In estimating the cost of primary health care projects, care must be given to envisioning "the world" once the project has become a reality. Will either the demand for inputs into the project or the actual success of the project significantly alter "the world"? For example, will the increased need for building materials for Health Huts lead to a shortage and hence a rise in the price of such input materials? Obviously, such increases in the price of materials would need to be budgeted into the project.

Lastly, what is the time horizon of the project? The cost of a one-shot primary health care project aimed at preventive care, e.g., an immunization program, will be vastly different from the establishment of a permanent primary health care project. And, is the permanent project to be self-sufficient or continue to be funded for its duration? These questions must be addressed before the concept of cost has any relevance.

The above provide the general framework guidelines for the planner. The last section of this paper applies these guidelines to the Sine-Saloum project to illustrate the deficiencies and common mistakes of the costing procedure. Most of these deficiencies are not inherent to the project of the planner, but arise from a misperception of what is a cost and how it should be valued. It is hoped that this paper provides a logical thought process that will aid the planner in estimating cost. By the end of this paper, it is anticipated that the reader is as convinced as is the author that the search for a single dollar estimate of the world-wide cost of primary health care is a misdirection of energy that could lead to a serious misallocation of world-wide resources.

#### Primary Health Care: Function, Scope and Input Mix

In its broadest definition, primary health care encompasses improvements in family planning, nutrition, sanitation, and water supply as well as personal health services.

Primary Health Care programs include, in general, the following elements:

- prenatal care and obstetrical assistance; care of mothers, new-born infants;
- family planning information and services, including convenient access to pills, condoms, and voluntary sterilization, and advice on the health benefits of birth spacing and delaying motherhood until women reach their twenties;
- childhood immunizations and certain other vaccines;
- basic medicines such as oral rehydration packets, eye ointment, certain oral and topical antibacterial agents, and antiparasitic medications, as appropriate;
- first aid for emergencies and minor trauma;
- health education