

ETHICAL REVIEW COMMITTEE, ICDDR,B.

Principal Investigator Dr. M. Mahmud Khan Trainee Investigator (if any) \_\_\_\_\_  
Application No. 99-017 Supporting Agency (if Non-ICDDR,B) (<sup>RSDP</sup> Pathfinder Int'l)

Title of Study Health Care Seeking Behaviour, willingness and ability to pay for Project status: New Study  
for health services and costing of the ESP components delivered through NGO-run facilities of RSDP ( ) Continuation with change  
( ) No change (do not fill out rest of form)

Circle the appropriate answer to each of the following (If Not Applicable write NA).

- Source of Population:
  - (a) Ill subjects Yes  No
  - (b) Non-ill subjects  Yes No
  - (c) Minors or persons under guardianship Yes  No
- Does the study involve:
  - (a) Physical risks to the subjects Yes  No
  - (b) Social Risks Yes  No
  - (c) Psychological risks to subjects Yes  No
  - (d) Discomfort to subjects Yes  No
  - (e) Invasion of privacy Yes  No
  - (f) Disclosure of information damaging to subject or others Yes  No
- Does the study involve:
  - (a) Use of records, (hospital, medical, death, birth or other) Yes  No
  - (b) Use of fetal tissue or abortus Yes  No
  - (c) Use of organs or body fluids Yes  No
- Are subjects clearly informed about:
  - (a) Nature and purposes of study  Yes No
  - (b) Procedures to be followed including alternatives used Yes  No  NA
  - (c) Physical risks Yes  No  NA
  - (d) Sensitive questions Yes  No
  - (e) Benefits to be derived  Yes No
  - (f) Right to refuse to participate or to withdraw from study  Yes No
  - (g) Confidential handling of data  Yes No
  - (h) Compensation &/or treatment where there are risks or privacy is involved in any particular procedure Yes  No  NA

- Will signed consent form be required:
  - (a) From subjects  Yes No
  - (b) From parent or guardian (if subjects are minors)  Yes No
- Will precautions be taken to protect anonymity of subjects  Yes No
- Check documents being submitted herewith to Committee:
  - Umbrella proposal - Initially submit an overview (all other requirements will be submitted with individual studies).
  - Protocol (Required)
  - Abstract Summary (Required)
  - Statement given or read to subjects on nature of study, risks, types of questions to be asked, and right to refuse to participate or withdraw (Required)
  - Informed consent form for subjects
  - Informed consent form for parent or guardian
  - Procedure for maintaining confidentiality

Questionnaire or interview schedule \*

\* If the final instrument is not completed prior to review, the following information should be included in the abstract summary:

- A description of the areas to be covered in the questionnaire or interview which could be considered either sensitive or which would constitute an invasion of privacy.
- Examples of the type of specific questions to be asked in the sensitive areas.
- An indication as to when the questionnaire will be presented to the Cttee. for review.

We agree to obtain approval of the Ethical Review Committee for any changes involving the rights and welfare of subjects before making such change.

Mahmud Khan

Principal Investigator

Trainee

**CHECK-LIST FOR SUBMISSION OF PROPOSALS  
TO THE RESEARCH REVIEW COMMITTEE (RRC)**

[Please tick (✓) the appropriate box]

1. Has the proposal been reviewed, discussed and cleared at the Division level ?

Yes

No

If 'No', please clarify the reasons: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2. Has the proposal been peer-reviewed externally ?

Yes

No

If the answer is 'NO', please explain the reasons: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

3. Has the proposal scope to address gender issues ?

Yes

No

If the answer is 'YES', have these been adequately incorporated in the proposal. Please indicate: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

4. Has a funding source been identified ?

Yes

No

If the answer is 'YES', please indicate the name of the donor: \_\_\_\_\_  
\_\_\_\_\_

RSDP (Pathfinder International)

5. Whether the proposal is a collaborative one ?

Yes

No

If the answer is 'YES', the type of collaboration, name and address of the institution and name of the collaborating investigator be indicated:

Abt Associates: Technical Support only and directly funded through Abt Associates.

6. Has the budget been cleared by Finance Division ?

Yes

No

If the answer is 'NO', reasons thereof be indicated: \_\_\_\_\_

7. Does the study involve any procedure employing hazardous materials, or equipments ?

Yes

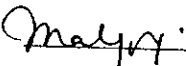
No

If 'YES', fill the necessary form.

July 20, 99  
Date

Mehmed Khan  
Signature of the  
Principal Investigator

## APPLICATION FOR PROJECT REVIEW BY RRC AND ERC

1. Principal Investigator (s) Dr. M. Mahmud Khan
2. Other Investigators Zahidul Quayyum, Shakil Ahmed, Suhaila H Khan,  
Kuntal K Saha, Ishtiaq Bashir
3. Title of Project Health Care Seeking Behaviour, Willingness and Ability  
to Pay for Health Services and Costing of the ESP  
components delivered through NGO-run facilities  
of RSDP
4. Starting Date July '99
5. Expected Date of Completion Feb' 2000
6. Total Budget Requested 129,396 US \$
7. Funding Source RSDP (Pathfinder International)
8. Head of Programme Dr. M. Mahmud Khan
9. Signature by Division Director 

Principal Investigator: Last, first, middle Dr. Khan Mahmud M

International Centre for Diarrhoeal Disease Research, Bangladesh

FOR OFFICE USE ONLY

Protocol No:

Date:

# RESEARCH PROTOCOL

RRC Approval: Yes/ No Date:

ERC Approval: Yes/No Date:

**1. Title of Project (Do not exceed 60 characters including spaces and punctuation)**

Health Care Seeking Behavior, Willingness and Ability to Pay for Health Services and Costing of the ESP Components delivered through NGO-run facilities of RSDP

**2a. Name of the Principal Investigator(s) (Last, Middle, First).**

Khan, M, Mahmud

**2b. Position / Title**

Health Economist

**2c. Qualifications**

Ph.D.

**3. Name of the Division/ Branch / Programme of ICDDR,B under which the study will be carried out.**

Public Health Sciences Division, Health Economics Programme

**4. Contact Address of the Principal Investigator**

**4a. Office Location:**

Health Economics Programme  
Public Health Sciences Division  
ICDDR,B

**4b. Fax No:** +880-2-886050

**4c. E-mail:** mkhan@icddr.org

**4d. Phone / Ext:** 2218/2219/2215.

9881762 (direct)

**5. Use of Human Subjects**

Yes

No

**5a. Use of Live Animal**

Yes

No

**5b. If Yes, Specify Animal Species**

**6. Dates of Proposed Period of Support**

(Day, Month, Year - DD/MM/YY)

July 1999-Feb 2000

**7. Cost Required for the Budget Period**

**7a. 1st Year (\$):** 129,396

**2nd Year (\$):**

**3rd Year:**

**7b. Direct Cost (\$)** 103,517

**Total Cost (\$)** 129,396

**8. Approval of the Project by the Division Director of the Applicant**

The above-mentioned project has been discussed and reviewed at the Division level as well by the external reviewers. The protocol has been revised according to the reviewer's comments and is approved.

Prof. A. Persson  
Name of the Division Director

[Signature]  
Signature

4/7/99  
Date of Approval

**9. Certification by the Principal Investigator**

I certify that the statements herein are true, complete and accurate to the best of my knowledge. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. I agree to accept responsibility for the scientific conduct of the project and to provide the required progress reports if a grant is awarded as a result of this application.

**10. Signature of PI**

[Signature]

Date:

4/7/99

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Check here if appendix is included

Principal Investigator: Last, first, middle Dr. Khan Mahmud M

**PROJECT SUMMARY:** Describe in concise terms, the hypothesis, objectives, and the relevant background of the project. Describe concisely the experimental design and research methods for achieving the objectives. This description will serve as a succinct and precise and accurate description of the proposed research is required. This summary must be understandable and interpretable when removed from the main application. (TYPE TEXT WITHIN THE SPACE PROVIDED).

Principal Investigator: Dr. M. Mahmud Khan

Project Name: **Health Care Seeking Behavior, Willingness and Ability to Pay for Health Services and Costing of the ESP components delivered through NGO-run facilities of RSDP**

Total Budget 129,396 Beginning Date July' 99 Ending Date Feb' 2000

### **I. Background**

Under the National Integrated Population and Health Program (NIPHP), the Rural Service Delivery Partnership (RSDP) funded various NGO-run health facilities to provide the ESP services to rural population of Bangladesh. Besides its efforts for the improvement in management and quality of service delivery, the NIPHP emphasizes the sustainability of the health care delivery activities. In order to attain sustainability, cost recovery through the introduction of user fees has been adopted. The current shift of the program focus on delivery of an essential package of health and family planning services (ESP) will require a pricing strategy based on all the components of the package, resource requirements for the delivery of various components, the exemption policy to be followed for increasing social benefits, cost recovery targets, the possibility of cross subsidization, and health care seeking behavior of the population in terms of the ESP services.

It was felt by the service delivery partners and the USAID that a systematic pricing policy should be devised and made available to the NGOs delivering the ESP services to rationalize the use of health care resources allocated to the primary care facilities of the country. To clearly define the scope of the study, the methodology to be followed, types of information to be collected, the Health Economics Program (HEP) of ICDDR,B met with the working group and the service delivery partners a few times. This proposal has been developed by taking into account the information needs identified and other related ideas and suggestions discussed in the meetings during the preparative phase.

The hypothesis of the study is that customers/potential customers will utilize and pay for the services provided by RSDP NGOs if 'quality' services can be delivered. The NGOs contracted by RSDP have already adopted a user fee based service delivery system. Nevertheless, to improve efficiency in service delivery and to protect the poor, a proper pricing policy and strategy will be necessary. This policy should be carefully evaluated on the basis of following issues.

The Price setting mechanism for health care services;  
Implications of the pricing policy on utilization of services and on quality of care;  
Perspective about the quality of services;  
Health care seeking behaviour of the clients/potential clients;  
The customers'/potential customers' willingness to pay; and  
Costs of producing different components of ESP services;

The HEP of ICDDR,B will examine the following aspects of pricing policy through this research:

- a. To estimate the cost parameters for the specific ESP services delivered by the NGO clinics, satellite clinics etc.
- b. To identify the potential sources of variability of unit-costs among the facilities surveyed
- c. To examine the relationship between quality of service and the cost of production of the services, if any
- d. To understand the health care seeking behavior of the population in the catchment area of the health facilities
- e. To examine the willingness and ability to pay for the health services provided by the NGO clinics
- f. To suggest a price setting mechanism and the level of user charges for each of the ESP services

**KEY PERSONNEL (List names of all investigators including PI and their respective specialties)**

Name	Professional Discipline/ Specialty	Role in the Project
1. M. Mahmud Khan	Health Economist	PI
2. Zahidul Quayyum	Health Economist	Co-PI
3. Shakil Ahmed	Public Health Physician	Co-PI
4. Suhaila H. Khan	Public Health Physician	Co-PI
5. Kuntal K. Saha	Public Health/Health Systems Research	Co-Investigator
6. Ishtiaq Bashir	Public Health/Health Systems Research	Co-Investigator

Principal Investigator: Last, first, middle \_\_Dr. Khan Mahmud M\_\_\_\_\_

## DESCRIPTION OF THE RESEARCH PROJECT

### Hypothesis to be tested:

Concisely list in order, in the space provided, the hypothesis to be tested and the Specific Aims of the proposed study. Provide the scientific basis of the hypothesis, critically examining the observations leading to the formulation of the hypothesis.

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The hypothesis of the study is that customers/potential customers will utilize and are willing to pay for the services provided by RSDP NGOs. if 'quality' services can be delivered

A rational pricing system should based on cost of delivering all medical services.

### Specific Aims:

Describe the specific aims of the proposed study. State the specific parameters, biological functions/ rates/ processes that will be assessed by specific methods (TYPE WITHIN LIMITS).

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Develop a strategy for the NGO for the delivery of ESP services to rationalize the use of health care resources allocated to the primary care facilities. The specific parameter that will be assessed include the implication of pricing policy on utilization and quality of care, the health seeking behavior of clients/potential clients, willingness and ability to pay of the clients, cost of providing different component of ESP services.

The study will address the following key issues in the introduction of user fees:

- a) For each of the services provided can the users clearly define the scope of the services? Is the unit of services clearly understandable to consumers?
- b) Is the service clearly divisible into "standard" units?
- c) Can one clearly identify the beneficiary/beneficiaries of the service delivered ?
- d) Is there a significant positive or negative externality?
- e) The socioeconomic status of the consumers by services types/categories.
- f) Willingness and ability to pay for different services by socio-economic status.

The study will analyze the extent and possibility of introduction of user fees as cost recovery measures and for mobilising additional resources in the delivery of ESP. It will also focus on efficiency of allocation of resources as inputs used for production and delivery of different components of ESP.



## Background of the Project including Preliminary Observations

Describe the relevant background of the proposed study. Discuss the previous related works on the subject by citing specific references. Describe logically how the present hypothesis is supported by the relevant background observations including any preliminary results that may be available. Critically analyze available knowledge in the field of the proposed study and discuss the questions and gaps in the knowledge that need to be fulfilled to achieve the proposed goals. Provide scientific validity of the hypothesis on the basis of background information. If there is no sufficient information on the subject, indicate the need to develop new knowledge. Also include the **significance and rationale** of the proposed work by specifically discussing how these accomplishments will bring benefit to human health in relation to biomedical, social, and environmental perspectives. (DO NOT EXCEED 5 PAGES, USE CONTINUATION SHEETS).

The delivery of Essential Service Package (ESP) is one of the major initiatives of the Health Sector Reform being implemented through the Health and Population Sector Program (HPSP) of the Ministry of Health and Family Welfare, Government of Bangladesh<sup>1</sup>. The ESP includes the following as important components: Reproductive Health Care, Child Health Care, Communicable Disease Control, Limited Curative care, and Behavioral Change Communication. For efficient implementation of the reform strategy, it is extremely important to estimate the amount of resources needed for delivering this package of services. The preparation of a financing plan needs the estimates of costs to produce each of the ESP services, and the potential for local resource mobilization in the health sector through user charges and/or community participation.

Under the National Integrated Population and Health Program (NIPHP), the Rural Service Delivery Partnership (RSDP) funded various NGO-run health facilities to provide the ESP services to rural population of Bangladesh. Besides its efforts for the improvement in management and quality of service delivery, the NIPHP emphasizes the sustainability of the health care delivery activities. In order to attain sustainability, cost recovery through the introduction of user fees has been adopted. A review of user fee based cost recovery initiatives of the NGO programs indicates that the fees were not set taking into account the relevant variables like the cost of production, willingness and ability to pay of the clients, and the market structure of the primary health care delivery system. Often, the price setting does not take into account the full range of services being offered to understand the possibility of cross-subsidization, and the effect of prices on certain types of services on the utilization of other types<sup>2,3,4</sup>. The current shift of the program focus on delivery of an essential package of health and family planning services (ESP) will require a pricing strategy based on all the components of the package, resource requirements for the delivery of various components, the exemption policy to be followed for increasing social benefits, cost recovery targets, the possibility of cross subsidization, and health care seeking behavior of the population in terms of the ESP services.

It was felt by the service delivery partners and the USAID that a systematic pricing policy should be devised and made available to the NGOs delivering the ESP services to rationalize the use of health care resources allocated to the primary care facilities of the country. A working group was formed to look into this issue. The working group, consisting of representatives of USAID, RSDP, UFHP and ORP met a number of times and discussed the problems of policy formulation in absence of the relevant information. The group decided to commission a study to help the RSDP and the UFHP in formulating a comprehensive pricing policy for basic ESP components. To clearly define the scope of the study, the methodology to be followed, types of information to be collected, the Health Economics Program (HEP) of ICDDR,B met with the working group and the service delivery partners few times. This proposal has been developed by taking into account the information needs identified and other related ideas and suggestions discussed in the meetings during the preparative phase.

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## Research Design and Methods

Describe in detail the methods and procedures that will be used to accomplish the objectives and specific aims of the project. Discuss the alternative methods that are available and justify the use of the method proposed in the study. Justify the scientific validity of the methodological approach (biomedical, social, or environmental) as an investigation tool to achieve the specific aims. Discuss the limitations and difficulties of the proposed procedures and sufficiently justify the use of them. Discuss the ethical issues related to biomedical and social research for employing special procedures, such as invasive procedures in sick children, use of isotopes or any other hazardous materials, or social questionnaires relating to individual privacy. Point out safety procedures to be observed for protection of individuals during any situations or materials that may be injurious to human health. The methodology section should be sufficiently descriptive to allow the reviewers to make valid and unambiguous assessment of the project. (DO NOT EXCEED TEN PAGES. USE CONTINUATION SHEETS).

### Research Questions and Objectives of the Research

The RSDP have initiated their program by hypothesizing that customers/potential customers will utilize and pay for the services provided by RSDP NGOs if 'quality' services can be delivered. The NGOs contracted by RSDP have already adopted a user fee based service delivery system. Nevertheless, to improve efficiency in service delivery and to protect the poor, the RSDP is interested in determining a proper pricing policy and strategy that will be based on careful evaluation of the following questions:

- (i) How to set prices for health care services?
- (ii) What will be the implications of the pricing policy on utilization of services and on quality of care?
- (iii) How do the clients define the quality of services?
- (iv) What is the health care seeking behaviour of the clients/potential clients?
- (v) How much money does the customers/potential customers is willing to pay?
- (vi) What are the costs of producing different components of ESP services?

Although all the above questions are important for pricing policy, the studies will be carried out in phases or stages through various research organizations. The HEP of ICDDR,B will be responsible for a number of specific areas of the research questions mentioned above. The definition of 'quality' from the client's point of view is being examined by another research initiative. The HEP of ICDDR,B will examine the following aspects of pricing policy through this research:

- a. To estimate the cost parameters for the specific ESP services delivered by the NGO clinics, satellite clinics etc.
- b. To identify the potential sources of variability of unit-costs among the facilities surveyed
- c. To examine the relationship between quality of service and the cost of production of the services, if any
- d. To understand the health seeking behavior of the population in the catchment area of the health facilities
- e. To examine the willingness and ability to pay for the health services provided by the NGO clinics
- f. To suggest a price setting mechanism and the level of user charges for each of the ESP services
- g. To examine the effect of "social mobilization" contacts, knowledge about health etc. on willingness and ability to pay for the ESP services and its utilization.

### Methodology

The study will conduct a number of activities to address the user-fee issues. The research activities will include:

- a. Estimating the cost of providing various ESP services through the surveys of the health centers and the satellite clinics

The study will calculate the overall cost of the health centers by analyzing the health center expenditure data and observing the various aspects of the physical facility and personnel. It will also examine the time allocation of health personnel to various ESP services in static and satellite clinics under RSDP.

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- b. Health seeking behavior, households' willingness and ability to pay by type of service, characteristics of the patients and the socio-economic status of the household.

#### *a. Costing of the ESP Services*

### **Selecting the Health Facilities for the Survey**

The study will be based on a sub-sample of 171 RSDP sites of USAID-funded NGOs. The RSDP sites are run by 20 different NGOs of the country. Since the NGOs involved are large in number, the study will not make any attempt to estimate the cost of delivering health care services for each of the NGOs. However, to allow for inter-NGO variations in costs, the NGOs involved with RSDP may be grouped into two broad categories, large national NGOs and local NGOs. After examining the list of NGOs involved in rural service delivery and informal discussions with RSDP officials and other partners, the study will decide about the exact methodology of selecting the RSDP sites.

One significant problem of costing the static health facilities under RSDP is the wide variations one can expect among the different NGO-run facilities. Some of the facilities provide very comprehensive services including laboratory services while others only provide basic consultations. Moreover, the types of services delivered also differs between the static sites at the thana level and the satellite clinics at the lower levels. Since the satellite clinics are held only once a month, these are unlikely to provide any significant curative services other than certain regular child health and family planning services. Therefore, it is important to understand the cost implications when only a limited set of services are provided. To make the analysis more complicated, some of the NGOs have also developed an intermediate type of health clinic known as the health sub-center. The sub-centers are also static clinics but organized, supervised and managed by the thana level fixed sites.

The method of selecting the health centers can be summarized here. The details of the sampling will be further developed after examining the list of all the NGO facilities under the RSDP.

The NGO facilities will be divided into two groups, either on the basis of the type of NGO (national or local NGO) or on the basis of comprehensiveness of the health care delivery system developed (types of services provided, referral system, laboratory facility, drug list etc.). During the sample selection, an effort will be made to select health centers to represent different categories of NGOs or service-mix groups.

The study will select 10 percent of the sites randomly after stratifying the NGOs or the facilities based on the stratification variable selected. The list of all the sites will be obtained from the RSDP office. The sites selected will be surveyed to estimate the cost of providing services from the thana level health facilities. Therefore, the study will use the data from 18 health centers for the costing of static sites of the NGO facilities. Although the sample size is not large enough to examine the inter-facility variability of costs and its determinants, the need for detailed cost information within a short period of time restricts the sample size to less than 20.

To supplement the cost data of the static sites with the cost of producing services at the satellite clinic level, the survey will list all the satellite clinics of the thana. The schedules and hours of the satellite clinics will be collected to define the sampling frame for selecting the satellite clinics. One week of time of the field investigators will be used to collect data from the satellite clinics. All the satellite clinics to be held during the week will be listed and four of the satellites will be selected at random. The field investigators will note the resources being utilized by the satellite clinics on the day when the satellite is held. In other words, from each of the thanas, five health centers will be surveyed for costing purposes, four satellite clinics and one thana level fixed center. The cost of health care delivery for the whole system at the local level will be derived by appropriately weighting the hours of work of satellite clinics and thana level fixed clinics.

### **Methodology of Costing**

#### **Defining the Cost Items**

This study will carefully examine the full cost of providing services, not just the recurrent costs. This will include capital costs associated with the organization and delivery of the services, variable costs associated with the delivery of the services, alternative estimates of costs if the input-mix can be potentially changed, cost of collecting user fees at the facility level by the type of fee system introduced. The input/resources that will be included are usually categorized into a number of groups: personnel/labor costs, capital cost, cost of drugs and medical supplies, cost of non-medical supplies, utilities and services. Also, total cost of providing

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services will be considered irrespective of the sources of funding to determine the importance of alternative sources of funding health care and facilities in rural Bangladesh. For example, a number of health centers may receive material resources or volunteer time from the community. All the resources/inputs used in the production process will be valued using market price or other appropriate method of valuation.

To ensure that all resources used for the delivery of an essential package of health and family planning services (ESP) are accounted for, a modified production function analysis will be used. The production function analysis in costing exercises observes the outputs (throughputs) being produced and then tries to identify the inputs needed to produce the output. To ensure that all inputs are being valued, the costing exercise observes the actual delivery of services from a health center and the field investigators list the resources used during the delivery process. Such observations should be able to capture most of the inputs used. Since the delivery of services may require other administrative preparations, record updating etc. which normally will not be visible during the actual delivery of the services, it is essential to ask questions about resource use for organizing and managing the health care delivery sessions.

### Collecting Information for Costing Health Centers

To estimate the costs, the study will collect information on expenditure pattern of the health centers from secondary sources. The line items of the expenditure data will be subdivided into capital and recurrent expenditures. In some cases, the expenditure line items often do not distinguish between capital and recurrent inputs. One example is the case of training. Training costs at the startup of the project or expenditures on long term training is considered capital expenditures while the costs associated with refresher courses should be categorized as recurrent costs. If the expenditure items combine the capital and recurrent costs, the facility administrators and accountants can be interviewed to subdivide the costs into capital and recurrent. If the expenditure data is available by line items for a relatively long period of time, it is also possible to estimate the average value of recurrent items. Normally, expenditures on different line items show significant lumping even though the resources are recurrent in nature. The expenditure data shows the actual acquisition of the resources rather than the use. If a time series of expenditure items are available, average over the months or years should indicate the actual use pattern of the resources in general.

The capital inputs are defined by the economic life of the resource, and whether the resource can be considered as building up the inventories of materials or human capital. Therefore, any resource with an economic life of more than one year and all start-up stocks of supplies, drugs, training, etc. will be categorized as capital items. The physical facility and the equipment observed at the health facility surveyed will also be costed and the annualized value will be added with the cost to derive the total capital expenditures.

To understand the organizational and management structure of the health facilities, the organogram of the central office as well as the health facilities will be reviewed. For each of the health center, all personnel, part-time or full-time, will be identified. The years of education and training of health care personnel and their years of experience will be noted. The salary scale of each of the staff will be obtained from the central accounting office or the local office.

Most of the recurrent cost items are normally observable and the field investigators will observe the use of these resources. The resources used will be quantified and valued. The resource use will be noted by the type of services being delivered by the health center.

A time motion study will be carried out to determine how different providers and others (directly or indirectly engaged in providing services) spent their time, and this information will form the basis for apportioning personnel cost among different services. To collect information on the time spent by the providers at the different level of the service delivery, observations on different providers will be made and a structured questionnaire will be used to record such information. The time allocation of the providers will be noted during randomly selected days by the trained field investigators. During the week of the health center survey, the three investigators will list all service delivery personnel (excluding the administrative staff, cleaners, guards, etc.) and patient flow. Out of this list, three items will be selected randomly and assigned to three field investigators. For example, if the selected items are patient flow, the physician and the paramedic of the facility, one of the survey investigators will observe the paramedic, the second will follow the physician for the whole business day to note the amount of time used in different activities. The time spent on a specific activity will be noted by using stopwatch. The third investigator will observe and follow the patients visiting the center. The first patient will be selected and then followed till the departure from the center. The investigator will then select another patient for observation. This process will continue till the end of the day. Such random selection of health care providers or patients will continue for the whole week. The health center personnel, supplies and paperwork and area of the center used for collecting user fees will also be noted so that the cost of collecting fee can be estimated. The fee system should also be described in detail so that the cost can be associated with the type of user fees implemented.

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To estimate the cost of producing services at the satellite clinic level, similar methodology will be adopted for following the patients or the providers during the session. The survey enumerators will collect data on the physical facility, types of services provided, personnel, etc. before the start of the activities. The observation will start as soon as the session starts operating.

The cost data of health centers cannot be interpreted without knowing the scale of operation. The administrative data on the utilization of health facility by service-type will be used. The survey investigators will also note the number of contacts during the day of observation. This information will be used as a crosscheck to verify the administratively reported numbers. Another aspect of cost of producing health care services is the quality of service delivered. It is possible that the cost of production is affected by the quality of service produced. The survey will also note a number of quality indicating variables to examine the quality-cost relationship, if any.

To summarize, the following information will be required in costing:

1. Health facility related information. This will be implemented through structured questionnaire. One questionnaire per center. Will collect information on size of the facility, number of rooms, fixed assets, equipment, cost of various items
2. Personnel list, organizational set up, educational qualification of personnel, years of experience, salary levels, percentage of number of working days/ days absent from work
3. Availability and supply of drugs, procurement procedure, stocks and stock management, mix of drugs used, number of drugs and other commodities used.
4. Facility utilization data for last one month (or year) by service-type
5. Time use of health care providers by activity/work performed during a day
6. Flow of patients in the facility: from entry to the facility till exit with or without using the services provided.
7. Use of different inputs/supplies by service-category, including the drugs prescribed
8. Quality indicators from patient's point of view as well as from the analysis of facility-specific data

#### *b. Household Survey*

#### *Health Seeking Behavior*

Ideally, health care seeking behavior survey should have a number of discrete steps: a qualitative survey to prepare a list of commonly occurring illnesses and conditions with local terminology; a key informant interview survey to list all the health care options available in the community; a survey of providers to understand the types of services provided, training and experience of health care personnel, quality of physical infrastructure, a household survey to explore illness occurrences and utilization of services, and household survey to understand the willingness and ability to pay for different types of health care services.

The household survey should examine the health care seeking behavior in different seasons and therefore should be for at least six months. However, since the policy makers need the information of this research within a very short period of time, the above approach can not be followed. For quick results, the following approach is proposed:

A cross sectional household survey will be conducted in selected rural areas to cover common illness occurrences and health service utilization in the community during the last two weeks prior to the visit. Recall period of two-weeks may be too short for certain types of services provided through the ESP. For example, antenatal care (ANC) services are used by about a third of all women giving birth during the year. The Crude Birth Rate in Bangladesh is about 25 per thousand and therefore about 8 per thousand use ANC over their pregnancy. If the recall period of using ANC services is three months, we should get only four users per thousand population. A recall period of last one-year should increase the numbers to about 15 per thousand. Therefore, a random sample of households will not generate enough cases for statistical precision.

To ensure that a higher number of pregnancy cases and users of ANC services are observed, the selection of the household for the survey can be biased towards households with at least one woman in the reproductive age group and having a child of less than two year old. Most of the ESP services delivered by the NGOs are for women in their reproductive age group, children of age less than two years and pregnant women. Therefore, selecting the households satisfying the above three conditions should provide the

Principal Investigator: Last, first, middle Dr. Khan Mahmud M

relevant information on the use of ESP services in the country. Once the households are selected, a survey will be carried out to understand the health seeking behavior of the population, especially the preventive services as well as maternal and child health related activities. To ensure that the survey explicitly considers preventive and promotive services, all contacts with health care providers will be considered irrespective of illness and health conditions. It will enable a better understanding of the nature of illness episodes and the health care resource used and the factors influencing decision making in selecting that particular health care option. This will also enable to clearly identify the beneficiary/beneficiaries of the services being delivered.

Data will be collected on health care resource used for each target illness episode. As mentioned above, the emphasis of data collection will be on a sub-set of health care services, although overall behavior will be examined. Data will also be collected for each health care option used, and the factors that influence the decision making in the process of their health seeking behavior. In addition to this, data on willingness to pay for different services, perceived quality of care, and level of satisfaction with the health care option used for different socio-economic group will also be collected. The survey will be conducted with structured questionnaires by trained interviewers. There will be two questionnaires for the households to be surveyed. One will collect information on illness episodes, health care resource used, and the factors influencing decision making in selecting that particular health care option and providers, perceived quality of care and level of satisfaction from the services obtained from the selected providers. The other questionnaire will be used to collect information on willingness to pay for different services provided, and for different quality of services.

The recall period of the service used or health conditions will vary by service. The services delivered through the satellite clinics will have a recall period of two to three months. The satellite clinics are held only once a month and so recall period of two weeks will not be appropriate. For curative services related to common illnesses, the recall period should be lower, preferable about two weeks. As mentioned earlier, the recall period for the utilization of ANC will be about a year.

The health centers to be selected for costing will be used for implementing the household survey as well. In each of the health center region, one thana level health facility and four satellite clinics will be surveyed for costing. Using the health facilities as the center of the catchment area for household survey, in each catchment area 60 households will be selected at random after the target households are identified through a simple census questionnaire. Therefore, in each thana, about 300 households will be surveyed and total population of the households should be about 1500. This sample size should provide about 25 to 30 cases of ANC service users if the target group is defined to include families with young children and women in reproductive age group.

For selecting the sample household, the facilities will be considered as the center of the catchment area. In Bangladesh, utilization of a health facility declines drastically with distance. Therefore, random selection of households from a pre defined catchment area will not be appropriate, especially when the sample is quite small and the main purpose of the study is to understand the health seeking behavior, willingness and ability to pay rather than the rate of utilization of the center by the population in the catchment area.

### *Information to be Collected During the Household Survey*

#### **Census questionnaire**

The census questionnaire will collect information on demographic characteristics of the households (number of women in reproductive age group, number of women with less than one year old children, children below the age of six years, number of women pregnant and lactating, etc.), distance from the health facility (the satellite clinic or the thana level static clinic), whether used the RSDP NGO facilities during the last three months, Socioeconomic status of the household

#### **In-depth Household questionnaire**

The in-depth questionnaire will collect the following information:

Household characteristics and the health environment.

Number of illness episodes in the household during the last 15 days. Number of the episodes acute in nature, Number of episodes that can be considered chronic.

Any health conditions present now that appears to be related with past pregnancies

Any health conditions present now those appear to be related with family planning interventions

Use of health care services during the last 15 days

Types of services used, source of the service, amount of money spent by expenditure categories

Principal Investigator: Last, first, middle Dr. Khan Mahmud M

Use of health care services for immunizing children and women during the last three months

Use of family planning services during the last three months

Use of maternal care services during the past one year

Use of child health services during the past one year

Number of contacts with community health promoters, social mobilizers

Types of messages obtained from the community health promoters

Number of contacts with family planning workers

Types of services received from the family planning workers

Quality of the services obtained from the health professionals, health workers, etc.

Quality of the health facility used by household members

Knowledge about benefits of immunization to the child or mother being immunized or to others in the society

Knowledge about benefits of getting ANC services

Knowledge about the benefits of family planning services

Questions on household perception about negative consequences of the above health services on health and wellbeing (side effects, other negative effects), if any

Knowledge about various common illnesses, the symptoms and how to manage the illnesses within the household

Willingness to pay for specific health care interventions by the characteristics of the patient

Principal Investigator: Last, first, middle \_\_Dr. Khan Mahmud M\_\_\_\_\_

## Facilities Available

Describe the availability of physical facilities at the place where the study will be carried out. For clinical and laboratory-based studies, indicate the provision of hospital and other types of patient's care facilities and adequate laboratory support. Point out the laboratory facilities and major equipment that will be required for the study. For field studies, describe the field area including its size, population, and means of communications. (TYPE WITHIN THE PROVIDED SPACE).

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The fixed health services facilities, which will be selected randomly are located at thana level and in different districts of Bangladesh. Each facility at the Thana is designed to provide ESP services to all individuals in the Thana through the fixed site and a number of satellite clinics. The RSDP NGOs will assist in locating the household areas that will be selected in the sample. The travel to the study area will be by road.

## Data Analysis

Describe plans for data analysis. Indicate whether data will be analyzed by the investigators themselves or by other professionals. Specify what statistical software packages will be used and if the study is blinded, when the code will be opened. For clinical trials, indicate if interim data analysis will be required to monitor further progress of the study. (TYPE WITHIN THE PROVIDED SPACE).

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## Method of Analysis

The costing exercise will use two different approaches to costing: the first approach will estimate the cost by major cost items from the administrative data of the NGO or the health center.

The survey-based data on resource use will be evaluated using the market price or another appropriate opportunity value. The cost estimates will be derived for each of the health care services provided, including the types of family planning services provided to the clients. For each of the services, the recurrent costs will be put together into a spreadsheet and total of all these cost items can be considered the recurrent cost of producing the service. The capital costs will be apportioned using a predefined criterion. The share of the capital cost will then be added with the recurrent cost to obtain the total cost of producing the service per unit.

The utilization data and the quality of service indicators will be used to examine the relationship among quality, utilization and cost of producing the services.

The household survey will use both bivariate and multivariate approaches of data analysis. Average willingness and ability to pay by service type will be reported. However, the policy makers are more interested to understand the willingness to pay by socio-economic status of the households. Simple bivariate analysis can be used to show this relationship.

Multivariate analysis will be used to understand the factors affecting the choice of providers. Households might choose the NGO facility for certain types of services but not for others. The factors that may have affected this decision-making will be examined. The potential determinants of the choice of health facilities are: household size and composition, income per capita, distance from the health center, knowledge about the types of services provided in the NGO clinic, knowledge about health and wellbeing, quality of service at the facility, etc.



Principal Investigator: Last, first, middle \_\_Dr. Khan Mahmud M\_\_\_\_\_

## **Ethical Assurance for Protection of Human Rights**

Describe in the space provided the justifications for conducting this research in human subjects. If the study needs observations on sick individuals, provide sufficient reasons for using them. Indicate how subject's rights are protected and if there is any benefit or risk to each subject of the study.

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The study, as noted earlier, will examine the health care seeking behaviour, willingness and ability to pay of the sample population. The study will interview the user of the RSDP health centres to gather information on perceived quality of the services. Observation will be made on the service produced to study the time allocation for different activities. The study subjects will be informed about the objectives, procedures and potential benefits of the study. Consents will be obtained from the subjects to protect subjects' rights.

## **Use of Animals**

Describe in the space provided the type and species of animal that will be used in the study. Justify with reasons the use of particular animal species in the experiment and the compliance of the animal ethical guidelines for conducting the proposed procedures.

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NOT APPLICABLE

Principal Investigator: Last, first, middle \_\_\_Dr. Khan Mahmud M\_\_\_\_\_

## Literature Cited

Identify all cited references to published literature in the text by number in parentheses. List all cited references sequentially as they appear in the text. For unpublished references, provide complete information in the text and do not include them in the list of Literature Cited. There is no page limit for this section, however exercise judgment in assessing the "standard" length.

- 
1. Ministry of Health and Family Welfare. Health and Population Sector Programme (HSSP), 1998-2003: Programme implementation Plan. 1998
  2. Quayyum Z., Routh S, Rahman MA, Jahan M, Khuda B; Cost-Recovery Strategies in the Health and Population Programmes of Bangladesh: Issues for the Application of User Fees. Special Publication, ORP, HPED, ICDDR,B. 1999
  3. Quayyum Z, Thwin AR, Baqui AH, Mozumder MA, Begum A, Sobhani J. Establishing a systematic pricing mechanism for MCH-FP services of NGO in urban Bangladesh: a preliminary assessment. ICDDR.B Working Paper. 1997
  4. Barkat-e-Khuda, Larson A, Barkat A, Lerman C. A study of the feasibility and impact of pricing scheme for condoms and pills. University Research Corporation. 1999.

Principal Investigator: Last, first, middle Dr. Khan Mahmud M

## **Dissemination and Use of Findings**

Describe explicitly the plans for disseminating the accomplished results. Describe what type of publication is anticipated: working papers, internal (institutional) publication, international publications, international conferences and agencies, workshops etc. Mention if the project is linked to the Government of Bangladesh through a training programme.

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The finding will be disseminated jointly by RSDP and ICDDR,B at seminars and workshop, Interdivisional Scientific Forum of ICDDR,B, RSDP seminars, through internet, ICDDR,B working paper, and Abt Associate publication. USAID's concurrence will be obtained for dissemination of the study results as and when needed.

## **Collaborative Arrangements**

Describe briefly if this study involves any scientific, administrative, fiscal, or programmatic arrangements with other national or international organizations or individuals. Indicate the nature and extent of collaboration and include a letter of agreement between the applicant or his/her organization and the collaborating organization. (DO NOT EXCEED ONE PAGE)

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The study will have an arrangement of technical assistance with Abt Associates. Dr. M.Mahmud Khan, who will be ending his term at the HEP, ICDDR,B in July will work as Abt Associates Consultant. The funding agency will enter into agreement with the Abt Associates to buy Dr. M. Khan's time for providing technical assistance and guidelines to the Co-Principal Investigator and other Co-Investigators at HEP, ICDDR,B after his departure from ICDDR,B. Professional collaboration will be developed with the NGO health facilities surveyed, so that the analysis will be useful for policy formulation at the NGO level as well.

Principal Investigator: Last, first, middle Dr. Khan Mahmud M

**Biography of the Investigators: *Please find enclosed separately***

Give biographical data in the following table for key personnel including the Principal Investigator. Use a photocopy of this page for each investigator.

Name	Position	Date of Birth

**Academic Qualifications** (Begin with baccalaureate or other initial professional education)

Institution and Location	Degree	Year	Field of Study

**Research and Professional Experience**

Concluding with the present position, list, in chronological order, previous positions held, experience, and honours. Indicate current membership on any professional societies or public committees. List, in chronological order, the titles, all authors, and complete references to all publications during the past three years and to representative earlier publications pertinent to this application. **(DO NOT EXCEED TWO PAGES, USE CONTINUATION SHEETS).**

**Bibliography**

Principal Investigator: Last, first, middle Dr. Khan Mahmud M

## Detailed Budget for New Proposal

Project Title: **Health Care Seeking Behavior, Willingness and Ability to Pay for Health Services and Costing of the ESP Components delivered through NGO-run facilities of RSDP**

Name of PI: Dr. M. Mahmud Khan

Protocol Number:

Name of Division: Public Health Sciences Division

Funding Source: RSDP. Dhaka. (Pathfinder International ) Amount Funded (direct): 103,517 Total: 129,396

Overhead (%) 25% 25,879

Starting Date: July, 1999

Closing Date: 28 February, 2000

Strategic Plan Priority Code(s):

Sl. No	Account Description	Salary Support			US \$ Amount Requested		
		Personnel	Position	Effort%	Salary	1st Yr	2 <sup>nd</sup> Yr
01	Principal Investigator*						
02	Sr. Operations Researcher	2	100%	1000	16,000		
03	Field Research Officer	6	100%	349	6,282		
04	Sr. Field Research Assistant	9	100%	267	7,209		
05	Field Research Assistant	24	100%	224	16,128		
06	Data Entry Technician	6	100%	267	9,612		
07	Programmer for Data Analysis	1	100%	635	8,890		
08	Administrative Support	1	50%	455	1,396		
	<b>Sub Total</b>				<b>65,517</b>		
	Consultants						
	Local Travel	Including Per diem			33,000		
	International Travel						
	<b>Sub Total</b>				<b>33,000</b>		
<b>Supplies and Materials (Description of Items)</b>							
	Printing Questionnaire/list				2,000		
	Stationary & other Filed Materials				3,000		
	<b>Sub Totals</b>				<b>5,000</b>		

Principal Investigator: Last, first, middle Dr. Khan Mahmud M

Other Contractual Services				
	Repair and Maintenance			
	Rent, Communications, Utilities			
	Training Workshop, Seminars			
	Printing and Publication			
	Staff Development			
	<b>Sub Total</b>			

Interdepartmental Services		1 <sup>st</sup> Yr	2 <sup>nd</sup> Yr	3 <sup>rd</sup> Yr
	Computer Charges			
	Pathological Tests			
	Microbiological tests			
	Biochemistry Tests			
	X-Rays			
	Patients Study			
	Research Animals			
	Biochemistry and Nutrition			
	Transport			
	Xerox, Mimeographs etc.			
	<b>Other Operating Costs</b>			
	<b>Capital Expenditure</b>			

~~129,396~~  
103,512

**TOTAL DIRECT COST**

\*To be funded separately through a consulting arrangement with Abi Associates after his departure from the Centre.

Overhead -- 25% --

US\$ 129,396

By 5/7/99

Md. Bozluur Rahman  
Senior Budget & Cost Officer  
ICDDR, B, Mohakhali  
Dhaka-1212, Bangladesh

Principal Investigator: Last, first, middle Dr. Khan Mahmud M

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## **Budget Justifications**

Please provide one page statement justifying the budgeted amount for each major item. Justify use of man power, major equipment, and laboratory services.

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Two Senior Operations Researchers will need to work full time (eight months) for two months and will have the overall responsibility in undertaking the activities of the study. The Senior Operations Researchers will work under the guidance and close collaboration of the Principal Investigator. Considering the number of households and the amount of information to be collected from the household for the health seeking behavior , willingness and ability to pay, and the facility survey for collecting cost information and time allocation study, it has been estimated that around 24 Field Research Assistant and 9 Senior Field Research Assistant will be needed to complete the work within the stipulated time of data collection (three months). Six Field Research Officers will be needed to supervise the field research assistants for three months, the period of data collection. Six data entry technicians will be needed to complete the data entry in the stipulated time. The programmer will be employed for 7 months, who will help in data entry design and management and also assist in analysis of the data.

The travel and per diem expenditure is designated for staff members (research assistants and investigators). It is estimated that about 4 round trips will be made by the field research staff. While calculating the total expenses, the standard ICCDR,B per diem rate and travel by bus has been taken into account.

## **Other Support**

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Describe sources, amount, duration, and grant number of all other research funding currently granted to PI or under consideration. (DO NOT EXCEED ONE PAGE FOR EACH INVESTIGATOR)

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Principal Investigator: Last, first, middle Dr. Khan Mahmud M

APPENDIX

**International Centre for Diarrhoeal Disease Research, Bangladesh**  
**Voluntary Consent Form**

Title of the Research Project: **Health Care Seeking Behavior, Willingness and Ability to Pay for Health Services and Costing of the ESP Components delivered through NGO-run facilities of RSDP**

Principal Investigator: **Dr. M. Mahmud Khan**

Before recruiting into the study, the study subject must be informed about the objectives, procedures, and potential benefits and risks involved in the study. Details of all procedures must be provided including their risks, utility, duration, frequencies, and severity. All questions of the subject must be answered to his/ her satisfaction, indicating that the participation is purely voluntary. For children, consents must be obtained from their parents or legal guardians. The subject must indicate his/ her acceptance of participation by signing or thumb printing on this form.

**English Version:**

*For household survey:* We are going to conduct a study on the health seeking behaviour, willingness and ability to pay for Health Services. This study will help us to obtain information on household's health seeking behaviour pattern of the different socio-economic group, use of different type of providers, value of health services, the perception about the benefits of seeking different type health care, the different type total expenditures incurred for seeking preventive and curative care, client's willingness to pay for different health and family planning services. The results of the study will help improve the quality of services, improving the policy for service delivery. Please feel free to answer the questions. All individual information will be kept strictly confidential and will be used for research study only. We are requesting you to take part in this study. You have the option to accept or to refuse participation. If you agree, you may please sign your name or give thumb impression on this form.

*For facility survey for costing part of the study:* We are going to conduct a study on costing all the different type health services at the facility and the health facility. This study will enable us to estimate the cost parameters for each specific ESP services delivered at the clinics and satellite clinic, the unit cost of each services at the clinics and satellite clinics, and would allow to examine the relationship between quality of service and the cost of production. We will collect the information all the type of inputs used, the capital and variable inputs. We will also conduct time motion study to determine how different providers and others (directly or indirectly engaged in providing services) spent their time. This information will form the basis for apportioning personnel cost among different providers. The costing study will not only determine the unit cost of different services, but also allow examining the allocation of inputs in the process of producing services. This will also help improving the efficiency in allocation of resources, determining the cost recovery targets for different services with different pricing, and also help in designing the pricing strategies. All information will be kept strictly confidential. We are requesting you to take part in this study. You have the option to accept or to refuse participation. If you agree, you may please sign your name or give thumb impression on this form.

**Bangla Version:** Will follow.

Signature of Investigator/ or agents  
Date:

Signature of Subject/ Guardian  
Date:



Principal Investigator: Last, first, middle Dr. Khan Mahmud M

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# Check List

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After completing the protocol, please check that the following selected items have been included.

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1. Face Sheet Included
2. Approval of the Division Director on Face Sheet
3. Certification and Signature of PI on Face Sheet, #9 and #10
4. Table on Contents
5. Project Summary
6. Literature Cited
7. Biography of Investigators
8. Ethical Assurance
9. Consent Forms
10. Detailed Budget

# CURRICULUM VITAE

M. Mahmud Khan

## PRESENT POSITION

Associate Professor  
Department of International Health and Development (IHD)  
and Department of Health Systems Management (HSM)  
Tulane School of Public Health and Tropical Medicine, USA  
and  
Head, Health Economics Programme  
Public Health Sciences Division, ICDDR, B  
GPO Box. 128, Dhaka -- 1000, Bangladesh  
Tel: +880-2- 9881762 (W), 885606 (R), Fax: +880-2-886050  
E-mail: [mkhann@icddr.org](mailto:mkhann@icddr.org)

## EDUCATION

B.S.S.	University of Dhaka, Bangladesh Major: Economics, Secured first position in the first class	1978
M.S.S.	University of Dhaka, Bangladesh Economics, Secured first position in the first class	1980
M.A.	Stanford University, California Applied Economics. Areas: Food, Nutrition and Health, Production Economics, Development	1982
M.A.	Stanford University, California Economics. Areas: Econometrics, Labor Economics, Development theory, Micro-economics	1987
Ph.D.	Stanford University, California Applied Economics. Household modeling	1988

## POSITIONS HELD

Feb 1980 to Aug '81	Lecturer, Dept. of Economics, University of Dhaka, Bangladesh
Jan 1984 to June '85	Assistant Professor, Dept. of Economics, University of Dhaka, Bangladesh
July-Sept '85	Visiting Fellow, Warwick University Development Economics Research Center, Coventry, UK
August 1987 to July 1988	Acting Assistant Professor Economics Department, University of Washington, Seattle, USA.
July 1988 to May 1992	Assistant Professor, International Health and Development (IHD) Tulane University, Louisiana, USA
June 1992 to June 1994	Assistant Professor, IHD and HSM Departments, Tulane University, USA.
July 1994-	Associate Professor (tenured), IHD and HSM, Tulane University.
January 1997	Head, Health Economics Programme, ICDDR,B, Dhaka. (on secondment from Tulane University)

## PUBLICATIONS (since 1992)

1. "RE: The Use of Residuals for Longitudinal Data Analysis: The Example of Child Growth", letter to the editor, American Journal of Epidemiology (USA), February 1993.
2. "Composite Indicators for Famine Early Warning Systems", first author with Nancy Mock, William Bertand, The Disaster, September, 1992 (UK)
3. "Is Madagascar becoming Increasingly Vulnerable to Food Crises?", first author with Nancy Mock, Victor Jeannoda, Shawn Baker, in Ecology of Food and Nutrition, 1992 (USA).
4. "The Costs of Rearing Children in Agriculture Economics: An Alternative Estimation Approach and Findings from Rural Bangladesh", first author with Robert Magnani, Nancy Mock and Yusuf Saadat, in Asia-Pacific Population Journal, 1992 (ESCAP, United Nations).
5. "The Utility of Clinic-based Anthropometric Data for Early-Timely Warning Systems: A Case Study Niamey, Niger", second author with Nancy Mock, D. Mercer, and others, Food and Nutrition Bulletin, December, 1992 (USA).
6. "Financial Development and Income Velocity of Money in Bangladesh", second author with Dr. Kabir Hassan, Dr. Badrul Haque, Bangladesh Development Studies, Volume 21, No1, March 1993.
7. "Market Based Early Warning Indicators for Pastoral Households of the Sahel: A Case Study for Niger", World Development, February 1994.
8. "Economics of Schistosomiasis Control Strategies in Northern Cameroon: A Study based on Household Survey Data from the Extreme North Province", M. Mahmud Khan, Small Applied Research Paper No.16, Peer-reviewed paper, Health Financing and Sustainability Project, Abt Associates, December 1994.
9. "A Note on Choice of Indicators for Food Security and Nutrition Monitoring", Letter to the editor, M. Khan and F. Riely, Food Policy, Vol.20, No.1, February 1995.
10. "Economic Status of Households and Labor Supply to Market and Non-market Activities - Some Results from a Poor Rural Economy", M. Mahmud Khan, Applied Economics, Vol.27, 1995.
11. "Socioeconomic Development and Health: A Comparative Analysis", M. Mahmud Khan, Asian Affairs, Vol. 17, August 1995.
12. "Community-based Health Insurance in China: Bending to the Wind of Change", M. Khan, N.Zhu, J. Ling, World Health Forum, Vol.16, 1995.
13. "The Use of Non-project Assistance for Health Policy Reform: An Analysis of the Case of Republic of Niger", M, Khan, Nancy Mock and R. Magnani, Journal of African Policy Studies, December 1995.
14. "Health-seeking behavior in Niger, the Role of Traditional Healers", Scandinavian Journal of Development Alternatives, June 1996.
15. "Market based Price Support Program: An Alternative Approach to Large Scale food Procurement and Distribution System", M. Khan and A.M.M. Jamal, Food Policy (UK), December 1997 Vol.22, No.6, pp.475-486.
16. M. Ali, A de Francisco, M. Khan et al., "Factors affecting the performance of family planning workers: Importance of geographic information system in empirical analysis", International Journal of Population Geography, Volume 5, 1999, pp.19-29.

17. M.M. Khan, M. Shahadat Hossain et al., "Social Situation and Health Status of Women in Bangladesh: A Preliminary Analysis", Chapter 15 in Health Situation and Health Care Expenditures in Bangladesh: Evidences from Nationally Representative Surveys, edited by Waliul Islam, M. Mahmud Khan and M. Shahadat Hossain, Bangladesh Bureau of Statistics, 1998.
18. M. Khan, Y. Celik et al., "Inappropriate Use of Hospital Beds in a tertiary hospital of Turkey", accepted for publication. Forthcoming in World Hospital.
19. M. Khan, N. Zhu and J. Ling. "Designing a Health Insurance Programme for Rural Bangladesh: Lessons from the Cooperative Medical System of Taicang County of China", forthcoming in Bangladesh Development Studies.

## CURRENT RESEARCH

1. Costs and benefits of syphilis screening and treatment in Bangladesh
2. Costs and benefits of introducing hepatitis-B vaccination with EPI in Bangladesh.
3. Optimal distribution of Emergency Obstetric Care facilities: A social cost-minimization approach.
4. Macroeconomic aspects of health sector of Bangladesh
5. Effect of development programmes on health and nutrition
6. Costing IMCI activities at the community level
7. Costing Integrated Nutrition Project of Bangladesh.

## PRESENTATIONS (since 1997)

- |               |  |
|---------------|--|
| February 1999 | Presented two papers on Expanded Program on Immunization in Bangladesh at the Annual Scientific Conference of ICDDR,B, 14-15 February.   |
| February 1999 | Presented a paper/research findings on Status of Immunization Costs, Cost-effectiveness and Financing: Bangladesh Case, Meeting on Sustainable Financing for Vaccination Programs, organized by Child Vaccine Initiative, New York, 4-5 February |
| February 1998 | Poster presentation at ASCON VII organized by ICDDR,B on 14-15 February, 1998. Title of the paper: Economics of Hepatitis B Vaccination for Bangladesh.  |
| February 1998 | Paper presented at ASCON VII organized by ICDDR.B on 14-15 February, 1998. Title of the paper: Costs and Benefits of Syphilis Screening in Bangladesh: Some Preliminary Estimates.   |
| December 1997 | Paper presented at the workshop on "Women's Health in the Community:   |

## CURRICULUM VITAE

Zahidul Quayyum

### PRESENT POSITION

#### Senior Operations Researcher

Health Economics Programme, Public Health Sciences Division. ICDDR, B.  
GPO Box. 128, Dhaka – 1000. Bangladesh. Tel: +880-2- 9881762 (W), 9117400 (R).  
E-mail: zquayyum@icddr.org

### EDUCATION

Bachelors of Social Science (BSS)	University of Dhaka Dhaka, Bangladesh	1980
Masters of Social Science (MSS) Economics	University of Dhaka Dhaka, Bangladesh	1982
Masters of Arts (MA), Economics	Thammsat University Bangkok, Thailand.	1984
M. Sc. Health Policy, Planning and Financing	London School of Hygiene and Tropical Medicine and London School of Economics University of London, UK	1996

### POSITIONS HELD

1 February 1985 to 6 November 1993	Research and Statistical Officer International Jute Organisation Dhaka, Bangladesh	Major Responsibilities included: Writing on reports on market and trade situation of jute and jute products. Assist in project preparation and implementation.
7 November 1993 to 30 November 1994	Research Investigator Urban Health Extension Project Community Health Sciences Division, ICDDR,B.Dhaka.	Major Responsibilities included Supervise the urban health and demographic surveillance system Prepare research reports
1 December 1994 31 July 1997	Senior Operations Researcher, Urban MCH-FP Extension Project Health and Population Extension Division. ICDDR,B. Dhaka	Design and Implement interventions and studies on financial sustainabi- lity. Prepare research reports
1 August 1997 to to 12 April 1999	Senior Operations Researcher, Operations Research Extension Project, Health and Population Extension Division. ICDDR,B. Dhaka	Major Responsibilities included: Design and implement operations research interventions, and studies on financial sustainability. Prepare research reports

12 April 1999 till to  
date Senior Operations Researcher,  
Health Economics Programme,  
Public Health Science Division  
ICDDR,B. Dhaka

Major Responsibilities include:  
Design and undertake studies on  
costing, financing, economic  
evaluation, major health policy  
Issues of the health systems.  
Faculty for the short training courses  
organised by the programme.

#### PUBLICATIONS/RESEARCH REPORTS

1. **A Review of Cost Recovery Strategies in the Health and Population Sector of Bangladesh.** Published as a Special Publication Series of the Operations Research Project. ICDDR,B. I am the principal author. April 1999.
2. **Demand for Child Curative Care in Two Rural Thanas of Bangladesh: Effects of Income and Women's Employment.** Working paper of the Operations Research Project, ICDDR,B, published in 1998. I am one of the co-authors of the paper.
3. **Establishing A Systematic Pricing Mechanism for MCH-FP Services of NGOs in the Urban Bangladesh: A Preliminary Assessment.** A working paper of Urban MCH-FP Extension Project, ICDDR, B, published in October 1997. I am the first author of the paper.
4. **Impact of national immunization days on polio-related knowledge and practice of urban women in Bangladesh.** Working Paper of the Urban Health Extension Project, ICDDR,B published in 1997. I am one of the co-authors of the paper.
5. **Impact of national immunization days on polio-related knowledge and practice of urban women in Bangladesh.** A journal article published in the journal: "Health Policy and Planning", **12(4)**, published in 1997. I am one of the co-authors of the paper.
6. **Reducing drug cost through rationalization of Diarrhoea and ARI case management at Urban PHC level.** Forthcoming working paper of the Operations Research Project. I am the principal author of the working paper.
7. Co-author of the book, "**New Horizons for Jute**", published by National Information Center for Textile and Allied Subjects (NICTAS), Ahmedabad, India. February 1993.
8. Co-author of the article "**Jute Has a Bright Future**", published in **Textile Horizon**, October 1989, Textile Institute, Manchester, UK.
9. Co-author of the publication on "**Yield Performance and Cost of Cultivation of Jute Kenaf and Allied Fibre in the Major Jute Producing Countries.** A Research Report of the International Jute Organisation, published in 1990. Dhaka.
10. "**Determinants of Export Performance of Jute Goods from Bangladesh.**" A Thesis submitted in partial fulfillment of the requirement of Masters of Economics, Faculty of Economics, Thammasat University, Bangkok, August 1984. Unpublished.

## PRESENT RESEARCH

1. Costing of NGO Health Facilities Providing Essential Services Packages of Health and Family Planning Services.
2. Health Seeking Behaviour, Willingness and Ability to Pay of Rural and Urban Households of Bangladesh.
3. Economic Evaluation of Home Gardening supported by NGO as an Alternative to Improvement of the Nutritional Status in Bangladesh
4. Pricing the Essential Services Packages delivered by USAID funded NGOs in the Urban and Rural Bangladesh.

## PREVIOUS RESEARCH

1. Designed and implemented an intervention for developing a systematic pricing mechanism for the MCH-FP services provided by the NGO in Urban Dhaka.
2. Willingness and Ability to Pay and Ability to Pay for MCH-FP services
3. Reducing Drug Costs through Rationalization of Diarrhoea and ARI Case Management at the Primary Health Care Facilities
4. Study on the knowledge of urban mothers on immunization (particularly about polio vaccine) and the impact of National Immunization Day on knowledge and coverage of polio vaccine.

## PRESENTATIONS

1. **Reducing Drug Costs Through Rationalization of Diarrhoea and ARI Case Management at Urban PHC Level.** Paper presented at the Seventh Annual Scientific Conference of ICDDR,B. 14-15 February, 1998. This paper was presented at annual conference of National Council for International Health (NCIH), for the year 1998, held in Virginia during 25-27 June 1998. I am the principal author of the paper.
2. **The Demand for Child Curative Care in Rural Bangladesh".** Paper presented at the Population Association of America (PAA) 1998 Annual Meeting, held in Chicago, Illinois on April 2-4, 1998. I am one of the co-investigators of the study.
3. **Establishing Systematic Pricing Mechanism for Essential Service Package in Urban Areas.** Presentation of findings of the operations research on the subject at the Dissemination Seminar: Lesson Learned and Programmatic Implications," organised by MCH-FP Extension Project, ICDDR, B. 17 July 1997. I was the principal investigator of the operations research.
4. **Willingness and Ability to Pay for MCH-FP Services in Urban Bangladesh.** Paper presented at the Sixth Annual Scientific Conference of ICDDR,B. 8-9 March 1997. This paper was also presented at the annual conference of American Public Health Association held in November 1997. I am the principal author of the paper.
5. **Cost of MCH-FP Services Delivery: An Analysis of Concerned Women for Family Planning Branches.** Paper presented at the Sixth Annual Scientific Conference of ICDDR,B. 8-9 March 1997. I am one of the co-authors of the paper.

6. **Vital Role of Human Resource Development in the Jute Industrial Sector**, Paper presented at the "Workshop on Mill Practices in Jute and Jute Goods Producing Countries". International Jute Organisation, Dhaka. June 1991.

#### TEACHING EXPERIENCES

I am a faculty member for the short courses on "Applied Health Economics for Developing Countries" and "Clinical Economics" conducted by the Health Economics Programme of Public Health Science Division of ICDDR, B.

Teaching Health Economics for the Course: Diploma in Health Economics at the Institute of Health Economics, University of Dhaka as a guest lecturer since November 1998.

I was one of the external faculty member to take lecture for the Health Economics Course offered for the Msc students (1997/98) of Department of Economics, Jahangirnagar University, Savar, Dhaka.

I taught Health Economics to the M. Phil Students (M.Phil in Preventive and Social Medicine) at the National Institute of Preventive and Social Medicine (NIPSOM), Dhaka, during 1996-97 as a guest lecturer.



**Shakil Ahmed**  
Senior Operations Researcher  
Health Economics Programme, PHSD, ICDDR,B

**EDUCATION**

Tulane University, New Orleans, LA, USA  
Department of International Health & Développement  
*Master of Public Health*, May 1998  
Focus on International health with emphasis on health economics research.

University of Dhaka, Mymensingh Medical College, Dhaka, Bangladesh  
*Bachelor of Medicine & Surgery MBBS*, May 1994

**TRAINING**

International Workshop on Research Methodology at ICDDR,B.  
Applied Health Economics for Developing Countries at ICDDR,B.  
Clinical Economics at ICDDR, B.

**RESEARCH EXPERIENCE**

June 98 – Present

Assist the Principal Investigator in cost benefit, cost effective analysis of different health interventions especially in child health and nutrition and also looking in strategies for cost recovery. Specific responsibilities include, identification of areas in need of research, writing proposals, supervising ongoing researches, proper implementation of projects in Matlab field area of ICDDR,B and five rural thanas of Bangladesh, data management and analysis of data, report writing, preparing seminar documents, attending various workshops and seminars.

Presently involved as a Co-investigator in the following projects:  
Costing of Integrated Management of Childhood Illness (IMCI),  
Costing of Bangladesh Integrated Nutrition Project (BINP) at the community level.  
Cost Estimates for the National Nutrition Program and Potentials for Local  
Resource Mobilization.  
Effectiveness of Bangladesh Integrated Nutrition Project (BINP) at the community level.

Aug 97 - May 98

Research Assistant, Tulane University  
Data collection, entry, verification, and statistical analysis of different projects of the Department of International Health & Development.

Jan. 97 - Jun 97

Nov. 95 - April 96

Short – Term Evaluator, AVSC International, Bangladesh Country Office  
Completed Training Impact Evaluation (TIE) of clinical service courses as well as comprehensive training on clinical contraception conducted by AVSC International. Was responsible for assisting the principal evaluator of the training impact evaluation of the IUD, injectable and family planning counselling training programs.

**PRESENTATION**

A paper "Cost Estimates for the National Nutrition Program and Potentials for Local Resource Mobilization" by Shakil Ahmed, presented at the National Nutrition Program workshop in Bangladesh on October 20, 1998.

A paper "Costing of the Integrated Management of Childhood Illness (IMCI): A Study Based on Matlab Data" by M. Mahmud Khan, Kuntal K Saha and Shakil Ahmed, presented at the Inter-Divisional Scientific Forum at ICDDR,B on May 17, 1999.

**Dr. Suhaila H. Khan, MBBS, MPH**  
**Senior Operations Researcher, Health Economics Programme, ICDDRDB**

**EDUCATION :** *Master of Public Health, Population & International Health*, June 1995  
Harvard School of Public Health, Boston, USA.

*Bachelor of Medicine and Surgery*, April 1993  
Dhaka Medical College, Dhaka, Bangladesh.

**RESEARCH EXPERIENCE :**

**International Centre for Diarrhoeal Disease Research, Bangladesh**

Department, Designation: Health Economics Programme, Senior Operations Researcher

Duration of employment: January 1999 - current

Currently conducting study on evaluating the cost-effectiveness of the urban Expanded Programme on Immunization in Bangladesh. Key responsibilities include study designing, preparing data collection tools, training and supervising data collectors, analysis, and report writing.

**Bangladesh Rural Advancement Committee (BRAC), Bangladesh**

Department, Designation: Research and Evaluation Division, Senior Medical Officer (Research)

Duration of employment: April 1996 - December 1998

Conducted various research studies relevant for uplift of BRAC programmes such as, financial and economic sustainability of BRAC Health Centres, challenges faced during natural calamities such as the 1998 flood, immunization in urban slums, needs of urban slum dwellers, and reasons for turnover of BRAC's *Shasthyo Shebikas*. For each study had responsibilities of principal investigator which included formulating study proposals, study designing, data collection tools, supervising data collection, analysis, report writing and dissemination.

**Ministry of Health and Family Welfare, Government of Bangladesh**

Department, Designation: Health Economics Unit, Consultant

Duration of employment: October - November 1995

Drafted a report for the HEU research strategy on cost-recovery through user fees.

**Harvard University, USA**

Department: Health Office of the Harvard Institute of International Development (HIID)

Duration of employment: October 1994 - March 1995

Worked as Research Assistant at the HIID and reviewed literature for a textbook on health management information systems, and wrote the preliminary draft for the first chapter on the evolution of HMIS.

**PUBLICATIONS and REPORTS :**

- Are government reproductive healthcare services 'free' or are they a burden? A case study in Bangladesh. Paper partially accepted at the Asia-Pacific Population Journal.
- Training and retaining *Shasthyo Shebika*: reasons for turnover of community health workers in Bangladesh. Health Care Supervisor, Aspen Publishers, USA. September 1998, 17 (1), 37-47.
- A comprehensive women's health care programme in Bangladesh: towards financial sustainability. In: Implementing Women's Health Programmes in the Community: The Bangladesh Experience. BRAC Publishers, Bangladesh. August 1998. p.247-255.
- The trade-off between sustainability and equity at the grassroots level: the case of the BRAC Health Centres in Bangladesh. BRAC-Research & Evaluation Division. December 1998.
- Beneath the shadows of the BRAC Centre, slums of Moliakhali. BRAC-Research & Evaluation Division. June 1997.

# CURRICULUM VITAE

Name : **Kuntal Kumar SAHA**  
Position : Medical Officer

## Education:

- Master of Science* in Nutrition in 1995 from the Institute of Nutrition and Food Science, the University of Dhaka.
- Bachelor of Medicine and Bachelor of Surgery (*MBBS*) in January 1990 from Dhaka Medical College.

## Training:

- *Applied Health Economics in Developing Countries* at ICDDR,B.
- *International Workshop on Research Methodology* at ICDDR,B.
- *Introductory Course on Epidemiology and Biostatistics* at ICDDR,B.
- *Clinical Economics* at ICDDR,B.
- *Operations Research Methodology* at BIRPERHT.
- *Practical Epidemiological and Computing Skills for Nutritional surveillance* in Addis Ababa, Ethiopia.

## Research:

- Involved in the study "Assessment of Maternal Mortality in Bangladesh" - a collaborative study of BIRPERHT and CDC, Atlanta, USA.
- Health Care Use Pattern of the Non-slum Residents in Dhaka City.
- Assessing Health Services Utilization for Policy Development.
- Costing of the Integrated Management of Childhood Illnesses (IMCI): A Study Based on Matlab Data

## Publication and Presentation:

- Akhter HII, Saha KK, Elahi ME, Karim F, *Knowledge, Attitude and Practice of Mothers/Female Guardians on Nutrition of Adolescent Girls in Rural Bangladesh*. Programme and Abstracts, 7th Bangladesh Nutrition Conference of Nutrition Society of Bangladesh 1997, p 37.
- A paper "An Analysis of Health Care Interventions in Bangladesh" by Ishtiaq Bashir and Kuntal K Saha, presented at the Workshop on Health Care Organization in Bangladesh.
- A paper "Costing of the Integrated management of Childhood Illnesses (IMCI): Bangladesh Module" by M Mahmud Khan and Kuntal K Saha presented at the IMCI Technical Coordination Committee meeting in Geneva in March 1999.
- A paper "Costing of the Integrated management of Childhood Illnesses (IMCI): A Study Based on Matlab Data" by M Mahmud Khan, Kuntal K Saha and Shakil Ahmed, presented at the Inter-Divisional Scientific Forum at ICDDR,B on May 17, 1999.

## Current involvement:

Data analysis and writing of scientific reports on the following studies:

- Health care Use Pattern of the Non-slum Residents in Dhaka City.
- Assessing Health Services Utilization for Policy Development.
- Costing of the Integrated Management of Childhood Illnesses (IMCI): A Study Based on Matlab Data.

## CURRICULUM VITAE

Name:

Ishtiaq BASHIR

Position:

Senior Medical Officer, Public Health Sciences Division, ICDDR,B

### EDUCATION

- Master of Public Health (MPH) from the Prince Leopold Institute of Tropical Medicine at Antwerp, Belgium in June 1996.
- Bachelor of Medicine and Surgery (MBBS) from Rajshahi Medical College, Univ. of Rajshahi, Bangladesh in Feb. 1984.

### TRAINING

- *Epidemiological Methods in Public Health*, ICDDR,B, Dhaka.
- *Qualitative Methods in Research*, Bangalore, India.
- *International Course in Health Development*, Antwerp, Belgium.
- *Cost Effectiveness Analysis for Primary Health Care*, Dhaka.
- *Clinical Economics* ICDDR,B, Dhaka.
- *Applied Health Economics for Developing Countries*, ICDDR,B, Dhaka.

### PROFESSIONAL EXPERIENCE

From Jul. 1996 till date: Currently Field Coordinator of Safe Motherhood: Emergency Obstetrics Care In Mallab, Bangladesh and Co-Investigators of: Assessing Health Service Utilization For Policy Development a) In The Non-Slum Population Of Dhaka-City, Bangladesh b) In The Catchment Area Of Gonosasthaya Kendra Health Care System In Savar And Gazipur Thanas, Bangladesh. Provides training on Health Systems Research; Epidemiology & Biostatistics.

From Jul 1992 to Aug 1995: Co-investigator of Health Care Use Patterns of Slum Residents in Dhaka, Bangladesh.

From Nov. 1990 to Jan. 1992: Project Manager, Training Immunizers in Community Approach (TICA), CARE Bangladesh

From Oct. 1989 to Oct. 1990: Research Associate, Epidemiology Dept., ICDDR,B

From Dec. 1987 to Sept. 1989: Medical Officer - Epidemic Control Preparedness Program (ECP), ICDDR,B

From Oct. 1985 to Jan. 1987: Medical Officer, Amo Tea Estate Hosp, Duncan Brothers(BD) Ltd. (Incorporated in UK)

### PUBLICATIONS & PRESENTATIONS

- Siddique AK, Zaman K, Majumder Y, Islam Q, Bashir I, Mutsuddy P, Eusof A. *Simultaneous Outbreaks Of Contrasting Drug Resistant Classic And El Tor Vibrio Cholera 01 In Bangladesh*. Lancel 1989;ii:396
- Siddique AK, Baqui AH, Eusof A, Haider K, Hossain MA, Bashir I, Zaman K. *Survival Of Classic Cholera In Bangladesh*. Lancel 1991, May 11:337(8750):1125-27
- Siddique AK, Zaman K, Akram I, Mutsuddy P, Bashir I, Majumder Y, Baqui AH, Eusof A, Sack RB. *Determinants of cholera deaths in Bangladesh: A case-control study* 'Proceedings of the Second Annual Scientific Conference of the International Centre for Diarrhoeal Disease Research, Bangladesh: Jan 1993, Dhaka, Bangladesh
- Desmet M, Zeilyn S, Myaux J, Bashir I, Rowshan R, Sohel N. *Can All Slum Residents Equally Afford Health Care?* 'Proceedings of First Canadian Conference on International Health: 13 - 15 November, 1994. Ottawa, Ontario, Canada:
- Desmet M, Bashir I, Sohel N, Zeilyn S, Myaux J, Rowshan. *'Equity in health care forgotten for the urban poor in Bangladesh.'* Proceedings of the Second Canadian Conference on International Health, 12-15 November 1995, Canada.
- Bashir I. *Why Slum Residents Use Health Services: Factors For Demand-A Study From Dhaka, Bangladesh*. Master of Public Health Thesis. Prince Leopold Institute of Tropical Medicine, Antwerpen, Belgium, 1996.
- Bashir I, Desmet M. *Proceedings of an International Dissemination Seminar on Health Care Reform: User-Provider-Policy Maker Dialogue - A Regional Perspective*. Dhaka, Bangladesh published at Glimpse Supplement, Vol. 18 No.4. December 1996.
- Bashir I, Desmet M, Rahman H, Sayeeduzzaman M Chowdhury Q. *'Can We Provide A More Appropriate Health Care In Bangladesh?'* Proceedings of the First International and Biennial National Conference of Bangladesh Sociological Association, Dhaka, Bangladesh. November 1997. p. 10.
- Chowdhury Q, Desmet M, Bashir I, Rahman H, Sayeeduzzaman M. *'Pluralistic Health Care Options In Bangladesh: Implications for Health Care Reform'* Proceedings of the First International Conference of Bangladesh Sociological Association, Dhaka, Bangladesh. November 1997.
- Desmet M, Bashir I, Sohel N. *'Health Care Seeking For Delivery Cases In The Urban Slum Area: Is The Current Health Care Provided Adequate?'* Presented at the Interdivisional Scientific Forum Meeting of the International Centre for Diarrhoeal Disease Research, Dhaka, Bangladesh. November 1997.
- Desmet M, Bashir I, Sohel N. *'Effects Of Ill-Health On Income-Earning Capacity Among Urban Poor In Bangladesh.'* Presented at The Second Asian -Pacific Congress of Epidemiology, January 1998, Tokyo, Japan. Abstracted at Journal of Epidemiology, Vol.8(1) January 1998, p.63
- Desmet M, Bashir I, Sohel N. *Demographic, Socio-Cultural And Economic Profile Of Slum Residents In Dhaka-City, Bangladesh*. Health Economics Programme Working Paper series, Public Health Sciences Division, HEP working paper No. 3-98, ICDDR,B Working Paper No. 110, Dhaka, Bangladesh, May 1998
- Desmet M, Bashir I, Sohel N. *Illness Profile And Health Care Utilization Patterns Of Slum Residents In Dhaka-City, Bangladesh.* Health Economics Programme Working Paper series, Public Health Sciences Division, HEP working paper No. 4-98, ICDDR,B Working Paper No. 111, Dhaka, Bangladesh, November 1998
- Desmet M, Bashir I, Sohel N. *Direct And Indirect Health Care Expenditure By Slum Residents In Dhaka-City, Bangladesh*, Health Economics Programme Working Paper series, Public Health Sciences Division, HEP working paper No. 5-98, ICDDR,B Working Paper No. 112, Dhaka, Bangladesh, May 1998
- Bashir I, Saha KK. *An Analysis Of Health Care Interventions In Bangladesh*. A paper presented at the workshop on 'Health care organisation in Bangladesh' held on 10/11 June 1998, at BRAC Centre for Development Management, Rajendrapur, Dhaka, Bangladesh.
- Bashir I *'Utilisation Patterns of Health Care Services in Urban Dhaka: A Comparative Analysis'* Presented at the Interdivisional Scientific Forum Meeting of the International Centre for Diarrhoeal Disease Research, Dhaka, Bangladesh. October 1998.

**Response to the reviewers' comment on the proposal on "Health care seeking behaviour, willingness and ability to pay for health services and costing of the ESP components delivered through NGO-run facilities of RSDP"**

The research proposal has been prepared in close consultation with RSDP and USAID. RSDP had given their comments on earlier drafts and this final proposal has been revised accordingly. This proposal was sent to two external reviewers, i) Professor Sushil Ranjan Howlader, Director, Institute of Health Economics, University of Dhaka, and ii) David Hotchkiss, Health Economist at the Tulane University, New Orleans, USA.

Copy of comments from Professor Howlader is enclosed.

David Hotchkiss has verbally communicated and informed that he does not have any major comments on the study proposal. His written comments will follow soon.

Our responses to Prof. Howlader's comments are:

- a) The providers in delivering the services will consider the social cost and benefit as well; the information that will be collected will address such issues.
- b) The research findings will address the issue that will help in determining the poor and the data collection instruments are will be designed to address this.
- c) The issue of possibility of the estimates of time allocation of the provider to be biased will be taken by considering the data on observation at later stages only. The results of the observation at the initial stage are often found to be biased.
- d) The quality issues that may effect cost of services in different facilities will be considered in the data collection instruments.

স্বাস্থ্য অর্থনীতি ইনস্টিটিউট

ঢাকা বিশ্ববিদ্যালয়  
কলা ভবন  
নীলক্ষেত্র, ঢাকা-১০০০  
বাংলাদেশ



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86 55 83

স্মারক নং .....

DATE : ..... 19

July 3, 1999

Dr. Mahmud Khan  
Head, Health Economics Program  
Public Health Science Division  
ICDDR,B  
Mohakhali  
Dhaka

Dear Dr. Mahmud,

I have gone through the proposals sent to me for my comments. My comments are as follows:

1. Study Proposal on : " Health Care Seeking Behaviour, Willingness and Ability to Pay for Health Services delivered through NGO-run facilities of UFHP".

**Comments:**

- a. As regards the aspect of the pricing policy to be examined (p. 4), the research should consider the issue of externalities not only from the consumer viewpoint but also from providers'.
  - b. The issue of protecting the poor and ensuring the safety net for them needs to be specified. Also, the tools to be used in identifying the poor or the poorest of the poor need to be mentioned.
  - c. The size of sample households is not large enough to capture the difference in various services and to represent the population served by UFHP.
2. Study Proposal on: " Health Care Seeking Behaviour, Willingness and Ability to Pay for Health Services and Costing the ESP Components delivered through NGO-run facilities of RSDP."
- a. The points noted as "a" and "b" for the former proposal apply to this one as well.
  - b. It is mentioned that to allocate cost there will be time allocation study. The observation method may give biased results. It is necessary to mention how these biases will be corrected.
  - c. The cost differentials may also vary among the facilities due to varying quality of services provided in different facilities. This should be taken into account.

With best regards,

Yours sincerely,

  
(Prof. Sushil Ranjan Howlader)  
Director

## Attachment

**Name of the Study :** Health Care Seeking Behavior, Willingness and Ability to Pay for Health Services and Costing of the ESP Components delivered through NGO-run facilities of RSDP

The study as noted in the summary submitted, will have two parts, one the household survey and the costing of RSDP facilities.

The household survey will be conducted to examine the health care seeking behaviour, (for family planning services, ANC and PNC, immunization and general illness mother and child and other members of the households) willingness and ability to pay for ESP delivered by RSDP NGOs. This will involve collecting information on the socio-economic status of the household (income, expenditure, the household type, durable assets of the households, source of care for above mentioned services, all the expenditure incurred for obtaining the health and family planning services/care, willingness to pay for selected ESP services.

1. The subject population will be selected from areas served by NGOs. For the household survey, the information will be collected from the mothers of the households, and women of reproductive age group.
2. There will be no potential risk of physical, psychological, social, legal and of any other kind. The study do not involve any physical risks because it does not involve any physical intervention on the subjects. No sensitive questions will be asked in interviews that may have adverse psychological affect on the subjects.
3. In order to safeguard the confidentiality and the protection of anonymity, the questionnaires will be coded to represent the households and/or the individual. The questionnaire will be marked as "confidential" and the data/information will be used for study purposes only.
4. For collecting the information, a consent form will be used (as attached). This will be signed consent form. For illiterate mothers, the contents of the consent form will be read out and consent will be obtained.
5. For the household survey, interviews will be carried out at the respondent's household. Trained female interviewers will conduct the interview using structured and semi structured questionnaire. The estimated time of the interview will be around 20 min.
6. The study will assist the RSDP in improving the pricing policy for the services delivered by RSDP NGOs. It will also help in improving the resource allocation between services that will help in improving the efficiency of the service delivery and improve the quality of services. The information will also provide an opportunity of cross subsidizing some preventive services delivered which may help to develop an "safety net" measures for the poor clients.
7. The study activity will not require the use of records, organs, body fluids, the fetus or the abortions.

The facility survey for the costing part of the study will involve collection of information on type, quantity and cost of all inputs used for providing the health and family planning services.

8. The NGO facilities will be selected randomly. For the facility survey, the information will be collected from the facility manager and head office of the respective NGO facility.
9. There will be no potential risk of physical, psychological, social, legal and of any other kind. The study do not involve in physical risks because it does not involve any physical intervention on the subjects. No sensitive questions will be asked in interviews that may have adverse psychological affect on the subjects.
10. In order to safeguard the confidentiality and the protection of anonymity, the questionnaires will be coded to represent the facility. The questionnaire will be marked as "confidential" and the data/information will be used for study purpose only.
11. For collecting the information, a consent form will be used (as attached). This will be signed consent from.
12. For the survey, interviews will be carried out at the facility household. Trained interview will collect information using structured questionnaires. The estimated time of the interview to collect cost information will be a week for each facility as it requires discussions with different administrative and finance officials.

In order to allocate the cost of different inputs used among different output (services) produced by the facilities, time allocation study will be conducted. For this, selected providers at the facilities will be observed for about two weeks to examine how their time is allocated between services provided by them. Trained female enumerators will observe the providers using structured and questionnaire and stop watch.



ଅଭ୍ୟାସ ପତ୍ର

ଓଡ଼ିଆ ଭାଷାରେ ପଢ଼ା ଯାଉଥିବା ଶିଳ୍ପୀ ଶିଳ୍ପୀଣୀ ଓ  
ଅନ୍ୟାନ୍ୟ ଶିଳ୍ପୀ ଶିଳ୍ପୀଣୀ, ଆପଣଙ୍କର ଶିଳ୍ପ କଳା  
ଶିଳ୍ପୀ:

ଆପଣଙ୍କ ଓ ଆପଣଙ୍କର ଶିଳ୍ପକଳା ଅନୁଭବ ଆପଣଙ୍କର ଶିଳ୍ପକଳା  
କଳା । ଆପଣଙ୍କର ଯେ ଅନୁଭବ ଆପଣଙ୍କ ଓ ଆପଣଙ୍କର ଶିଳ୍ପକଳା  
କଳା ଶିଳ୍ପକଳା ଅନୁଭବ !

ଆପଣଙ୍କର ଶିଳ୍ପକଳା ମଧୁର, ମଧୁର ଶିଳ୍ପକଳା ଯେ, ମଧୁର  
କଳା, ଶିଳ୍ପକଳା ମଧୁର, ଶିଳ୍ପକଳା ମଧୁର ଏବଂ ଆପଣଙ୍କର  
ଅନୁଭବ ଯେଉଁଠି ଆପଣଙ୍କର ଅନୁଭବ । ଆପଣଙ୍କର ଆପଣଙ୍କର  
ଆପଣଙ୍କର ଆପଣଙ୍କର ଅନୁଭବ ମଧୁର (ଆପଣ, ଶିଳ୍ପ, ଅନୁଭବ)  
ଆପଣଙ୍କର ଶିଳ୍ପକଳା ଅନୁଭବ କଳା ଅନୁଭବ ।

ଆପଣଙ୍କର ଆପଣଙ୍କର ଅନୁଭବ ଆପଣଙ୍କର ଶିଳ୍ପକଳା ଅନୁଭବ  
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ଆପଣଙ୍କର ଅନୁଭବ ।

ଆପଣଙ୍କର ଅନୁଭବ ଅନୁଭବ ଓ ଆପଣଙ୍କର ଅନୁଭବ ଆପଣଙ୍କର  
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# Comments on the project entitled "Health Care Seeking Behavior, Willingness and Ability to Pay for Health Services and Costing of the ESP components delivered through NGO-run facilities of RSDP"

*Dr. Halida Hanum Akhter  
Director, BIRPERHT*

## **Aims and methods:**

The study will assess the implication of pricing policy on utilization and quality of care, the health seeking behavior of clients/potential clients, their willingness and ability to pay and cost of providing different components of ESP services.

Although NGOs contracted by RSDP have already adopted a user fee based service delivery system, to improve efficiency in service delivery and to protect the poor, the RSDP is interested in determining a proper pricing policy and strategy based on careful evaluation.

The study will analyze the extent and possibility of introduction of user fees as cost recovery measures and focus on efficiency of allocation of resources as inputs used for production and delivery of different components of ESP.

To address the user-fee issues, the research will estimate the cost of providing various ESP services through surveys of the health centers and the satellite clinics. Based on a sub-sample of 171 RSDP sites of USAID-funded NGOs, run by 20 different NGOs of the country, a cross-sectional household survey for health seeking behavior data, will be conducted using census questionnaire and in-depth household questionnaire.

**Facilities available:** The fixed health services facilities, which will be selected randomly are located at thana and district levels. Each facility at the Thana is designed to provide ESP services through the fixed site and a number of satellite clinics. The RSDP NGOs will assist in locating the household areas that will be selected in the sample.

**Ethical assurance:** The study will interview the user of the RSDP health centres to collect information on perceived quality of the services. Observation will be made on the services provided in order to study the time allocation. The study subjects will be informed about the objectives, procedures and potential benefits of the study. Consent will be obtained from the subjects who will volunteer.

In order to allocate the cost of different services, a time allocation study will be conducted. Selected providers at the facilities will be observed for about two weeks to examine how their time is allocated between services. Trained female enumerators will observe the providers using structured questionnaire and stop watch. The study subjects will be selected from areas served by NGOs. For the household survey, the information will be collected from the women of reproductive age group. The estimated time of the interview will be around 20 min. A consent form will be used. For illiterate mothers, the contents of the consent form will be read out and consent will be obtained.

The PI claims that there will be no potential physical, psychological risk, nor will involve any physical intervention on the subjects. No sensitive questions will be asked in interviews that may have adverse psychological affect on the subjects. However, since questionnaire was not included with the proposal we could not review this assurance.

## **Final comments:**

The Bangla consent form contains relevant information about the study and type of data to be collected. I think the consent form needs some language correction and should include the information on approximate time required for the interview.

Since the NGOs of RSDP have already adopted user fees in their clinics, interviewing clinic attendants (seeking services from the clinic) may exclude poor who could not pay even the minimum amount to attend their clinic.

We have not seen the questionnaire for the clinic nor for household interview. However I presume that except for socio-economic questions no other sensitive questions will be asked. To include the poor the PI should interview poor households during the survey and try to identify reasons for not attending the RSDP clinics and whether they preferred other categories of providers in the same communities. The PI should clearly indicate the procedures of sampling from RSDP NGO selected household areas. If they are examining willingness to pay they should also recruit subjects for the households who are not served by the clinic of RSDP. The help from NGOs to select areas to sample household may be sought, but not in selecting households. This will help avoid bias of selecting known households.

Having no major ethical concerns the proposal may be approved with suggested modifications.