

PUBLIC HEALTH SERVICES UTILIZATION STUDY

**HEALTH ECONOMICS UNIT (HEU)
MINISTRY OF HEALTH AND FAMILY WELFARE
GOVERNMENT OF THE PEOPLE'S REPUBLIC OF
BANGLADESH**

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Research Team

**M. A. Mannan
Mohammad Sohail
Kazi Jahid Hossain**

**BANGLADESH INSTITUTE OF DEVELOPMENT STUDIES
E-17, AGARGAON, SHER-E-BANGLA NAGAR
DHAKA-1207**

Preface

Government of Bangladesh is in the process of preparing Poverty Reduction Strategy Papers. Health poverty as diagnosed in the interim Poverty Reduction Strategy Papers of Bangladesh needs to be addressed to achieve Millennium Development Goals by 2015. This warrants that the government should have more evidence and information on many matters and one is “who gets benefit and the extent of it” from the services it provides to the population. This is the second study on Benefit Incidence Analysis (BIA) commissioned by the Health Economics Unit (HEU), under the Ministry of Health and Family Welfare. Health Economics Unit and Data International Ltd did the first BIA jointly.

The purpose of the study is to determine who benefit from public health expenditures according to criteria such as age, sex and socio-economic status. The study has been carried out in a range of facilities at district level and below. Each of the six divisions has been represented in the present study. The report is based on primary data collected from six District Hospitals, eighteen Upazila Health Complexes, eighteen Union Health & Family Welfare Centres and eighteen Community Clinics. A total of 5752 patients were interviewed for the study, of them 81.1 per cent were outpatients and 18.9 per cent were inpatients.

Overall utilization is 46 per cent for males and 54 per cent by females. The poor dominate utilization of public health facilities. The share of the poorest quintile is 36 per cent of total utilization, while the share of the poorest two quintiles is 53 per cent. By contrast, the share of the richest 20 per cent is 13 per cent of total utilization. We find these findings consistent with the findings from the earlier BIA study which shows that health care facilities at Upazila and below levels are primarily used by lower-income groups. The bottom quintile accounts for more than 35 per cent of visits, while the richest group accounts for only 15 per cent.

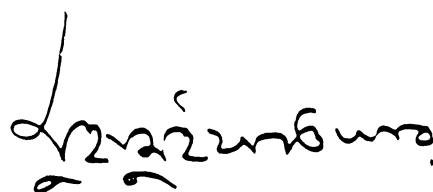
The study shows that though the service users are relatively more satisfied with the services of doctors/service providers, they are less satisfied with such aspects of the facilities as cleanliness and hygiene, privacy of treatment and waiting time for treatment. Users are least satisfied with the inadequate supply of drugs and other medical supplies as well as the quality of inpatient food. If these aspects of public health services could be further improved, it would lead to higher utilization of facilities.

Benefit Incidence Analysis methodology has been used to analyse how the benefits from government health spending are distributed across various income groups. The results suggest that a higher share of public expenditure on health accrues to the poorer strata of the population. The finding is particularly revealing for the poorest quintile. They account for 20 per cent of total population but receive 37 per cent of total benefits from government health spending; while the share of the poorest two quintiles is 54 per cent of total transfers. Households located at the top income quintile receive the lowest benefits (10.7%) compared to other quintiles.

There is no sufficient study on the BIA of the public services. Moreover, the study did not go in-depth to find out the reason for relative increase in the utilization by the poor. Is it that the poor prefer to go to the public facilities for better service or their economic conditions compel them to go to the public facility? On the contrary, whether lower utilization by the better-off people is because of the poor quality of services at the public health facilities. Therefore, there is sufficient room to undertake extensive study to investigate the reasons.

Finally, the planners and policy makers may give more emphasis for improving the conditions identified to increase the utilization. It is expected that the findings of the study will be useful to planners, policy makers and researchers in formulating policies designed to improve the health status of the poor.

November 18, 2003



Mustak Hassan Md. Iftexhar
Joint Chief and Line Director
Health Economics Unit
Ministry of Health and Family Welfare

Acknowledgement

This is the Final Report of the study titled “Public Health Services Utilization Study” which was undertaken by BIDS and sponsored by the Health Economics Unit, Ministry of Health and Family Welfare. This report is based on primary data collected from 60 health facilities at district level and below.

We are grateful to those who cooperated at different phases of the study. We acknowledge our deep sense of appreciation and gratitude to the Health Economics Unit, MOHFW for sponsoring this study and for providing necessary funds to undertake this study.

We remain ever grateful to the respondents (facility users) of the selected health facilities, for their cooperation in responding to our multifarious questions. The respondents, though anonymous here, deserve our special appreciation, without their cooperation the study would not have been possible.

We would like to express our sincere gratitude to the following: Mr. A. Waheed Khan, Joint Chief, Planning, MOHFW; Mr. Mustak Hassan Md. Iftexhar, Line Director, HEU; Dr. Shamim Ara Begum, Dr. Ahmed Mustafa, Dr. Md. Shahjahan and Mr. A.H. Moral of HEU; and Mr. Md. Mashiur Rahman, Local Consultant, SIHE. We remain ever grateful to all of them for their valuable comments and suggestions on the draft report. We owe an enormous debt to all those at the HEU who provided invaluable comments to improve the quality of the report.

Last but not the least, our sincere thanks are to Mr. Geoff A. Hoare, Team Leader, HEU, and Dr. Priti Dave Sen, previous Deputy Team Leader, HEU, for their invaluable guidance and support in conducting the study. However, the study team is alone responsible for any remaining errors or omissions.

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M. A. Mannan
Senior Research Fellow
BIDS

Abbreviations

ARI	:	Acute Respiratory Infection
BBS	:	Bangladesh Bureau of Statistics
BCAS	:	Bangladesh Centre for Advanced Studies
BCC	:	Behaviour Change Communication
BIA	:	Benefit Incidence Analysis
BIDS	:	Bangladesh Institute of Development Studies
CC	:	Community Clinic
CCD	:	Control of Communicable Diseases
CDC	:	Communicable Disease Control
CH	:	Child Health
DH	:	District Hospital
EPI	:	Expanded Program on Immunization
ESP	:	Essential Services Package
FP	:	Family Planning
GOB	:	Government of Bangladesh
HA	:	Health Assistant
HEU	:	Health Economics Unit
HFWC	:	Health and Family Welfare Centre
HPSP	:	Health and Population Sector Program
HPSS	:	Health and Population Sector Strategy
ICDDR, B	:	International Centre for Diarrhoeal Disease Research, Bangladesh
LCC	:	Limited Curative Care
MA	:	Medical Assistant
MCH	:	Maternal and Child Health
MCWC	:	Maternal and Child Welfare Centre
MOHFW	:	Ministry of Health and Family Welfare
NGO	:	Non-Government Organization
PHC	:	Primary Health Care
RH	:	Reproductive Health Care
SACMO	:	Sub-Assistant Community Medical Officer
UHC	:	Upazila Health Complex
UNICEF	:	United Nations Children Fund
WB	:	World Bank
WHO	:	World Health Organization

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Executive Summary

Introduction

Health is one of the vital indicators reflecting quality of human life. Article 25 of the universal Declaration of Human Rights unequivocally states that health care for the preservation and promotion of health is one of the most basic human rights. Bangladesh despite being a signatory to the Alma Ata declaration (1978), which aimed at "health for all" by 2000, is still lagging quite far from realising this dream even in the year 2003. The socio-economic inequalities that prevail in the society and concerns for the under-privileged sections must form the backdrop for any study on health economics research.

The main purpose of the present study is to determine who benefit from public health expenditures according to criteria such as age, sex and socio-economic status. The specific objectives of the study are:

- To examine the utilization pattern of public health facilities by type of services rendered (ESP and non-ESP);
- To assess the utilisation of facilities by age (children, adults) and gender, and to assess the level of benefits accruing to the most vulnerable groups;
- To assess the degree of satisfaction of the users with regard to different qualitative aspects of the facility and to identify the factors affecting accessibility to services by socio-economic characteristics of the users;
- To estimate the amount of cost incurred and the sources of financing such costs and the impact of these costs.

Methodology

The present study is based on primary data collection and interviews in each of the country's six divisions. In each division the sample comprised one district hospital (DH), three Upazila Health Complexes (UHCs), three Union Health and Family Welfare Centres (HFWCs) and three Community Clinics (CCs). Thus, 10 health facilities from each division and a total of 60 facilities from six divisions have been covered for the study purpose. Facilities covered included 6 District Hospitals (DHs), 18 Upazila Health Complexes (UHCs), 18 Union Health and Family Welfare Centres (HFWCs) and 18 Community Clinics (CCs). A total of 5752 patients were interviewed for the study. Of them, 4666 (81.1%) were outpatients and the rest 1086 (18.9%) were inpatients.

Major Findings

Utilization Pattern

Among 5752 patients who were interviewed about a third (33.8%) utilized DHs, almost half (50.8%) visited UHCs, about a tenth (11.9%) visited HFWCs, while only 3.5 per cent went to CCs.

Overall utilization was 46 per cent by males and 54 per cent by females. Only at the district hospitals male utilization was found to be higher than that of females (52% vs. 48%), while utilization of facilities by females was higher than that of males at upazila level and below. Again, much of the difference in male-female utilization is accounted for by 'Reproductive Health'. If reproductive services are taken out or excluded from the analysis, then overall utilization of males is similar to that of females.

Utilization of facilities by age shows that male utilization rates are higher than that of females for all age groups except the reproductive age span (15-49 years). A little less than a fifth (18.7 %) of the users were children under 5 years of age, and a little less than a quarter (22.6%) of the users belonged to the age group 5-19 years. A large majority of the patients (43.4%) were in the age group 20-49 years, while older patients of age 50 years and over constituted around 15 per cent of all patients.

Around 65 per cent of the facility users belonged to functionally landless category, of them 7 per cent of the users belonged to households not having even any homestead land. Marginal and subsistence households constituted 26 and 6 per cent of the users, respectively. Users belonging to big landholders owning above 5 acres of land constituted a small minority of 3 per cent of the patients.

The educational distribution of household heads shows that about half (53%) of the users came from households where the heads were found to be either illiterate (41%) or who could read and write only (12%) with no formal schooling, 18 per cent of the household heads had education up to primary level, 14 per cent had secondary level schooling, another 12 per cent had education at the Higher Secondary (HSC) level and only 3 per cent of the heads completed degree or higher level education.

In terms of monthly household income, a vast majority of the facility users belonged to lower income groups. About a third (35%) of the users belonged to the poorest category (with monthly income not exceeding Tk. 2000), while only 9 per cent of the users belonged to the group having monthly income above Tk. 7500. Only a small minority of the users (4%) came from the richest income group (monthly income more than Tk. 10,000)

Overall, 53 per cent of the patients visited health facilities for LCC services, 18.7 per cent for CH, 7.2 per cent for RH services, 2.5 per cent for CDC, 14 per cent for non-ESP services and 3.1 per cent for "unspecified" diseases (i.e. diseases that are difficult to categorise). Male utilization was higher than that of females for both **child health** and **communicable disease control**. For **limited curative care**, service use was evenly

distributed. However, unlike other types of diseases, **reproductive health services** were principally obtained by women (95% v. 5%).

Overall, the poor dominate the use of health facilities. The share of the poorest quintile (bottom 20%) was 36 per cent of total utilization, while the share of the poorest two quintiles was 53 per cent of total utilization. By contrast, the share of the richest 20 per cent in total utilization was only 13 per cent. This holds true for both in-and-outpatients. In general, utilization of public health facilities is pro-poor and pro-gender.

Accessibility to Facilities

The three main elements of physical accessibility are distance to be travelled, travel time and travel cost to visit the facilities. The findings suggest that health care facilities are accessible to every one (poor and non-poor) without any discrimination. Physical accessibility is no longer a barrier in the sense that people do not have to travel a long distance to reach the health facilities and once they arrive at the facilities, they do not have to wait for a long time to get to the services. Waiting time is 25 minutes for DHs which goes down to 17 minutes for UHCs, 13 minutes for HFWCs to 7 minutes for CCs.

Expenditures on Health

The survey findings show that on the average, an outpatient spent Tk. 44.78, while in case of inpatients the average amount spent was Tk. 1560.43. Again, the largest proportion of total cost (70%) was spent on drugs for both in-and-out patients. The cost of outpatient visits ranged from Tk 91 in the DH (Tk 35 in the UHC, Tk 11 in HFWC) to Tk 4 in the CC. By contrast, the cost of inpatient visits ranged from Tk 1991 in the DH to Tk 669 in the UHC. In general, the amount spent was lowest for the poorest quintile and highest for the richest quintile (with few exceptions between quintiles) for both males and females.

The bulk of the treatment costs were financed either from regular income or from household savings, the rest is financed by borrowing from friends and moneylenders. However, there were some differences in the sources of financing between inpatients and outpatients. Although services at the public health facilities are supposed to be free of cost, patients have to spend on medicine and diagnostic tests. But out-of pocket costs have major consequences in the process of seeking care. People from the poorer strata have to undergo a lot of economic pressure to meet the treatment cost. Episodes of illness affect the economic position of households rather badly.

On the whole, 9 per cent of the monthly household income was spent for the treatment of a single episode of illness. But the poorest households had to spend 38 per cent of their monthly income for treatment purposes as against 3 per cent by the richest households. This can lead to tremendous financial burden on poor households, sometimes resulting in liquidation of their assets/property.

Users' Satisfaction

In this study, quality of care is judged on the basis of information on ten different aspects of quality of services, ranging from attitudes of doctors /service providers, availability of drugs to overall quality of treatment. Aspects of clients' ranking of quality of services were recorded using a five way categorical scheme (e.g. from excellent to bad).

The results indicate that the service users are likely to be relatively more satisfied with such aspects of services as the attitudes of doctors /service providers as well as the attitudes of office staff. They seem to be moderately satisfied with the availability of service providers and the quality of treatment. They are, however, likely to be dissatisfied with such services as cleanliness and hygiene, privacy of treatment and waiting time for treatment. They are likely to be highly dissatisfied with the supply of drugs and medical supplies and quality of (inmate) food.

There are no wide variations in the levels of satisfaction derived by males and females. Indoor patients are relatively more dissatisfied than the outdoor patients. Users are more satisfied with the quality of services provided at the UHCs than those at the DHs. The findings suggest that the service users with higher landholding status and living in better housing conditions receive better services from doctor/service providers, as well as better quality of treatment. The land- poor and those living in poor housing conditions are slightly more satisfied with regard to availability of drugs from the public health facilities.

Benefits Accruing to the Poor

The BIA methodology has been used to see how the benefits from government health spending are distributed across various income groups. The findings suggest that a higher share of public expenditure on health accrues to the poorer strata of the population. The finding is particularly revealing for the poorest quintile. They account for 20 per cent of total population but receive 37 per cent of total benefits from government health spending; while the share of the poorest two quintiles is 54 per cent of total transfers. Households located at the top income quintile receive the lowest benefits (10.7%) compared to other quintiles.

The results also suggest that of all categories of ESP spending, allocations to **Curative Care** and **Child Health** reduce inequality the most. Distribution of these outlays is found to be strongly pro-poor, in large part because poor households tend to have more children. In addition, because of endemic poverty coupled with poor living condition and unhygienic practices, members from poor households are especially disadvantaged with respect to morbidity and mortality.

The emerging pattern is generally pro-poor, which implies that the share of the poor in the total stream of benefits from public health spending is much more than their share in the total population. Thus, in Bangladesh health expenditures taken as a whole are progressive and reduce inequality.

Concluding Remarks

Overall, the poor dominate the use of public health facilities, accounting for roughly two-thirds of the total utilization. Government facility is the last resort for the hapless poor who cannot afford to consult a private qualified doctor. The findings suggest that public spending on health is pro-poor. The focus on the poor is especially important in the context of their large share in the total population. However, nutrition program has not been given due importance in the HPSP. It is hoped that in the future, nutrition will routinely be included in any program designed for the health sector.

To be effective, health care services should be available, accessible and affordable. The findings show that health care facilities are available in sufficient quantity and they are also accessible to every one (poor and non-poor) without any discrimination. Accessibility has a number of dimensions, including physical and economic accessibility. It appears that physical accessibility is no longer a barrier in the sense that people do not have to travel a long distance to reach the health facilities and once they arrive at the facilities, they do not have to wait for a long time to get to the services.

'Economic accessibility' means that health facilities, goods and services (drugs and other treatment related items) must be affordable for all. But the findings clearly show that out-of-pocket costs have major consequences in the process of seeking care. People from the poorer strata have to undergo a lot of economic pressure to meet the treatment costs.

In terms of accessibility to the health facilities there is no major problem. But inadequate supply of medicine and shortage of staff are the main problems. It is not only the fact that the users are not provided with the required medicine, but in most cases the physicians do not even check up the patients properly. Episodes of illness affect the economic position of households rather badly. Poor households have to undergo a lot of economic pressure to buy medicine and other health needs. Moreover, visit to a facility involves transportation cost and disturbance of the household routine.

Any hospitalization involves a lot of expenditure so it is but obvious that the households belonging to lower income category would rely on different sources to finance their health care needs. The various sources utilized for meeting treatment costs include drawing from savings, borrowings from friends/moneylenders, distress sale of assets/household articles. Even that may not be sufficient to buy the medicine in full. Hospitalization that requires surgical interventions or prolonged stay in the facility ruins the families both economically and physically. They have to spend money on medication and they also lose their incomes - in some cases for months together, particularly in cases where the patient himself/herself is the earning member. While the diseases mercilessly weaken the people, both physically and financially, the burden of treatment makes them more helpless, accelerating the process of pauperisation.

Poverty is one of the significant factors affecting health-seeking behaviour, and for members belonging to poorer households pecuniary condition acts as a strong deterrent in their health expenditure behaviour. This brings us to the question of providing financial protection to the poor households against such contingencies. Insurance scheme to cover the poor/or low-income households who are mostly in the informal or unorganized sector

can be devised. Also, even if the government hospitals want to levy user charges, people below a certain income level should be exempt from paying such charges, and this could be achieved through proper targeting.

According to the research findings, government's overall health expenditures are pro-poor in the sense that these expenditures are more equitably distributed compared to the distribution of household income. In other words, public health spending helps to reduce the overall inequality in the economy. The results suggest that:

- (i) The poorer segment of the population receive a larger share of the subsidies; they enjoy higher subsidy per capita.
- (ii) The amount of subsidy is highest for the poorest quintile and declines monotonically for richer quintiles (except for the third quintile).

These results along with the earlier BIA findings show that public spending on health is pro-poor and pro-gender, and government health services play a major role in providing critical services, either free or at heavily subsidised prices. The findings suggest that it is the poor people who tend to utilize government services more for the simple reason that they can not afford the cost of private services. Therefore, the government will have to continue to play a significant role as a service provider, at least in the short to medium term, if basic services for the poor are to be ensured.

Chapter 1

Introduction, Objectives and Methodology

Introduction

Compared to most other developing countries, Bangladesh has a relatively extensive government infrastructure of facilities as well as a relatively extensive human resource base for the delivery of health and family planning services. But despite these, large segments of the population of Bangladesh have limited or no access to the health services at all and for many of the rest, the care they receive does not answer the problem they have. The national health resources, built and administered for all, are being consumed by the selective few who are favoured by geography, social class, wealth or position. The underserved majority is largely rural but also includes the urban poor (Khan M.R. 1988, 1994).

Despite the large expenditures on health, and the technical feasibility of dealing with many of the most common health problems, efforts to improve health have had modest impact on the health of the vast majority of the population in Bangladesh. This is commonly attributed to two main reasons. First, health activities have typically over emphasised sophisticated, hospital based care, while neglecting preventive public health programme and simple primary care provided at conveniently located facilities. Second, even where health facilities have been geographically and economically accessible to the poor, deficiencies in logistics, inadequate training of staff, poor supervision, inappropriate services, and lack of social acceptability have often compromised the quality of the care they offer and limited their usefulness.

Structure of Health Care Delivery in Bangladesh

Theoretically, Bangladesh seems to have a health system of some sophistication. There is a network of hospitals, health centres and dispensaries, thousands of staffs and extensive training centres. This network, now in its advanced stage of development, comprises of 402 health complexes at the upazila level (UHCs), about 4000 health and family welfare

centres (HFWCs) at the union level and several thousands community clinics (11000-13000) at the ward level.

The roles of the Upazila health complexes and the union health and family welfare centres are of key importance to the delivery of primary health care in rural areas. It has been recognised that proper and effective curative care greatly influences the process of the people's acceptance of preventive and promotive health care. Without active support of the former, the latter cannot be geared up to a significant extent, particularly in the existing socio-economic conditions of rural Bangladesh. What is primarily needed is effective curative care with adequate provision of preventive, promotive services with health education.

A ward is the lowest administrative sub-unit of the government and has an average population of 25 00-3,000; typically distributed over 2 to 3 villages. There are 9 wards in a union with an average population of 25,000 to 30,000 and approximately 9 unions make up an Upazila with an average population of 2,50,000. Upazila Health Complex is in charge of administering all health and family planning programmes in the upazila. Upazila health complexes function as the first referral at the Upazila.

The UHC basically provides three types of services: (1) One 31 bed inpatient facility of which six beds are reserved for MCH and family planning services, (2) out patient general health services as well as MCH services, (3) domiciliary services by HAs in the health sector and by the FWAs in the family planning sector. The UHCs provide promotive, preventive and curative services.

The secondary referral level of PHC consists of 59 district hospitals. A civil surgeon is the head of the administration of a district hospital. The district is responsible for channeling the programmes of Upazila level health and family planning offices and coordinating with other government and non-governmental organization at the district level. Each district hospital has a 50 to 250 bedded facility.

The tertiary referral level of PHC network at the national level consists of 13 medical colleges and 6 post-graduate institutes. It also includes one dental college, one (post

basic) nursing college and 38 nurses' training centres. There are 8 Medical Assistant Training schools, of which 5 are functional and 3 are non-operational because the campuses are being used by the newly established medical colleges.

There are two Institutes of Health Technology (previously known as para medical institute). One is at Mohakhali, Dhaka, and the other is at Rajshahi. These two institutes are producing health technologists on Laboratory, Pharmacy, Dentistry, Radiology, Sanitary, etc.

The country's health system is hierarchically structured and can be compared to a five layer pyramid. First, at the base of the pyramid, there is the ward level health facility (CC), consisting of a health assistant and a family welfare assistant. At the next level is the union health and family welfare centre (HFWC) staffed by a medical assistant, one family welfare visitor and one pharmacist, which concentrates on the provision of maternal and child health care and provides only limited curative care. Third, there is the Upazila Health Complex (UHC) with nine doctors, two medical assistants, one pharmacist and one radiographer and EPI technician. The UHC is responsible for inpatient and outpatient care, maternal and child health services and disease control. Fourth, the district hospital is the first layer of the health care pyramid to have theatre facilities, but some selected UHCs have got EOC facilities. Finally, the medical colleges and post-graduate institutes form the top of the health services pyramid offering a wide range of specialty services.

Under the recently introduced health program i.e. HPSP; efforts are being made to achieve "health for all" within the shortest possible time and to ensure equity of access for all Bangladeshi citizens, especially those who live in rural areas and in urban slums. The HPSP calls for the establishment of one community clinic (CC) for each local population of 6000 persons.

Scope of the Study

The Health and Population Sector Program (HPSP) was launched in July 1998 and started implementation by the government of Bangladesh as a sector wide strategy. The strategy emphasises an Essential Services Package (ESP) together with measures to restructure the entire health system to make it more responsive to the health needs of the people. The ESP under the on-going HPSP has been designed by redefining and repackaging the primary health care services in the light of “Reproductive Health” concept, MCH and other interventions. The Essential Services Package (ESP) identified in the HPSP consists of the following major five components:

- Reproductive Health Care
- Child Health Care
- Communicable Disease Control
- Limited Curative Care; and
- Behaviour Change Communication (BCC).

The ESP package includes **reproductive health** (antenatal care, delivery care, postnatal care, menstrual regulation, adolescent health, family planning, and prevention and treatment of sexually transmitted diseases), **child health** (immunisation, acute respiratory infection prevention and treatment, diarrhea disease prevention and treatment, and nutrition promotion), **communicable disease control** (tuberculosis control, leprosy elimination, malaria control) and **limited curative care**. The Health and Population Sector Strategy (HPSS) of the Government of Bangladesh emphasises the provision of an Essential Services Package (ESP) to the entire population. The ESP is a set of services in reproductive health, child health, communicable disease control, and limited curative care, with behaviour change communication making up an important part of each service area.

Behaviour change communication is a key component of each of these elements of the ESP. The main emphasis of behaviour change communication is:

- To change attitudes and behaviours so that people will attempt to improve their own health status;
- To build effective community support for health-seeking behaviour;

- To change attitudes and behaviours of service providers so that services are more client-centred; and
- To promote men's understanding of and respect for the special situation of women and of girl children.

Under the HPSP a more balanced approach to health and family planning services provision is envisaged where other elements of the ESP in addition to family planning will begin to receive greater attention and support than they have in the past. The principles of the Government's recently implemented Health and Population Sector Strategy include the following:

- Services will be directed to clients' needs, and especially to the needs of women and children and the needs of the poorest segments of the population, and "one-stop" service delivery will be promoted at service delivery points to reduce the fragmentation of services;
- Equity of access to services, quality of service delivery, and efficiency of service delivery will be strengthened;
- Services which have significant positive externalities for promoting the public goods, and services that promote maternal and child health will receive priority;
- Collaboration with the private, not-for-profit and NGO sector will be fostered;
- Decentralization of government services and increased local participation in defining local priorities and in reviewing local programme performance will be emphasised, and
- Programmes of Directorate of Health Services and the Directorate of Family Planning will be merged (Abedin, 1997; MOHFW, 1997).

The focus of the HPSP is to deliver ESP within the reach of the clientele population. The priority in ESP calls for universal, essential care including preventive, curative and promotive measures. In delivering the ESP priority is given to those on the social periphery with special attention to the high risk groups – women, children and the poor. It aims to provide health care services that are low in cost, available and accessible to all, close to where people live, relevant to their perceived needs and responsive to their expectations.

The ESP concept has been developed by the fact that many of the causes of poor health and premature death affecting the lives of vast majority of population in Bangladesh, can be prevented or treated using simple, safe and relatively inexpensive medical or public health measures. A central feature of HPSP is to increase the accessibility of services to the poorest and most vulnerable in the society - women, children and the poor. The HPSP has been formulated in keeping with the goal of ensuring adequate accessibility of the people to effective health care comprised of preventive, promotive and curative services. Increased resources have been allocated to the facilities based at upazila level and below. Within the combined development and revenue HPSP budget, the ESP claims the largest proportion – more than 60 per cent of the total, based on the calculation of the HEU and World Bank (2001)

The HPSP and Primary Health Care

Realising "health for all" will require a substantial increase in expenditures for primary health care services, a shift towards increasing the proportion of the Government's overall expenditures into the health sector, and a shift of Government expenditures into the health sector from hospital services into primary health care. The cost per capita of a client-centered package of essential quality health services in Bangladesh is estimated to be approximately US\$ 7, but only about US\$ 2 is currently being spent for primary health care services (World Bank and BCAS, 1998).

However, the cost of providing high-quality, internationally competitive hospital services for a large portion of even the better-off segments of the population is far beyond the grasp of the Government as well as the private sector. At present, the poorer 20 per cent of Bangladesh society, which no doubt need hospital services the most, are three times less likely to use a hospital when sick than are the most well-to-do 20 per cent (World Bank and BCAS, 1998). The authors of the report *Bangladesh 2020*, calculate that the funds spent to build and operate for one year a 250-bed hospital could make available an essential package of health and family planning services for 250,000 Bangladeshis for five years, would provide complete immunisation for 28 million Bangladeshi children, or would buy enough iron and folic acid supplementation to all malnourished pregnant and lactating women in Bangladesh for two years.

Again, 87 per cent of the expenditures for hospital services in Bangladesh are borne by the Government, and most of the Government support for hospital services comes from the Development Budget, supported with funds from the international donor community. Thus, the achievement of "health for all" will require a major reorientation of Government spending away from hospitals toward the provision of the ESP through the primary health care system. As mentioned previously, the Government has committed itself to spend 60 per cent of MOHFW resources on the ESP during the Health and Population Sector Programme, 1998-2003.

Experiences from other countries indicate that a minimum expenditure (from government and private sources) of six per cent of the gross domestic product (GDP) is required in order to provide adequate health care services to the entire population (World Bank and BCAS, 1998). If Bangladesh aims to achieve this target, she would have to increase the percentage of her GDP being spent in the health sector (3.9 per cent) by another 2 per cent if this minimum goal is to be achieved. A feasible approach to increasing primary health care expenditures is to increase the availability of client-centered, quality services throughout the population. This would require greatly increased efforts in training and promoting improved quality of care as well as greatly increased efforts to introduce community-based health insurance programmes since resources for a national health insurance programme are unlikely to become available during the foreseeable future.

The Bangladeshi government guarantees equal access to opportunities for good health to all her citizens, but public resources devoted to this task are limited. The financial allocation for the health sector (total revenue and development) is low, averaging less than 5 per cent of the combined national revenue and development allocation. Within the health budget, allocation for medical and surgical requisites is low and that for works and maintenance is still lower, while salary and allowances take a fat slab (about 70% of total revenue budget). Most of the national health expenditure is made by households, and almost all household expenditures are for primary health care services. Households extensively use their private resources to purchase health care; they contribute more than 60 per cent of the funds spent on health care, mostly by purchasing medicine.

But it is increasingly recognized that public spending does not always benefit those for whom it is intended. The World Development Report (2000/01) suggests that higher public spending does not necessarily translate into better services for the poor because “programs for poor people are often of low quality and unresponsive” and the “incidence of public expenditures is often regressive” (World Development Report, page 81).

The poor in Bangladesh represent 50 per cent of the population but their share of all public health expenditures is only an estimated 45 per cent. This implies that a higher share of all public health expenditures accrues to the wealthier strata of the population. The poorest 20 per cent of the population is particularly disadvantaged, claiming only 16 per cent of the public resources devoted to health.

Health Status, Access and Utilisation

The three aspects of health, viz. status, access and utilization, are distinct though interrelated. Indicators of health status (e.g. morbidity and mortality rates) can reflect whether health services have had any impact on the health of the population. A greater availability of health services is obviously intended to improve health status and to reduce inequity in the distribution of health services. However, it is important to consider the actual utilization of available health facilities since equity and access are likely to have an impact on health status if these facilities are actually utilized.

Access to health services can be defined in terms of (a) access of rural and urban areas and social classes to available health facilities, and (b) their actual utilization, which would determine the level of satisfaction of health needs. The factors determining access and utilization are diverse. Income is the major factor that might explain access to health services in developing countries. It is necessary but not sufficient---other factors such as the nature of government policies and their effectiveness, income distribution and institutional and non-economic factors (such as cultural and social constraints) play an equally important role in determining access to health services and their utilization.

Objectives of the Study

Until comparatively recently little was known about who was benefiting from public health resources or whether the distribution of benefits conformed to stated policy goals. A number of recent studies conducted by the HEU and other agencies for the MOHFW have helped to establish the degree to which policy goals are being achieved. Specifically, the Public Expenditure Review (PER) and Beneficiary Incidence Analysis (BIA) indicate how well sector resources are being targeted to priority groups and who is actually benefiting from public health expenditures.

The current sector plan is soon to enter its final year and work is now under way to plan for activities for the period 2003 to 2006. The Government attaches due importance on the fact that in order to be effective, the publicly funded health services must be accessible to the poor to meet their health needs.

The main purpose of the present study is to determine who benefit from public health expenditures according to criteria such as age, sex and socio-economic status. This entails an assessment of the benefits both in monetary terms and the degree of satisfaction of the users.

The specific objectives of the study are:

1. To examine the utilization pattern of public health facilities by type of services rendered (ESP and non-ESP);
2. To assess the utilisation of facilities by age (children, adults), gender, residence (rural, urban) and geographical variation of the users;
3. To analyse the utilization behaviour by socio-economic characteristics of the users and to assess the level of benefits accruing to the most vulnerable groups;
4. To assess the degree of satisfaction of the users with regard to different qualitative aspects of the facility (facility cleanliness, staff attitude, privacy, quantity and quality of food, availability of staff and drugs)
5. To identify the factors affecting accessibility to services (i.e. distance travelled, travel time, waiting time, etc.) by socio-economic characteristics of the users;

- vi. To estimate the amount of cost incurred, their structure for the services utilized (ESP, non-ESP) and the sources of financing such costs and the impact of these costs on other consumption decisions; and
- vii. To make an assessment of the various aspects of facility quality (such as availability and operational status of various items, adequacy of drugs and medical supplies) of different health facilities.

Survey Methodology

Size of Sample

The present study is based on primary data collection and interviews in each of the country's six divisions. In each division the sample comprises one district hospital (DH), three Upazila Health Complexes (UHCs), three Union Health and Family welfare centres (HFWCs) and three Community Clinics (CCs).

A critical aspect of the study is the selection of health facilities at district, upazila and union levels. To meet the need for divisional/regional representation, one district from each of the six divisions has been selected at random.

At the second stage, from each of the sample districts, three upazila health complexes have been selected on random basis. At the third stage, from each sample upazila, one HFWC has been selected at random. At the final stage, from each of the sample unions, one CC has been selected on random basis. This has yielded an overall sample of 6 DHs, 18 UHCs, 18 HFWCs and 18 CCs which is equivalent to 10 facilities per division and a total of 60 facilities for 6 divisions as shown below.

Size of sample at Different Stages

6 Division * 1 district per division * 1 DH per district = 6 DHs

6 Districts * 3 UHCs per district = 18 UHCs

18 Upazilas * 1 HFWC per upazila = 18 HFWCs

18 Unions * 1 CC per union = 18 CCs

Survey Instruments

Two sets of data collection instruments have been administered for collection of information from the health facilities. These are:

- (1) Questionnaire/Interview schedule for inpatients and outpatients;
- (2) Observation checklist: to review the availability and operational status of equipment, availability of drugs and medical supplies at the health facilities.

The questionnaire was designed with both open-and close-ended questions. This was pre-tested and necessary adjustments were made based on the results of the pre-test and comments and suggestions received from the HEU experts/personnel. Data collection was carried out in two phases. In the first phase, the districts of Bogra, Netrokona and Laxmipur were covered. Three teams, each consisting of seven investigators and one supervisor, were deployed in the field. The 1st phase of data collection started on January 23, 2003, while the 2nd phase started on February 23, 2003 and continued up to March 22, 2003. In the 2nd phase, selected health facilities from the districts of Magura, Bholakati and Moulavibazar were covered. The names of the health facilities at the District/upazila/union/ward level are given in Table 1.1, while the number of patients covered by type of facilities is shown in Table 1.2.

Interviewing of Patients

Both inpatients and outpatients were covered by the survey. A total of 5752 patients were interviewed for the study. Of them, 4666 (81.1%) were outpatients and the rest 1086 (18.9%) were inpatients. All inpatients (who were occupying beds at the time of the survey) in the selected district hospitals and upazila health complexes were interviewed. For outpatients, a somewhat different methodology was followed. First, the average number of outpatients attending a particular facility by age (children, adults) and sex (male/female) of the users was determined, by taking the average attendance during the last 3 days preceding the survey. Once the number of patients to be interviewed was determined, then the investigators interviewed the estimated number of patients from the particular facility. Normally, it took about 2 to 3 days for the investigators to complete the interview of outpatients at the DH and UHC. However, at the HFWC and CC it did

not take more than a day to complete the interview. If the client was a child, his or her attendant was selected as the respondent. But if the respondent received services for himself or herself as well as for one or more of his/her children, information was collected from all of them.

Data Limitations

The study has been carried out based on a survey of 5752 patients (both in-and-outpatients). The survey was conducted in six divisions of the country in a range of facilities selected randomly at the district level and below. Within each division the sample comprised 1 district Hospital, 3 UHCs, 3 HFWCs and 3 CCs, which is equivalent to 10 facilities per division and a total of 60 facilities for 6 divisions.

Data limitations as far as utilization of public health facilities is concerned must be acknowledged at the outset. The findings of the study are based on a census of all patients who visited the selected health facilities during the day of the survey. The sample has been selected in such a manner so that it yields a nationally representative sample of all patients visiting public health facilities at the district level and below. However, only those persons who were sick and visited the health facilities during the survey period were interviewed, but those persons who did not visit the health facility during their sickness could not be interviewed. This might introduce a bias since the likelihood of visiting a health facility may be different for different socio-economic groups. If the facility survey could be combined with a household survey this would have contributed to a better understanding of the reasons for non-utilization of health care facilities by people from different socio-economic groups.

Despite these limitations, the data does permit an analysis of the extent of utilization of health facilities by age, sex and socio-economic status, the degree of satisfaction of the users, and the level of benefits accruing to the most vulnerable groups.

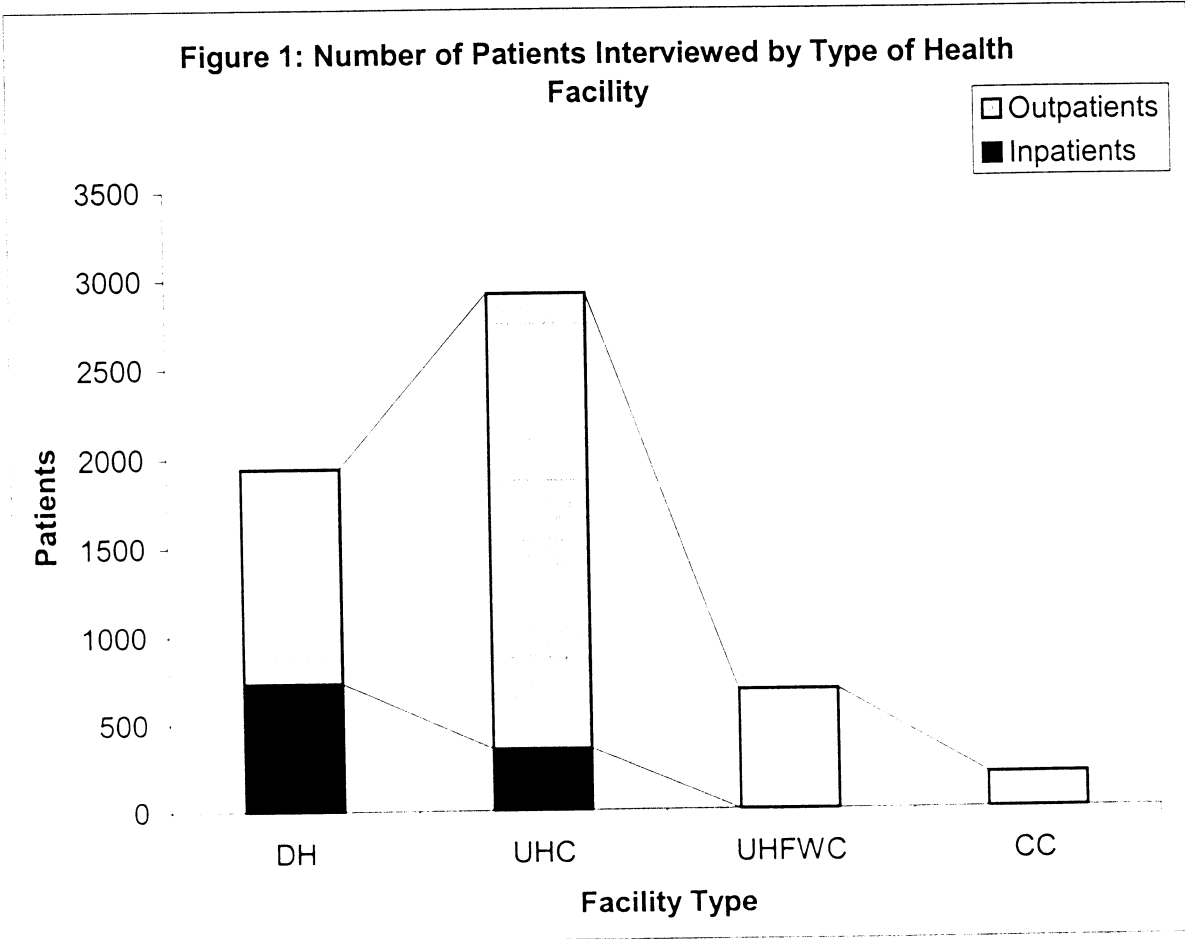
Table 1.1: Name of Selected District Hospitals (DHs), Upazila Health Complexes (UHCs), HFWCs and CCs by Division

Division	District Hospital	Upazila Health Complex	HFWC	Community Clinic
Dhaka	Netrokona Sadar Hospital	Durgapur UHC	Birishiri HFWC	Makrail CC
		Barhatta UHC	Shahata HFWC	Machehala CC
		Mohanagonj UHC	Barakashia HFWC	Manasari CC
Rajshahi	Mohammad Ali Hospital , Bogra	Dhunot UHC	Choukibari HFWC	Pachibari C.C
		Sherpur UHC	Gariko HFWC	Khidirhasra C.C
		Kahalu UHC	Narhatta HFWC	Nishchintapur C.C
Chittagonj	Laxmipur Sadar Hospital	Ramgoti UHC	Motihar HFWC	Bhavanigong C.C
		Raypur UHC	Rakhalia HFWC	Sonapur C.C
		Ramgonj UHC	Bigha HFWC	Shekharpura C.C
Khulna	Magura Sadar Hospital	Shalikha UHC	Shutukhali HFWC	Shingra C.C
		Sreepur UHC	Sreepur HFWC	Gopalpur C.C
		Mohammadpur UHC	Binodpur HFWC	Urura C.C
Borishal	Jhalakati Sadar Hospital	Nalchity UHC	Bhairabpasha HFWC	Kathipara C.C
		Rajapur UHC	Galua HFWC	Charakali C.C
		Kathalia UHC	Souljalia HFWC	Sonauta C.C
Sylhet	Moulavibazar Sadar Hospital	Kamalgong UHC	Munshibazar HFWC	Saikot C.C
		Kulaura UHC	Brahmmanbazar HFWC	Sreepur C.C
		Srimongal UHC	Kalapur HFWC	Sankar Sena C.C

Table 1.2: Number of Patients Interviewed by Type of Health Facilities

Type of Health facility	Inpatients	Outpatients	All
	No. of patients interviewed	No. of patients interviewed	Total patients interviewed
District hospital (n=6)	732	1211	1943
Upazila Health Complex (n=18)	354	2568	2922
HFWC (n=18)	-	687	687
CC (n=14) *	-	200	200
Overall	1086	4666	5752

* 4 CCs were not operational and were found closed on the day of the visit.



Chapter 2

Socio - economic Profiles of Facility Users

Users by Facility Type

A total of 5752 patients (both in-and-out) who visited the selected health facilities were interviewed. A brief discussion on each type of facility and average number of patients by type of facility is given below.

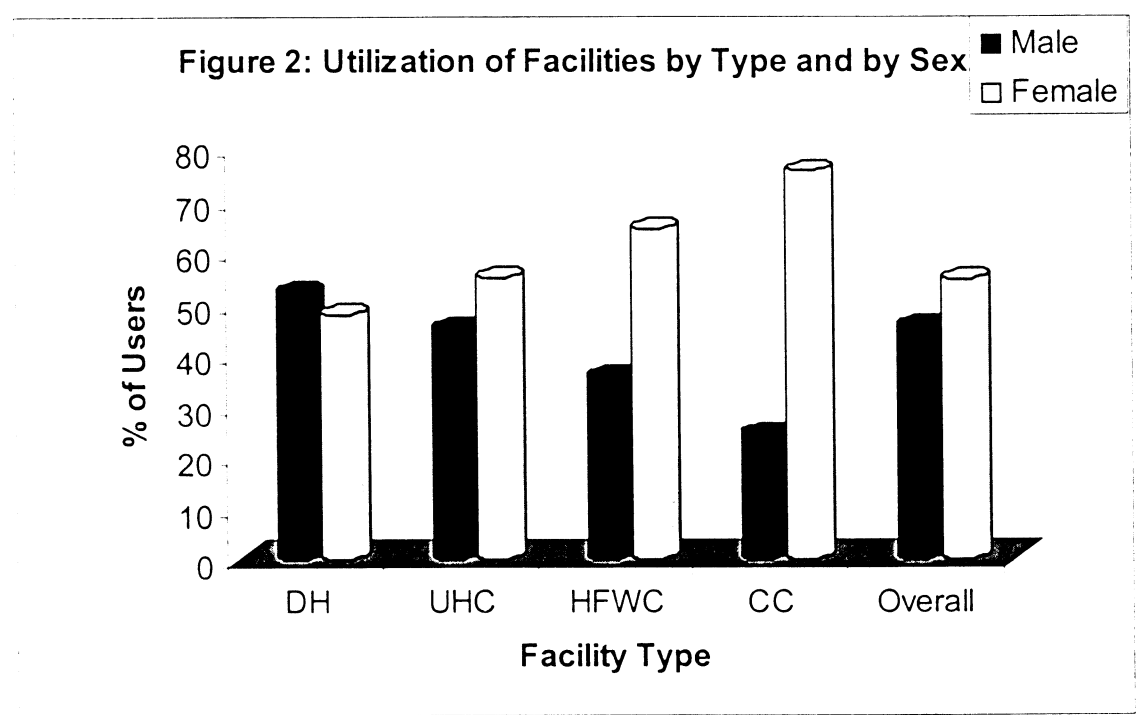
Community Clinics (CCs): A total of 18 CCs were visited in the 6 selected districts. Out of 18 CCs only 4 CCs were found to be closed and 14 were open. The average number of patients per CC (operational) per day was 14.3. It needs to be mentioned here that throughout the country the CCs started functioning in early 2001 but some of the CCs were found to be non-operational at the time of the survey. However, most of the selected CCs were found open as they came to know beforehand about the scheduled visit by the research team. Again, in the case of some of the CCs the immunization day was chosen for the field visit.

Union Health and Family Welfare Centres (HFWCs): A total of 18 HFWCs in 6 divisions have been visited for interviewing the clients. In the sample, a few HFWCs were the previous Rural Dispensaries (RD) that are converted into HFWC. The average number of patients per HFWC per day was found to be 38.1.

Upazila Health Complexes (UHCs): Eighteen UHCs from 6 divisions have been covered. The average number of patients per day per UHC has been found to be 162.3. In case of indoor patients the average number of patients per UHC is 19.7, while the average number of outdoor patients per UHC is 142.7.

District Hospitals (DHs): Six district hospitals (one each from six divisions) have been covered. The average number of patients per day per district hospital is 323.8. By further breakdown, the average number of indoor patients per hospital is 122, while an average of 201.8 outdoor patients attended a district hospital on the survey day. However, it may

be mentioned here that there is a wide variation in the number of beds in the District Hospitals. Among the 6 surveyed DHs, Bogra Mohammad Ali Hospital is a 250 bedded facility and Magura Sadar Hospital is a 100 bedded facility, while the other 4 district hospitals (i.e. Jhalakati, Laxmipur, Moulavibazar and Netrokona) are 50 bedded facilities. If Bogra and Magura DHs are excluded from the sample, then the average number of patients per day per 50 bedded district hospital is 223.5. The average number of outdoor patients per 50 bedded DH is 164.8, while average number of indoor patients is 58.7 per day.



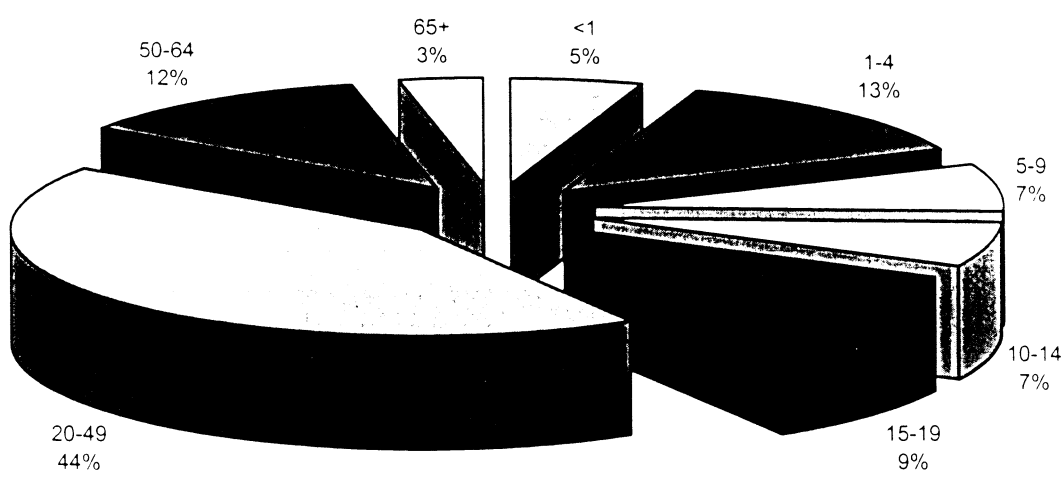
Among 5752 patients who were interviewed, about a third (33.8%) utilized DHs, almost half (50.8%) visited UHCs, about a tenth (11.9%) visited HFWCs, while only 3.5 per cent went to CCs. **Figure 2** shows the distribution of patients by sex and by facility type. Overall utilization is 46 per cent for males compared to 54 per cent by females. Only at the district hospital male utilization exceeds that of females, while females dominate utilization of health care facilities at the upazila level and below. Male utilization rate decreases sharply for facilities below upazila level. By contrast, utilization of facilities by females increases as one goes down the levels of care (from UHC to HFWC to CC). This

might be partly explained by the fact that health facilities below the upazila level primarily provide antenatal, natal, post-natal and family planning services free of cost, although users receive other services from these facilities related to child health (preventive immunization services) and health promotion advice (BCC).

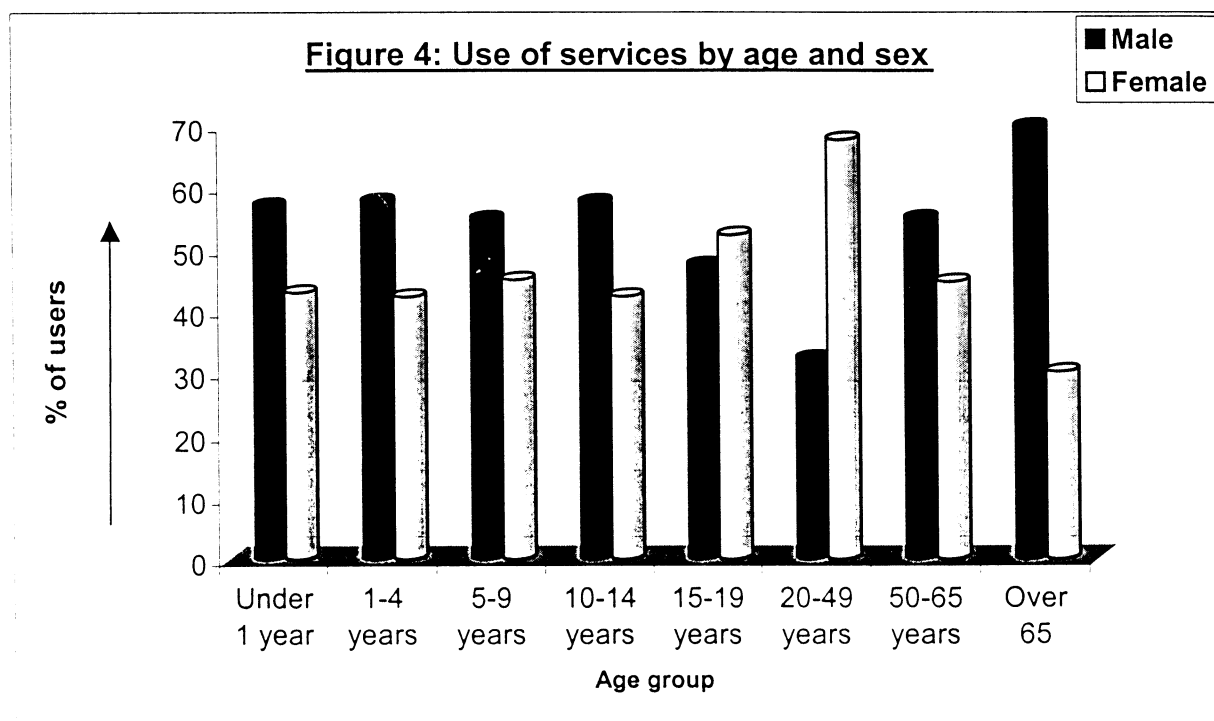
It is evident from **Figure 2** that female utilization was 48 per cent for district hospital which increased to 55 per cent for Upazila Health Complex, 64 per cent for HFWC and to 75 per cent for Community Clinic. Thus, female utilization rate is higher at the lower level facilities compared to facilities at higher levels (district and upazila level). As has been mentioned already, facilities at the upazila level and below deliver services mainly related to maternal care and immunization for which women and children are more likely to attend these facilities.

Figure 3 presents the distribution of facility users by broad age groups. Out of 5752 facility users, about a fifth of the patients were children under 5 years of age, while only 1 per cent of the patients were aged 65 years and above. It may be mentioned here that according to the latest census (2001), children under 5 years of age constitute less than 15

Figure 3: Distribution of the Users of Health Facilities by Age Group



per cent of the total population of Bangladesh. Since children are more vulnerable to death and disease, it is expected that a higher proportion of children will utilize the health facilities than their share in the total population. Again, women belonging to age group



20-49 years are more likely to visit health facilities for receiving antenatal, natal and postnatal care.

Figure 4 shows the distribution of facility users by broad age group and gender. Overall utilization is 46 per cent by males as against 54 per cent by females. Male utilization rates are higher than that of females for all age groups except the reproductive age span (15-19 and 20-49 years). The gender differential in utilization rates are much more pronounced for young infants and older women indicating that disparity is higher for the youngest and the oldest age groups.

Socio-economic Characteristics of the Users

In any survey research it is important to know the background characteristics of the study population. The assessment leads to interpretation of the results and to examine any cause effect relationship among the study variables. A brief description of the background characteristics of the users who visited the health facilities is presented in Table 2.1. Socio-economic and demographic characteristics include age and sex of the patient, household income and landholding size, and education and occupation of the household head.

Users by Age

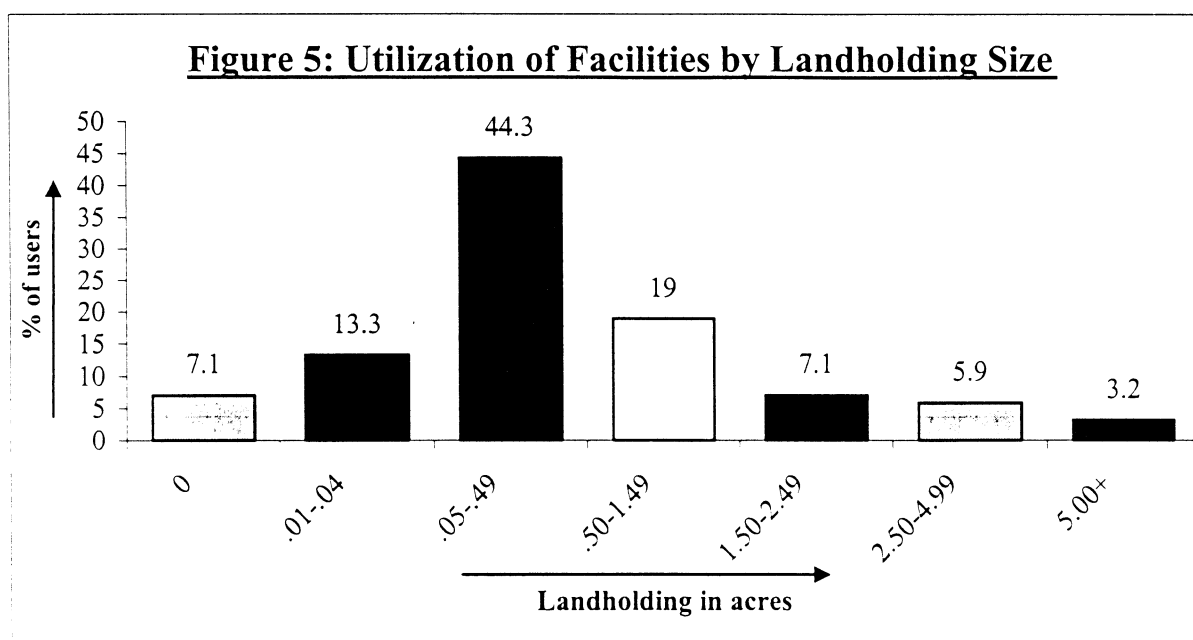
As already mentioned, a little less than a fifth of the users were children under 5 years of age, while a little less than a quarter (22.6%) of the users belonged to the age group 5-19 years. A large majority of the patients (43.4%) were in the age group 20-49 years, while older patients of age 50 years and over constituted around 15 per cent of all patients. It needs to be emphasised here that the demographic characteristics of persons – pregnant women, lactating mothers, pre-school children and aged persons over 65 years – are especially vulnerable to diseases and illnesses because of their physiological status.

Users by Occupation of Head

The occupational distribution of household heads shows that nearly a sixth of the facility users are dependent on farming, while wage labour (both agricultural and non-agricultural) represents the principal source of income for 42 per cent of households. About a fifth (20.9%) of the heads are involved in trading/business, while 16 per cent of the household heads are engaged in salaried job. It may be mentioned here that in rural Bangladesh, a salaried job, even as a school teacher, clerk, or a health worker, when coupled with one's own house, a plot of land and milch animals, raises the economic status of the household substantially.

Users by Landholding Size

Landholding status is an important indicator of socio-economic condition within the rural community. Majority of the rural population are directly dependent on land for their livelihood. The facility users were categorised into seven land size groups, viz. without any land at all (not even homestead land), households having less than 5 decimals of land, households with landholdings between 5 to 49 decimals. These three groups can be categorised as "functionally landless" (Land Occupancy Survey, 1978). The other categories include marginal farmers with 0.50 to 2.49 acres, subsistence farmers with 2.50 to 4.99 acres and rich peasants having more than 5 acres. It is evident from **Figure 5** that around 65 per cent of the facility users belonged to functionally landless category,

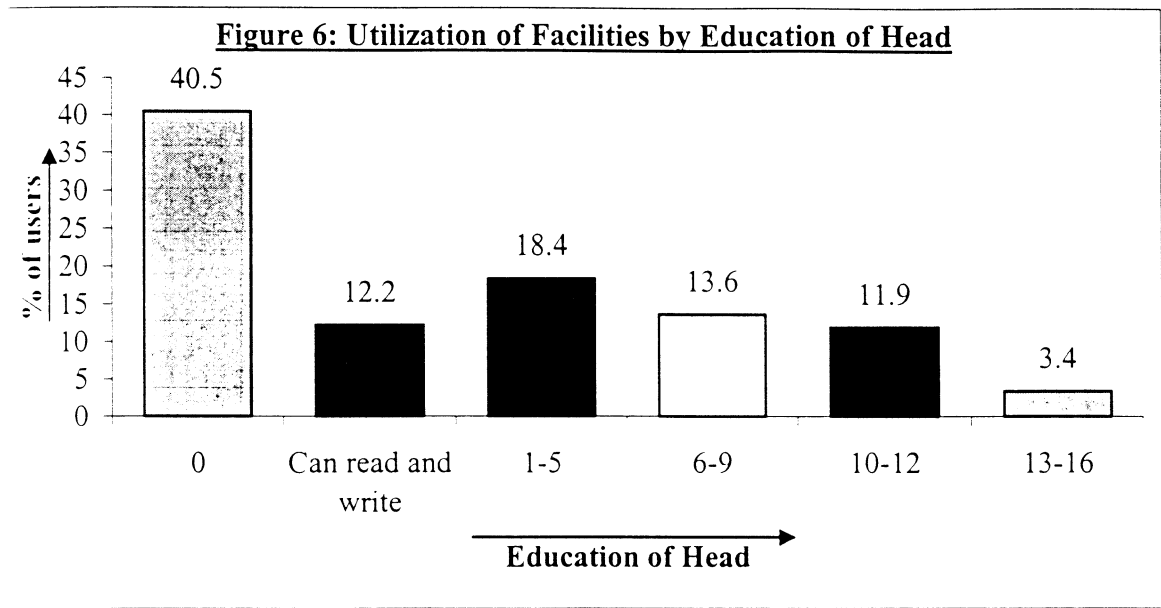


while 7 per cent of the users belonged to households not having even any homestead land. Marginal (having land between 0.50-2.49 acres) and subsistence (with 2.50-4.99 acres) households constituted 26 and 6 per cent of the users respectively. Users belonging to big landholders owning above 5 acres of land constituted a small minority of 3 per cent of the patients. According to the 1996 Agricultural Census of Bangladesh (BBS, 1999) the proportion of landless households (less than half an acre) constituted 56 per cent of the total, while the proportion of households owning more than 5 acres of land was only 5 per cent.

Users by Education of Head

The distribution of users by educational level of household heads (**Figure 6**) shows that about half (52.7%) of the users came from households where the heads were found to be either illiterate (40.5%) or who could read and write only (12.2%) with no formal schooling. About a fifth (18.4%) of the household heads had education up to primary level, 13.6 per cent had secondary level schooling, another 11.9 per cent had education up to Higher Secondary (HSC) level and only 3.4 per cent of the heads completed degree or higher level education. These figures are more or less consistent with national averages,

where 52 per cent of males as against 60 per cent of females are found to be illiterate (BBS, 2000).



Household Income

In terms of monthly household income, a vast majority of the facility users belonged to lower income groups (Table 2.1). About a third (35.3%) of the users belonged to the poorest category (with monthly income not exceeding Tk. 2000), while only 8.8 per cent of the users belonged to the group having monthly income above Tk. 7500. Only a small minority of the users (4.3%) came from the richest income group (monthly income more than Tk. 10,000).

Gender Differentials in Utilization by Socio-economic Characteristics

Findings from various studies have shown that in Bangladesh females generally do not get proper treatment during their childhood as well as during their reproductive age span. There is considerable evidence that in rural Bangladesh females have less access to food, health care and other resources than males within the same household (D' Souza and Chen, 1980; Chen et al. 1981; Khan, 1994).

Distribution of users by age and sex is shown in Table 2.2. Utilization of public health care facilities by women vis-a-vis men by socio-economic characteristics of the users reveals interesting pattern. It is evident from Table 2.2 that male utilization rate is higher than that of females for all age groups except the reproductive age span (15-49 years).

Patient Category

The survey findings indicate that overall, more than half (54.4%) of the utilization of facilities was by girls/females. But the utilization pattern by gender was different for outpatients and inpatients (Table 2.3). For outpatients 56.5 per cent of facility utilization was by females compared to 43.5 per cent for males. The pattern was reversed in case of inpatients where utilization rates for females and males were 45.3 and 54.7 per cent, respectively. For both in-and-out patients, the utilization rates for females in the age groups 15-19 and 20-49 years were much higher than that of male utilization rates. For all other age groups – both younger and older –male utilization rates far exceeded that of females for both categories of patients. For the oldest age group (65+ years), male utilization (70%) was more than twice than that of females (30%) for both categories of patients, while for the youngest age group (< 5 years), male utilization was about 57 per cent as against 43 per cent by females (for in-and-outpatients taken together).

The higher utilization of health facilities by males (compared to females) for all age groups other than the reproductive age span (15-49 years), is consistent with previous findings. The available evidence shows that compared to males, Bangladeshi females are disadvantaged in terms of their access to food, nutritional intake and utilization of health services. This arises mainly because of the existence of parental preference for sons and anti-female bias in the intrafamily allocation of food and health care for girls and women. (Chen et al 1981; Mannan 1988, 1989; Begum 1997).

Landholding and Education

Utilization of facilities by socio-economic characteristics of the users (Table 2.2) shows that gender related disparity increases with the increase in the household land size. For

patients belonging to landless households (having less than half an acre), female utilization is consistently higher than that of males. In general, female utilization is inversely related with household land. This pattern of increasing disparity between female and male utilization rates with increased socio-economic status of the household also holds true for other (socio-economic) indicators like education of head and monthly household income.

Female utilization of health facilities was inversely proportional with educational level of household head implying that (female) utilization rate decreases with an increase in the educational level of the head. Female utilization was 55.2 per cent where the household head was without any formal schooling as against 48.2 per cent where the household head completed college education (12th grade and above). Similarly, female utilization was higher (60.3%) for the landless group and lower (42.1%) for the land-rich (5.00+ acres) group. Similar male-female differentials in utilization of facilities were also found for the poorest and richest income group.

However, this differential in male-female utilization of facilities is reversed in case of inpatients (Appendix Table A2.1). In general, female utilization of inpatient facilities was found to be lowest where the head of household was without any formal schooling and highest where the head had completed college education. But with respect to landholding size, utilization of inpatient facilities by females and males was more or less the same for the landless group (with less than half an acre of land). But for all other land groups, female utilization of inpatient facilities was consistently lower than that of males. However, female utilization of outpatient facilities was higher than that of males for users belonging to households having less than 1.5 acres of land, while male utilization was higher than that of females for users from households having more than 1.5 acres of land.

Children and the Aged

The findings suggest that males dominate utilization of government facilities, at all age groups except for the reproductive one. The gender differential in utilization rate was particularly striking for under five children, and also for women in the age group 65 years and above (Appendix Table A2.1).

- For young infants, utilization of inpatient facilities was 62 per cent for males compared to 38 per cent for females, indicating that the younger the child – the higher the disparity.
- For older persons aged 65 years and above, utilization of outpatient facilities was only 30 per cent for females as against 70 per cent for males. This indicates that in terms of receiving care and treatment during old age females are much more disadvantaged compared to their male counterparts.

These findings imply that despite nearly comparable incidence of diseases for males and females, male children are brought to the health facilities by their guardians far more frequently than female children. While less is known about the incidence of diseases by gender, findings from Matlab (ICDDR, B) data do not show any sex differential up to 5 years of age in terms of exposure to infections (Chen et. al, 1981). Thus, one can assume that the probability of being sick is more or less the same for male and female children. But the frequency of hospitalization of male children (< 5 years) was much higher in the present survey than among cases involving females (60% males as against 40% females) which clearly indicates that in terms of receiving health care, girls are especially disadvantaged compared to boys.

In summing up, utilization of facilities by gender varies markedly by education and occupation of household head, household income and landholdings. In general, the analysis has shown that higher utilization of facilities by females is associated with low income, illiteracy, wage labour occupation and landlessness. Though it appears to be surprising, it may be explained by the fact that for the lowest socio-economic strata, a large number of women are being involved in income generating activities now a days. Microcredit and poverty alleviation programs of different NGOs and various targeted programs initiated by the government focus on poor women from landless and asset less families as the main beneficiaries. As a result, more and more poor women are coming out of their homes and participating in income generating activities. Since women from the poorer strata are earning an income for their family, they are more likely to have a say in the family decision making, including seeking health care for themselves and their children, when they fall sick. It needs to be emphasised here that it is mainly because of economic hardship that the poor women have become more liberated and are participating in various income earning activities, disregarding the strict observance of *purdah*.

Utilization of Facilities by Type of Disease

Data was collected on 36 health conditions (diseases/symptoms). The prevalence of disease varies with age, sex, literacy, income levels and various other factors. All the time, certain illnesses are common like fever, common cold and headache, diarrhoea and dysentery, other gastrointestinal diseases, respiratory diseases, ear/eye/dental problems, skin diseases, gynecological and obstetric diseases and others.

For ease of analysis, the diseases/symptoms are categorised into five groups as per ESP category. These are:

- Reproductive Health Care (RH) – including maternal health (antenatal care, delivery care and care of the newborn, essential obstetric care, postnatal care), adolescent health, family planning, other reproductive health services including reproductive tract infections and sexually transmitted diseases, and post-abortion complication care;
- Child Health Care (CH) – including EPI for immunisable diseases of childhood, acute respiratory infection (ARI) prevention and control, diarrhoeal diseases, malnutrition, vitamin A deficiency and iodine deficiency;
- Communicable Disease Control (CDC) – including tuberculosis control, leprosy elimination, malaria control, kala-azar control, filaria control and intestinal parasite disease control;
- Limited Curative Care (LCC) – including treatment of common conditions (provide basic first aid, identify and refer those with severe illness or with danger signs, identify and treat common conditions (common cold, conjunctivitis, impetigo, ring worm, tinea, scabies), treatment of medical emergencies, provide first aid for major trauma (road accidents, drowning, assaults), provide first aid for poisoning, snakebite, convulsions and burns.
- Behaviour Change Communication (BCC) is being implemented as a way of influencing health behaviour and health care seeking practices across all of the ESP components. Behaviour change communication makes up an important part of each service area.

It may be mentioned here that the reasons for visits to health facilities (or sickness), as mentioned in the survey may not be the medically or clinically defined exact causes, since a large number of patients who visited the health facility may have suffered from more than one problem concurrently. But as long as diseases are grouped under major head (RH, CH, CDC, etc.), the broad picture that emerges will more or less reflect the true pattern.

Figure7: Use of Services by Disease Category

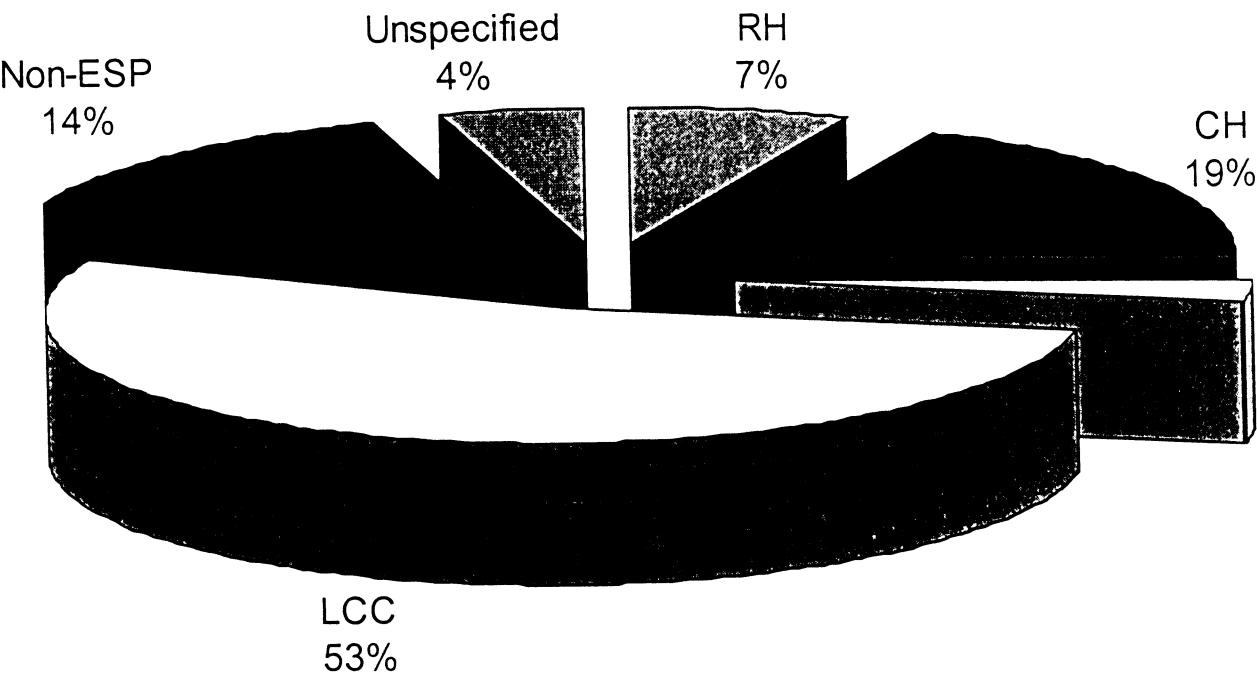
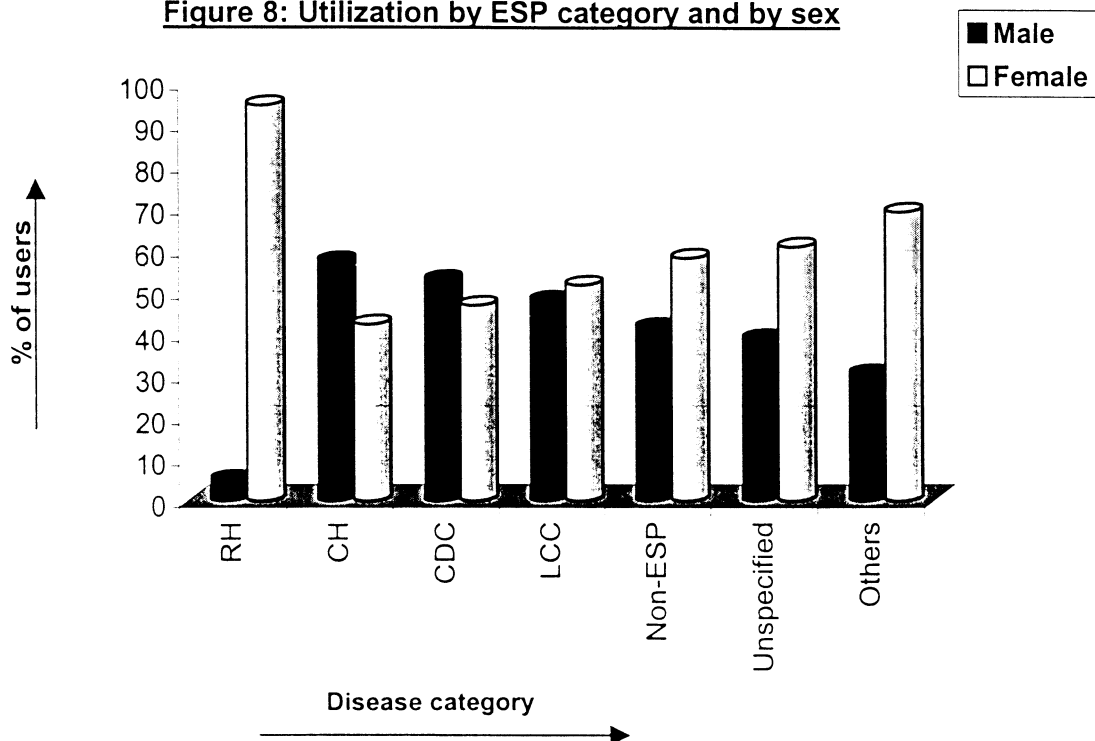


Figure 8: Utilization by ESP category and by sex



One of the most difficult tasks of the survey was the categorisation of diseases into ESP and non-ESP. The investigators asked for information on: reasons for visiting the facility, treatment given and prescription provided and finally the disease code was entered. It may be mentioned here that for some of the diseases it was very difficult to enter the correct code of the disease (for example, fever or common cold with headache is difficult to distinguish). However, when diseases are grouped under broad (ESP and non-ESP) category, such biases are likely to be minimised.

When the use of health facilities by ESP categories is examined it is found that utilization of health facilities is dominated by limited curative care (LCC). Overall, 53.3 per cent of the patients visited health facilities for LCC services, 18.7 per cent for child health (CH), 7.0 per cent for reproductive health (RH) services, 2.5 per cent for CDC and 14 per cent for non-ESP diseases/services (Figure 7). But still there were 3.1 per cent of cases which were difficult to categorise and finally such cases have been put under the head "unspecified" diseases.

Examining the use of services by gender and disease category it is seen that male utilization is higher than that of females for both **child health** and **communicable disease control**. For **limited curative care**, service use is more or less evenly distributed (48.2% by males and 51.8% by females). However, unlike other types of diseases, reproductive health services are overwhelmingly (95%) obtained by women. Women (and girls) also make up the majority of the users in the non-ESP, unspecified and uncategorised (others) group (Figure 8).

Again, much of the difference in male-female utilization is accounted for by 'Reproductive Health'. If reproductive services are taken out or excluded from the analysis, then overall utilization of males becomes almost similar to that of females. It needs to be mentioned that even though RH services are mainly obtained by women, they are of benefit to both men and women in providing protection against unwanted pregnancies or helping pregnant mothers before, during and after delivery of the baby.

Health Status of Mothers and Children

Numerous studies report that the rural people of Bangladesh suffer mainly from diarrhoeal diseases including dysentery, other gastro-intestinal problems, lung and respiratory problems including tuberculosis, rheumatism, fever (all types), scabies, etc (Mannan 1990a, Begum 1997). The scientific means of preventing and treating all these are time-tested wisdom; they are inexpensive and available. Yet these illnesses recur, interfering considerably with daily activity. Malnutrition, anaemia and diarrhoeal diseases are the biggest killers in the community both in cases of children and adults.

There are two large population groups who are especially vulnerable to disease and death – mothers and children. Children under 5 years of age and women in the reproductive age group constitute about 35 per cent of the total population of Bangladesh. Because children have less immunity to disease than adults, children's diseases predominate in Bangladesh. Again, because so many children die at an early age, many others are born. High mortality of children induces families (who have experienced child deaths) to have many children so that they can assure themselves of surviving progeny (Mannan 1990b).

Thus, another element is introduced - maternal mortality, in which a sharp and steady increase in the risk of death occurs after the third birth.

The cycles of pregnancy and lactation deplete the low-income mother nutritionally and result in a high proportion of low birth weight babies (less than 2500 gms) and in quantities of breast milk considerably below those of well-nourished mothers in more privileged circumstances. Low birth weight (LBW) babies show poorer growth and higher morbidity and mortality during the first year of life, and the combination of low nutrient reserves at birth and reduced quantity of breast milk means a need to introduce complementary feeding at an early age. This, in turn, adds to the risk of infection with enteric organisms and increases the likelihood of malnutrition beginning relatively early in the first year.

Nutritional problems in the rapidly growing child are serious in Bangladesh. As with most diseases, malnutrition in a child results from the interplay of causative agent, host and environment and it is in this dynamic context that the epidemiology and etiology of malnutrition should be analysed. Recent research has shown that repeated infection – especially respiratory and diarrhoeal infection – play a much greater role in causing malnutrition than was previously supposed. Studies have shown that frequent bouts of diarrhoea are a common and almost constant illness before a child develops malnutrition. Though malnutrition has many causes, frequent infection is probably the most important. All infections have a nutritional impact. They can depress appetite, decrease the body's absorption of nutrient and drain away nutrients through diarrhoea. And by any or all of these methods, infections become a major cause – perhaps the major cause of malnutrition among the world's children (UNICEF, 1984).

The dismal fact is that these great killers of children – diarrhoea, pneumonia, measles, fever and malnutrition – are beyond the reach of modern medicare, especially in rural Bangladesh. Diarrhoea is not often affected by antibiotics and the frequent presence of malnutrition makes even appropriate therapy difficult or futile.

It needs to be brought out at this juncture that the major illnesses of children in Bangladesh such as diarrhoea and respiratory infections are not immunisable diseases. Therefore, the attempt to project the immunisation programme as the guardian angel of Bangladesh's children has to be taken with a pinch of salt. Evidence from different studies shows that about 60-90 per cent of deaths and diseases in the early age groups are caused by respiratory infections and diarrhoea (Mannan, 1990a). These non-immunisable diseases deserve more attention because it is the children of the poor who are more prone to these diseases due to inadequate standards of food and hygiene.

Utilization of Facilities by Quintile Groups

The provision of public health facilities is a necessary but not a sufficient condition for the utilization of healthcare services. Economic status of the family does play an important role in the utilization of public health facilities. But contrary to the widely held belief that non-poor households are more likely to benefit from public health facilities, the data from the present survey shows that members from the poorer section have higher access to government health facilities. These findings are consistent with those of an earlier HEU study (HEU 2001), which reported that the use of health services at the upazila level and below is dominated by bottom two quintiles (53% of total utilization). This implies that it is the poor people who tend to utilize government facilities more.

According to the present survey, the share of the poorest quintile is 35.6 per cent of total utilization, while the share of the poorest two quintiles is 52.1 per cent of total utilization. By contrast, the share of the richest 20 per cent in total utilization is only 13 per cent (Table 2.3 and **Figure 9**). This trend of higher utilization by poorer strata also holds true for both in-and-outpatients. For outpatients, the share of the poorest quintile is 35 per cent as against 12.8 per cent for the richest quintile. Similarly, in case of indoor patients the share of the poorest quintile is 38.5 per cent as against 14 per cent for the richest quintile (Table 2.4).

Again, with regard to utilization of outpatient facilities by gender, the share of the lowest quintile is 32.9 per cent for males compared to 36.5 per cent by females. The share of the

richest quintile is the lowest, representing 13.6 and 12.1 per cent of total utilization for males and females respectively. Similarly, for patients visiting indoor facilities the share of the poorest quintile is 35.4 per cent of total utilization for males as against 42.3 per cent by females. By contrast, the share of the richest quintile is 13.6 and 14.4 per cent of total utilization for males and females, respectively. On the whole, the findings suggest that the utilization of facilities is pro-poor and pro-gender.

According to the findings of the present survey, the very poor (bottom 20 per cent of the population) are more likely to use the government health facilities compared to their non-poor counterparts. Why do the poor use the government facilities more than the rich? There may be several reasons. First, poor people are likely to be especially vulnerable to illness because of lack of proper diet and the generally unhygienic conditions in which they live. Second, low levels of education and income, and high levels of malnutrition and under-nutrition may result not only in higher actual morbidity for the poorest strata but also in higher level of utilization of public facilities. Third, for people in the upper income strata with higher level of education, better nutrition and more health awareness; the morbidity rate is likely to be lower than the poorer strata. Again, when they fall sick they might prefer to visit a private clinic or qualified private physician in the hope of getting better care and treatment.

Figure 9: Utilisation by Income Quintile

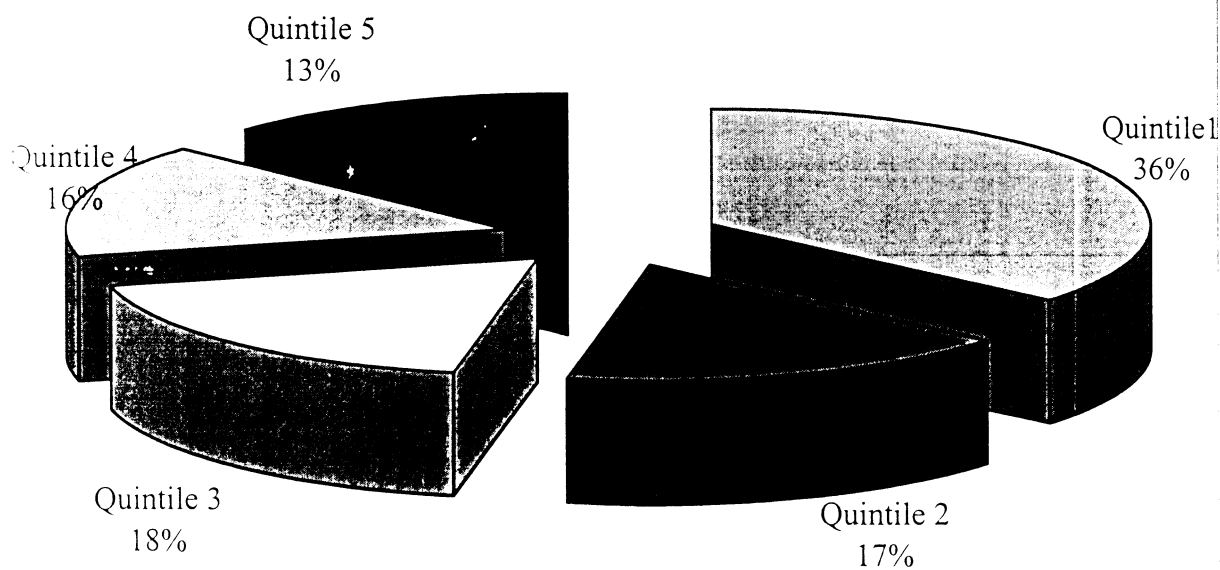


Table 2.1: Socio-demographic Characteristics of the Users of Health Facilities

Characteristics	No.	%
Age (years)		
0-4	307	5.3
5-14	768	13.4
15-24	410	7.1
25-34	389	6.8
35-44	498	8.7
45-54	2498	43.4
55-64	700	12.2
65+	182	3.2
Characteristics	No.	%
Size of Landholding (acres)		
0-0.4	411	7.1
0.5-0.9	767	13.3
1-1.49	2546	44.3
1.5-1.99	1095	19.0
2-2.49	409	7.1
2.5-4.99	341	5.9
5-10+	183	3.2

Table 2.1 Contd.

Education of Head (years of schooling)		
00	2331	40.5
Can read and write	702	12.2
1-5	1059	18.4
6-9	782	13.6
10-12	685	11.9
13+	193	3.4
Occupation of Head		
Farming	930	16.2
Agricultural wage labour	689	12.0
Non-agricultural wage labour	1718	29.9
Petty Trading	968	16.8
Business	236	4.1
Service	918	16.0
Housewife	37	0.6
Others	256	4.5
Monthly Income (Tk)		
up to 1000	459	8.0
1001-1500	787	13.7
1501-2000	785	13.6
2001-3000	1266	22.0
3001-5000	1339	23.3
5001-7500	610	10.6
7501-10000	257	4.5
10001+	249	4.3
Sex of patient		
Male	2625	45.6
Female	3127	54.4
Patient Category		
Outpatient	4666	81.1
Inpatient	1086	18.9
All	5752	100.00

Table 2.2: Gender Differentials in Utilization Rates by Socio-demographic Characteristics of the Facility Users

Characteristics	Percent distribution by gender			
	Male		Female	
	No.	%	No.	%
Age of Patient (years)				
0-4	175	57.0	132	43.0
5-14	443	57.7	325	42.3
15-24	225	54.9	185	45.1
25-34	224	57.6	165	42.4
35-49	237	47.6	261	52.4
50-64	808	32.3	1690	67.7
65-74	386	55.1	314	44.9
75+	127	69.8	55	30.2
Education of Head (years of schooling)				
0-5	1358	44.8	1675	55.2
6-7	492	46.5	567	53.5
8-9	355	45.4	427	54.6
10-12	320	46.7	365	53.3
13+	100	51.8	93	48.2
Landholding size(acres)				
0-0.04	163	39.7	248	60.3
0.05-0.09	292	38.1	475	61.9
0.10-0.49	1090	42.8	1456	57.2
0.50-1.49	566	51.7	529	48.3
1.50-2.49	221	54.0	188	46.0
2.50-4.99	187	54.8	145	45.2
5.00+	106	57.9	77	42.1
Occupation of Head				
Farming	542	58.3	388	41.7
Agricultural labour	308	44.7	381	55.3
Non-Agricultural labour	705	41.0	1013	59.0
Shop trading/Business	415	42.9	553	57.1
Self business	94	39.8	142	60.2
Service	418	45.5	500	54.5
Homemaker	11	29.7	26	70.3
Retired	58	60.4	38	39.6
Others	74	46.3	86	53.8
Monthly Income(Tk)				
0-1000	148	32.2	311	67.8
1001-1500	306	38.9	481	61.1
1501-2000	351	44.7	434	55.3
2001-3000	600	47.4	666	52.6
3001-5000	648	48.4	691	51.6
5001-7500	321	52.6	289	47.4
7501-10000	124	48.2	133	51.8
10001+	127	51.0	122	49.0
Total	2625	45.6	3127	54.4

Table2.3: Use of Services by Facility Level and Income Quintile: All Patients

Facility Type	Quintile Group (%)					Total (No.)
	1	2	3	4	5	
DH	31.8	14.6	18.5	17.7	17.4	1943
UHC	39.4	17.2	17.6	15.2	10.6	2922
HFWC	33.8	18.6	21.1	17.0	9.5	687
CC	24.0	18.0	18.5	23.5	16.0	200
Total (%)	35.6	16.5	18.3	16.5	13.0	5752

Table 2.4: Service Utilization by Income Quintile and by Gender

Quin tile	Outpatients						Inpatients					
	Male		Female		Total		Male		Female		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1	669	32.9	963	36.5	1632	35.0	210	35.4	208	42.3	418	38.5
2	341	16.8	433	16.4	774	16.6	109	18.4	67	13.6	176	16.2
3	375	18.5	481	18.3	856	18.3	115	19.4	83	16.9	198	18.2
4	369	18.2	440	16.7	809	17.3	79	13.3	63	12.8	142	13.1
5	277	13.6	318	12.1	595	12.8	81	13.6	71	14.4	152	14.0
Total	2031	100	2635	100	4666	100	594	100	492	100	1086	100

Chapter 3

Access to Public Health Services

Introduction

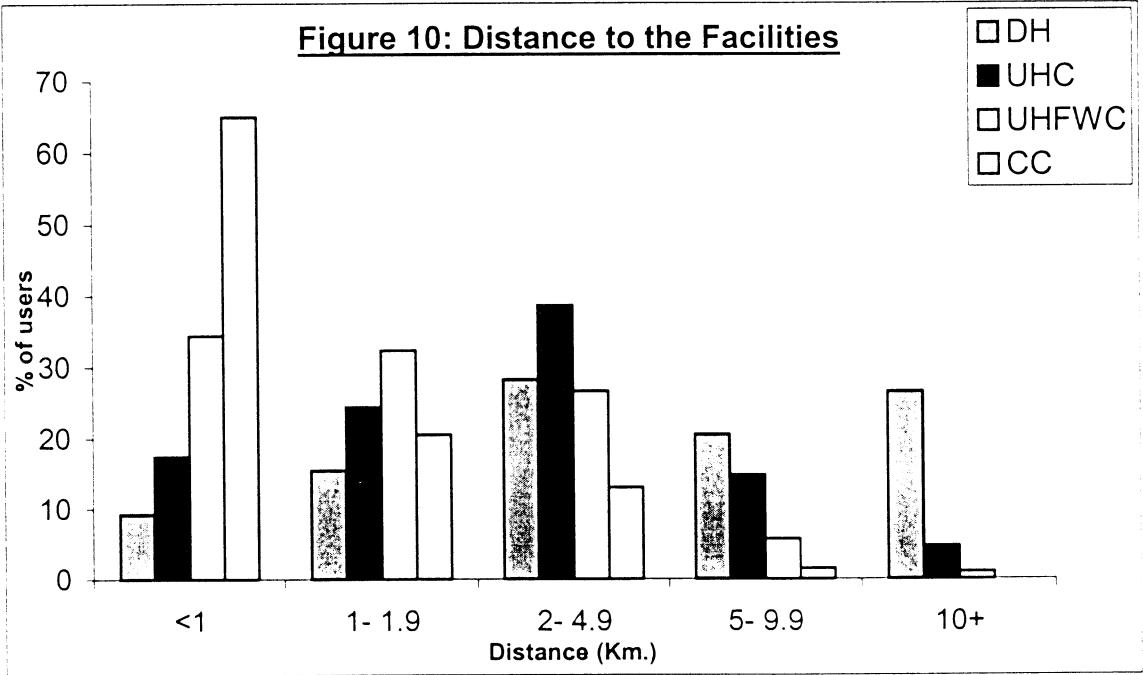
Despite the existence of a large and relatively sophisticated public health infrastructure in the towns and cities to remote rural areas, often these facilities suffer from underutilization of their services. The constraints encountered in better utilization are often associated with both physical accessibility and waiting time for treatment at the facility; the two critical factors that tend to facilitate or restrict health care use. Other factors involved in accessibility are knowledge, changing tastes, perceived quality and socio-cultural barriers to receiving care. The three main elements of physical accessibility are distance to the health providers and the ensuing travel time and travel cost. The location of health care facilities and the distance clients must travel is a significant determinant of utilisation. If the health facility is situated far away from home, it involves considerable travel time as well as travel costs to get to the facility depending on the mode of transport. Further, accessibility to services requires waiting time at the facilities that may induce or discourage usage.

In Bangladesh, a network of health facilities have been established over the years in the rural areas from the UHCs at the upazila level to HFWCs at the union level to the CCs at the ward level that has brought the public health services nearer to the clientele population. However, underdeveloped rural roads and communication system still impose a serious burden on the clients for their visits to health facilities.

Factors Affecting Accessibility

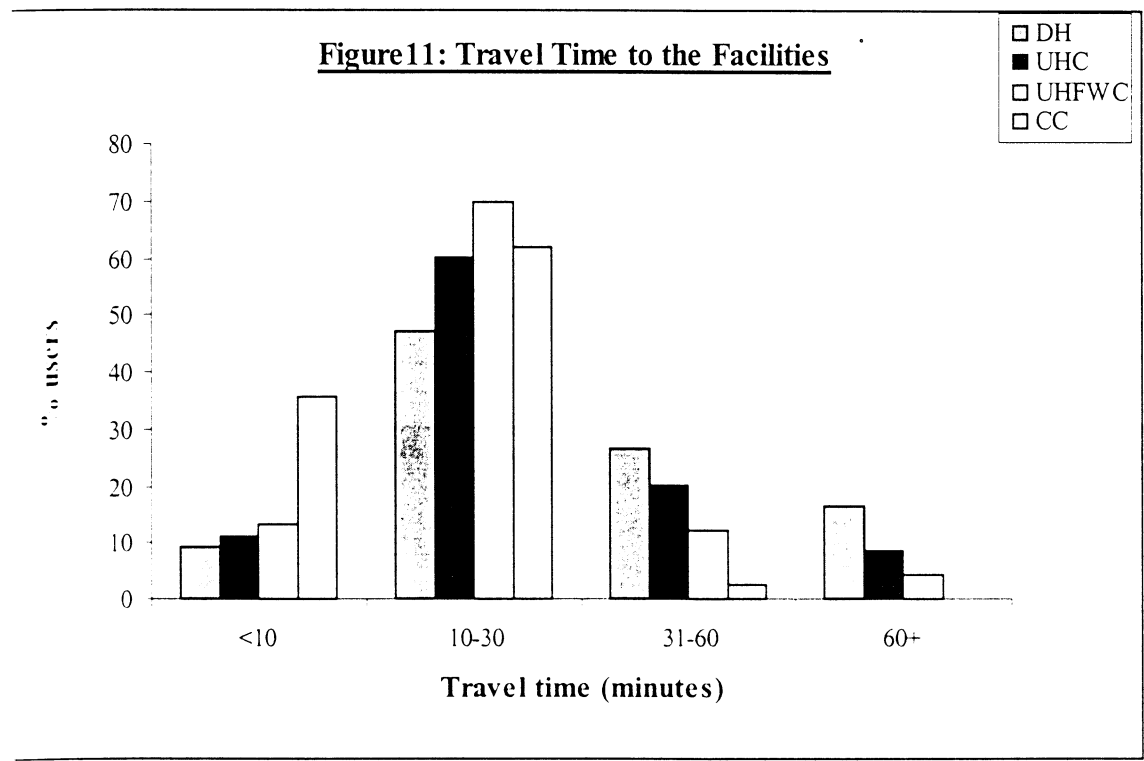
Table 3.1 shows the distance travelled, travel time, travel expenses and waiting time to have access to public health care facilities. The table shows that only a fraction (9.3%) of the clients of District Hospitals visit the facility from within less than one kilometer from their residence, while a larger proportion (28.2%) visit the facility from within 2-4.9 kilometers and a significant proportion (26.5%) from a distance of 10 kilometers and above. At the UHCs the highest proportion of the clients (38.6%) visit the centres from

within 2-4.9 kilometers, while in the HFWCs, two-thirds visit the centre from within two kilometers. On the other hand, in the community clinics majority of the clients visit the center from less than one kilometer. The average distance of the DHs from the usual place of residence of the clients is the highest 8 kilometers, followed by UHC at a distance of 3.2 kilometers, the HFWCs at 1.8 kilometers and the closest being the CCs at a distance of only one-kilometer. However, the median distances to the DHs, UHCs, HFWCs and CCs are 4, 2, 1 and 0.5 kilometers respectively.



A similar picture emerges for travel time and travel cost. The findings suggest that the largest proportion of clients take within 10-30 minutes to travel to the various types of health facilities. However, more than a quarter who visit DHs and one fifth of those who visit UHCs take within 31-60 minutes. Having access to CCs demands lowest average travel time of 12 minutes, while it takes twice as much to travel to HFWCs and more than three times to travel to DHs (41minutes). However, median travel time required to visit DHs, UHCs, HFWCs and CCs are 30, 20, 15 and 10 minutes respectively. It appears that though there exists significant differentials in distances travelled between different types of health facilities, the differentials are considerably reduced in terms of travel time. This

may be explained by the fact that the mode of transport is poor at the Upazila level and below, and most of the clients travel to these health facilities on foot.



Travel cost is up to 5 taka for a significantly large proportion of clients ranging from 30 percent of DH clients, to 73 percent for UHC clients to 98 percent of CC clients. Likewise, average travel expenses of the clients to travel to DHs, UHCs, HFWCs and CCs are 34 taka, 7 taka, 1 taka and less than one taka respectively. The differentials in travel time and in travel cost may largely be explained by variation in the distances of health service facilities and mode of transport used to reach these facilities. The reason behind travelling longer distances to DHs and UHCs is because people afflicted with chronic and acute illnesses seek quality health care from these facilities especially as poor patients. The recently established Community Clinics are the nearest public health facilities to the clientele population that provide selected immunization, health and family planning services.

A majority of the clients wait for treatment between 10-30 minutes and a smaller proportion wait beyond half an hour in the DHs, UHCs and HFWCs. The average waiting time to have access to public health services is the highest 25 minutes at DHs, followed by 17 minutes at UHCs, 13 minutes at HFWCs and the lowest 7 minutes in case of CCs.. Median waiting time at DHs, UHCs, HFWCs and CCs are 15, 10, 10 and 5 minutes respectively.

Differentials by Sex and Patient Category

Average distance travelled varies by indoor and outdoor patients and by sex (Table 3.2). A striking difference is noticed in average distance travelled by indoor and outdoor patients receiving care from DHs, showing that the indoor patients travelled a much longer distance compared to the outdoor patients. Similar variations in distance travelled among indoor and outdoor patients also appear in case of UHCs. The difference of means test shows that the variation of distance travelled between indoor and outdoor patients of DHs and UHCs is highly significant (sign. at 0.01 level). The reason behind travelling longer distances by indoor patients to DHs and UHCs is because people afflicted mainly with chronic and acute illnesses from remote areas seek quality health care from these facilities.

Differential in average distance travelled is also noticed by sex; distance travelled is statistically significantly longer for males than females at all types of facilities (sign. at 0.01 level). Distance travelled for treatment at DHs and UHCs appear to be higher for males than females. This is true for both outpatients (sign. at 0.01 level) and inpatients (sign. at 0.01 level) in these facilities. The reverse is true for CCs—females travel longer distances than males. Higher proportion of females travelling from a shorter distance from their homes to both DHs and UHCs implies that they either resort to less expensive types of treatment available nearer to their homes or the prevalent socio-cultural barriers act as deterrents to their travel.

Average travel time for those who seek care from public health facilities is 34 minutes (Table 3.3). Travel time is significantly higher for inpatients than outpatients at DHs and

UHCs (sign. at 0.01 level). Large variation in travel time to DHs and UHCs are observed between indoor and outdoor patients. Male travel time is found to be statistically significantly higher than their female counterparts for all types of facilities (sign. at 0.01 level). Among indoor patients, travel time to DHs and UHCs is significantly higher for males than females (sign. at 0.01 level). Among outdoor patients, travel time to DHs and HFWCs are higher for males than females and the opposite is true for UHCs and CCs which is due to chance and is not statistically significant.

Average travel cost for the clients from their homes to public health facilities is 15 taka (Table 3.4). Travel expense is significantly higher (at 0.01 level) for males which is 18 taka compared to 12 taka for females since males appear to have travelled longer distances than females. Males incur higher travel costs to travel to DHs and UHCs than that of females. There are not much variations in travel cost to HFWCs and to CCs between males and females. On the other hand, significantly higher travel costs to travel to DHs and to UHCs are borne by indoor compared to outdoor patients (sign. at 0.01 level). Among outdoor patients, males appear to bear significantly higher travel costs compared to that of females (sign. at 0.05 level). But among indoor patients, this variation in travel cost appears to be larger, but is not statistically significant.

Average waiting time for all clients in public health facilities is 19 minutes (Table 3.5). Hardly any difference in waiting time is observed between males and females which is not statistically significant. Waiting time for indoor patients is significantly higher than that of outdoor patients at the DHs and the UHCs (sign. at 0.01 level). There appears to be no significant differences in waiting time between males and females among both outdoor and indoor patients.

Socio-economic Differentials

Accessibility factors are also expected to vary by socio-economic status. Distance travelled by service users varies positively with the landholding status of the household (Appendix Table A3.1). For land rich households the distance travelled is about twice as great as the distance travelled by land-poor households. It is more evident for the users of district hospitals, but less prominent in case of users of other facilities.

The relationship between distance travelled and income quintiles are slightly positive, but not uniform (Appendix Table A3.2). In case of the users of DHs, the relationship is negative, users from the lowest quintile travel to DHs from a longer distance than the richest quintile. Similar situation is evident for the users of UHCs. But the relationship is positive only in case of HFWCs.

The relationship between waiting time at the facilities and landholding status appear to be positive, but not uniform (Appendix Table A3.3). Waiting time for the lowest landholding group is 19 minutes, which then decreases with the increase in landholding status, but again goes up with higher landholding status. A similar picture is visible for the users of DHs and UHCs. The relationship again seems to be negative for the service users of HFWCs and CCs, i.e. waiting time goes down with higher landholding status.

There is no significant variation of waiting time by income quintiles (Appendix Table A3.4). The waiting time is the highest for the second quintile and then reduces for the richer quintiles. In the DHs, richest quintile has slightly lower waiting time than the poorest quintile. In the UHCs, waiting time is the highest for the second quintile, which then reduces for the richer quintiles and the richest quintile shows the lowest waiting time. In the HFWCs and CCs, no uniform pattern emerges between waiting time and income quintiles.

In summing up, distance travelled by the clients to have access to public health facilities varies widely among different types of health facilities. Having access to DHs, UHCs, HFWCs and CCs clients must travel on an average 8, 3.2, 1.8 and one kilometer respectively. On the other hand, travel time required to visit these facilities are 41, 32, 24 and 12 minutes respectively. The differentials in travel time among the different types of facilities have shown to have greatly reduced because of poor mode of transport from the Upazila level and below. As a result, travel costs have been found to be low from the Upazila level and below. Average waiting time for treatment is 19 minutes, which varies widely across different type of facilities from 25 minutes at DHs to 7 minutes at CCs.

There is significant variation in distance travelled by landholding status showing that the land rich travel much longer distance compared to the land poor. However, there seems to be no major differences across income groups. There is no uniform and significant variation in waiting time by either landholding status or income quintiles.

Table 3.1: Accessibility Factors by Facility Type (% distribution)

Accessibility factors	District Hospital	Upazila Health Complex	Union Health & Family Welfare Centre	Community Clinic
Distance				
0-1 Km.	9.3	17.5	34.4	65.0
1-2.99 "	15.5	24.4	32.3	20.5
3-4.99 "	28.2	38.6	26.6	13.0
5-9.99 "	20.5	14.8	5.7	1.5
10- "	26.5	4.7	1.0	0
Mean	8.0	3.2	1.8	1.0
Median	4.0	2.0	1.0	0.5
Travel Time				
0-10 Minutes	9.5	11.0	13.5	35.5
11-30 "	47.3	60.2	69.9	62.0
31-60 "	26.8	20.3	12.4	2.5
61- "	16.5	8.6	4.2	0
Mean	41.3	31.9	24.3	12.4
Median	30.0	20.0	15.0	10.0
Travel Expenses				
0- To 05 Taka	29.9	73.3	93.2	97.5
6-10 "	23.2	10.4	4.1	2.0
11-50 "	33.5	14.9	2.6	0.5
51- "	13.4	1.4	0.1	0
Mean	34.1	6.6	1.2	0.5
Median	10.0	0.0	0.0	0.0
Waiting Time				
0-10 Minutes	25.2	34.2	45.1	72.0
11-30 "	58.0	57.3	48.6	27.0
31-60 "	12.7	7.4	4.9	1.0
61- "	4.1	1.2	1.3	-
Mean	24.8	16.6	13.0	6.7
Median	15.0	10.0	10.0	5.0
Total	1943	2922	687	200

Table 3.2: Average Distance (Kms) Travelled by Sex and by Category of Patients by Type of Facility

Type of Facility	Outpatient			Inpatient			All Patients		
	Male	Female	Both	Male	Female	Both	Male	Female	Both
District Hospital	5.8	5.1	5.4	14.1	9.9	12.2	9.1	6.8	8.0
Upazila Health Complex	3.2	2.6	2.9	5.6	5.3	5.5	3.5	2.9	3.2
Union Health & Family Welfare Centre	1.8	1.8	1.8	-	-	-	1.8	1.8	1.8
Community Clinic	0.7	1.0	1.0	-	-	-	0.7	1.0	1.0
All	3.7	2.9	3.3	11.4	8.4	10.0	5.5	3.8	4.5

Table 3.3: Average Travel Time (Minutes) by Category and Sex of Patients and by Type of Facility

Type of Facility	Outpatient			Inpatient			All Patients		
	Male	Female	Both	Male	Female	Both	Male	Female	Both
District Hospital	32.6	32.1	32.3	60.2	51.1	56.1	43.6	38.8	41.3
Upazila Health Complex	30.2	31.0	30.6	43.3	38.0	40.9	32.1	31.7	31.9
Union Health & Family Welfare Centre	25.3	23.7	24.3	-	-	-	25.3	23.7	24.3
Community Clinic	12.2	12.5	12.4	-	-	-	12.2	12.5	12.4
All	29.9	29.0	29.4	54.8	46.8	51.2	35.5	31.8	33.5

Table: 3.4: Average Travel Cost (in taka) by Patient Category and Sex and by Type of Facility

Type of Facility	Outpatient			Inpatient			All Patients		
	Male	Female	Both	Male	Female	Both	Male	Female	Both
Total	10.5	11.7	11.1	77.4	65.4	72.0	37.1	30.8	34.1
Health Complex	4.0	3.5	3.7	31.3	23.2	27.6	7.9	5.5	6.6
Health Family Welfare Centre	1.3	1.2	1.2	-	-	-	1.3	1.2	1.2
Community	0.4	0.6	0.5	-	-	-	0.4	0.6	0.5
	5.5	4.8	5.1	62.5	51.5	57.5	18.4	12.2	15.0

Table: 3.5: Mean Waiting Time (Minutes) by Category of Patients and Sex and by Type of Facility

Type of Facility	Outpatient			Inpatient			All Patients		
	Male	Female	Both	Male	Female	Both	Male	Female	Both
Total	24.1	25.1	24.6	24.9	25.2	25.0	24.4	25.1	24.8
Health Complex	15.7	17.5	16.7	16.3	15.5	16.0	15.8	17.3	16.6
Health Family Welfare Centre	12.1	13.5	13.0	-	-	-	12.1	13.5	13.0
Community	7.9	6.3	6.7	-	-	-	7.9	6.3	6.7
	17.6	17.9	17.8	22.1	22.0	22.1	18.6	18.5	18.6

Chapter 4

Health Expenditure and Sources of Finance

Introduction

From an economic perspective, healthcare utilization decisions depend on the relative magnitude of costs and benefits involved from the standpoint of persons who make these decisions to use healthcare for themselves or for others. The costs of seeking care typically include financial expenses and income losses that may be incurred as a result. Income losses can be high if considerable time is spent in commuting or standing in queues to obtain medical care.

For the same reason, the amounts paid for healthcare services, such as consultancy fees and hospital charges, are also likely to be an important determinant of health care utilization. There are other factors that influence healthcare utilisation behaviour. For people with higher education, the perceived benefits from effective treatment and/or preventive care may be higher than for the rest of the population. Benefits could be higher for individuals whose health is considered intrinsically more important in certain cultural settings, as for people belonging to higher socio-economic classes and for males. A recent analysis in India using data from the 42nd round of the NSS, shows that the chance of an ill person seeking treatment is greater among males, among members of households where the head is literate, and among scheduled castes and tribes (Gumber 1997).

Finally, economic status of the household plays an important role in the health seeking behaviour. The perceived need for medical care would depend both on the availability of healthcare facilities and the capacity to pay for health services. The findings in chapter 2 show that people from the bottom quintiles utilise government facilities more and the rate of utilization decreases with an increase in the economic status of the household. This difference reflects the fact that the rich avail themselves of the more expensive, but presumably also better quality, private facilities. This implies that economic reasons do

play an important role in decision to utilise public facilities and the perceived need for treatment depends largely on the ability of the persons to seek treatment.

Cost of Treatment

Apart from the direct cost related to consultation and purchase of medicine, there are also costs associated with transport, food and accommodation. In the survey, out of pocket utilization cost was recorded according to the type of costs incurred, like:

- traveling and transportation costs
- consultation fees
- purchase of medicine
- pathology/clinical investigation (X-ray, blood test, ECG, urine/stool tests, etc.)
- food and various hotel costs (for inpatients only)

The survey findings show that on the average, an outpatient spent Tk. 44.78 while for inpatient the average amount spent was Tk. 1560.43 (Table 4.1). Again, the largest proportion of total cost was spent on drugs for both in-and-out patients. According to the present survey, the cost of outpatient visits ranged from Tk 91 in the DH (Tk 35 in the UHC, Tk 11 in HFWC) to Tk 4 in the CC. By contrast, the cost of inpatient visits ranged from Tk 1991 in the DH to Tk 669 in the UHC.

It is worth noting here that on account of the way health care utilization has been aggregated in this study, these estimates may not be strictly comparable with other available estimates. For example, Ensor (2001) reports costs of outpatient visits ranging from Tk 66 (in UHC) to Tk 238 (in MCH), and the cost of inpatient treatment ranging from Tk 1957 (in UHC) to Tk 11,872 (in MCH). Ensor also reports that only 5 to 11 per cent of all treatment episodes in UHC and higher level facilities are inpatient admissions. By contrast, in the present survey 38 and 12 per cent of all treatment episodes in the DH and UHC, respectively are inpatient admissions.

The data in Table 4.1 shows that an overwhelming proportion of total cost was spent on drugs. However, there were some variations between in-and-outpatients in the proportion of total costs spent on other items. For example, an average outpatient spent 72 per cent