

CHAPTER 1



INTRODUCTION

1.1. Problem and Its Significance

Bangladesh Health and Family Planning Program has made a remarkable progress over the last two decades. Contraceptive prevalence rate has already reached about 50 % and the fertility rate has declined from 6.3 during 1971-75 to 3.3 during 1994-96, while population growth rate was 1.8 % in 1997. Maternal and Child Health (MCH) program showed some improvement in child survival since the early 1980s. Under five mortality was reduced from 133 deaths per 1000 birth in the period 1989-93 to 116 for the period 1992-96. The infant mortality rate has also reduced from 87 to 82 per 1,000 births over the same period.

Despite this progress, Bangladesh still remains as one of the few countries in which life expectancy at birth is lower for females than males. About 70 % of mothers suffer from nutritional deficiency and anemia. Less than 40 % of the population has access to basic health care, while the progress is satisfactory with respect to reduction in fertility and child mortality; it is poor with respect to maternal mortality and morbidity. The current estimated maternal deaths per 1000 live births are 4.5 in Bangladesh. It is not only among the highest in the world but also unacceptably high in comparison to other countries such as Sri Lanka, which has about 0.8 per 1000 live births. A comparative maternal mortality statistics of some developed and developing countries are given in Table 1.1. It can be seen from the table that women in many South Asian countries have highest maternal mortality ratio in 1990. Nepal was the most which was 830 per 100,000 live births, second was Bangladesh, third was Pakistan and India the fourth whereas it was less than 8 per 100,000 live births in many developed countries such as USA, UK and Switzerland.

Table1.1: Maternal Mortality Ratio in Some Selected Countries 1990

Country	Maternal Mortality (per 100,000 live birth)
India	460
Sri Lanka	80
Bangladesh	600
Nepal	830
Pakistan	500
Thailand	50
China	95
Japan	11
Singapore	10
UK	8
USA	8
Switzerland	5

Source: K. Park, The Textbook of Preventive Social Medicine, 1997

In Bangladesh every year about 4 million women becoming pregnant, there is an estimated 600,000 who develop complication and 28,000 maternal deaths occur each year due to five preventable causes like haemorrhage, sepsis, abortion, toxemia of pregnancy and obstructed labour. There are about 9 million women who have survived the rigours of pregnancy and child birth to suffer from lasting complications such as fistulae, prolapse, inability to control urination and painful intercourse (Ministry of Health and Family Welfare, 1998). It is said that for each maternal death, 15 other pregnancy is left behind with prolonged illness or life long disabilities. An efficient antenatal service by identifying the risk factors can facilitate the service providers to pay greater attention to high-risk mothers which in turn help in reducing maternal mortality and morbidity.

A well-designed and quality antenatal care program facilitates detection and treatment of problems during pregnancy, such as anemia and infections, and provides an opportunity to disseminate health message to women and their families. In addition the early contact with the health care system may encourage the timely and appropriate use of casual and emergency obstetric services. During pregnancy, proper medical attention and hygienic conditions during delivery can substantially reduce the risk of complications and infection that might cause death or serious illness of either mother or the new born baby.

Having that purpose the government of Bangladesh has made provision of antenatal care at Thana Health Complex (THC) and Health and Family Welfare Center (H&FWC) through Maternal and Child Health (MCH) program. Most of these are situated in rural area of Bangladesh.

Bangladesh Demographic and Health Survey (BDHS) 1996–97 indicates that, many mothers in Bangladesh do not receive antenatal care. For births that occurred about five years before the survey, nearly three-quarters (71 %) of mothers did not receive any antenatal care during pregnancy. Those who did receive, mostly received antenatal care from doctors (20 %), some from nurses, midwives, and family welfare

visitors (9 %). Less than 1 % of pregnant women received antenatal care from traditional birth attendants (TBAs).

The survey results show that there are sharp differences in antenatal coverage among subgroups in Bangladesh. Antenatal care is much more common among younger mothers than multipara. The urban-rural differential in the percentage of births for which the mother had at least one antenatal visit is quite large. About 58 % of urban births had received antenatal care from a medically trained person, compared with only 23 % of rural births. Antenatal care is common among mothers with lower birth order, mothers who live in urban areas and those with some secondary education. The level of antenatal care coverage in Bangladesh has remained virtually unchanged since the 1993–94 BDHS where 26 % of mother received antenatal care from a medically trained person.

In an attempt to identify whether ignorance is the key factor for the low utilization of antenatal care in Bangladesh, ever-married women interviewed in the 1996–97, whether they thought that women should have a medical check-up when they are pregnant, even if they are not sick. The vast majority (85 %) of women appeared to recognize that antenatal care was beneficial. Most of these reports imply that some factors perhaps costs and accessibility of services – accounts for the low antenatal care coverage. Poor quality of services and unequal resources distribution of public health services have led to limited and inequitable accessibility of ANC service. Other issues of concern are over all utilization of government services, as well as the cost-effectiveness, sustainability, and quality of services which were also raised at the mid-term Review of Fourth Population and Health Project (FPHP).

Antenatal care is a main part of safe motherhood, management of maternal and fetal symptomatic problem, screening and prevention of maternal problems. Therefore to increase the coverage of antenatal services at THC/H&FWC the factors that are associated with low utilization of ANC as well as the cost and effectiveness of antenatal care at different health centers under MCH-FP program must be explored.

1.2 Research Questions

This study tries to explore two main questions:

- 1). What are the costs and effectiveness for antenatal services at Thana Health Complex and Health & Family Welfare Center?
- 2). Which is more cost- effective for ANC coverage between Thana Health Complex and Health and Family Welfare Center?

1.3 Objectives of the Study

A. General Objective

The overall objective of this thesis to compare cost-effectiveness of antenatal care service under Maternal and Child Health program at Thana Health Complex and Health and Family Welfare Center from the provider perspectives.

B. Specific Objectives

1. To calculate the cost of antenatal care services at Thana Health Complex and Health and Family Welfare Center.
2. To find out the effectiveness of antenatal care in Thana Health Complex and Health and Family Welfare Center.
3. To compare the cost effectiveness of antenatal care services between Thana Health Complex and Health and Family Welfare Center.

1.4 Scope of the Study

This is a case study about cost and effectiveness analysis of antenatal care under Maternal and Child Health program of Fultala Thana Health Complex and Attra Gilatola Health and Family Welfare Center in Fhultola Thana. Fultala Thana was selected, because of this thana was high performance area for maternal and child health as well as family planning programs. In this study total cost for antenatal care were calculated from provider's perspective and effectiveness were measured in terms of normal delivery of pregnant women who received antenatal care from THC and H&FWC in 1998. Most of the cost components of antenatal care, number of pregnant women, number of antenatal visits and number of normal delivery were collected at study health center from January to December 1998. Data were collected from service records and cost-effectiveness in terms of normal delivery were also be analyzed and compared. Pregnant mothers who registered in THC and H&FWC during 1998 included in this study and who registered but received care after 1998 were not included in this study. This is a short-term retrospective study about the cost-effectiveness analysis of providing antenatal care at Thana level in Bangladesh. Thus, some of the information cannot be collected accurately for the analysis as it should be. Therefore some assumption are made for costing analysis in terms of output/outcome.

1.5 Possible Benefits

- a). This study seeks to help service providers make proper use of scarce resources to know the cost and output levels between two health service centers for antenatal care.
- b). By better understanding about cost of activities with regard to the effectiveness of the ANC service under Maternal and Child Health care provider that can improve the efficiency needed for best use of resources.

- c). Determination of cost-effectiveness of two level (THC and H&FWC) can help national policy makers to decide how to improve future policies for effective management of resource allocation, utilization and quality of care for ANC services.
- d). This study may be beneficial to identify which level is more cost effective for providing ANC services.
- e). Comparison of unit costs of ANC services between THC and H&FWC can help policy makers to make efficient strategy for providing ANC service and guide how to sustain the ANC program.
- f). It will also provide a baseline data regarding unit cost of providing ANC service.
- g). Above all this cost-effectiveness calculation can be used to formulate policies in terms of efficient production of ANC services.