

Situation of Maternal Health Care Services in Bangladesh

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Abstract: Improvement of the reproductive health status of women in the third world is being considered as one of the most important goals of human and social development. Bangladesh has achieved health gains over the last decade of the 20th century. However, equivalent program has not been realized in the area of maternal health. Despite the presence of an impressive establishment of the health infrastructure in the country to date the maternal health situation remains poor. Even through, the most maternal deaths are avoidable if adequate preventive observed are taken. Increasing the proportion of maternal health care services is being advocated as an important step in preventing maternal death.

Key words: Maternal health, antenatal care, health professional, delivery period, delivery assistance

INTRODUCTION

Maternal health refers to the health status of women during pregnancy. The state of maternal health can be characterized by numerous factors, such as mortality and morbidity rates, maternal nutrition status, as well as maternal health and indicators of maternal health related services availability and its usage. These indicators include: the levels of antenatal and postnatal care, Contraceptive Prevalence Rate (CPR), coverage of Tetanus Toxoid (TT) vaccination, proportion of deliveries conducted in health facilities by trained birth attendants, or proportion of unwanted pregnancies. In world, today about 5,29000 women die every year due pregnancy related complication and childbirth and that most of the death occur in developing countries (WHO, 2005). Most of maternal deaths are preventable pregnancy and childbirth is still the leading causes of death and disease in women of reproductive age in developing countries. During the past few decades there has been a growing recognition of the reproductive health issues for people, particularly women in third world countries. In developing countries, the lifetime risk of maternal death may be high as 1 in 7, compared to 1 in >5000 in many high income countries (WHO, 2000) and in Bangladesh, lifetime risk of dying from pregnancy and childbirth related causes in are 1 woman in 21, which compares to 1 woman in over 4,000 in industrialized countries (UNFPA, 2002), which are about 100 times higher than in the developed countries. Pregnancy related complication is one of the most prime women's health problems of the world's public health and its consequences are still the

leading causes of death, disease and disability among women of reproductive age in developing countries. It is more serious in the case of developing countries like Bangladesh. It is clear that a number of important social and health system issues underlie the poor maternal health situation in Bangladesh. Common causes of maternal deaths include postpartum hemorrhage, eclampsia and complications of abortion; obstructed labour and postpartum sepsis (Ahmed *et al.*, 1995). The low status of the girls and women, poverty, women's limited access to education, poor nutrition, lack of access of good quality health service and lack of financial means to pay for the health services are some of the contributing to high levels of maternal mortality and morbidity (Maimbolwa, 2004).

Maternal health situation appears to be very poor in Bangladesh. About 320 mothers die per 100000 due to pregnancy related complications every year. The obstacles, which lead to maternal deaths in Bangladesh do not relate only to deficiencies in health care; they are largely social, cultural and economic. Many of these factors are intertwined with gender inequality, reflected in women's lower status in the society. An estimated 60,000 women of reproductive age die every year in Bangladesh. Most of them are resulted from poor socio-economic conditions, high fertility and the disadvantaged status of women, the latter responsible for limited access of women to key resources such as food and health care (Fauveau and Blanchet, 1989). Bangladesh, with >1/3 of its population suffering from extreme poverty and a little <1/3 from extreme hunger is a signatory to the millennium development compact (Fukuda-Parr, 2003). Utilization of

basic health services in Bangladesh has remained poor even though, there has been increasing public and private expenditure on the provision of advanced health care. The low utilization seems to be due to low levels of household income, high illiteracy and ignorance and a host of traditional factors. On the other hand, despite substantial public investments in health infrastructure the supply of such services continues to be inadequate and of poor quality. In addition, several inefficiencies such as an over emphasis on secondary and tertiary hospital care, skewed distribution of health services favoring urban areas (Naylor *et al.*, 1999) and gender discrimination in access to health care are all pervasive (Shariff, 1999).

Over the last several decades maternal health care in Bangladesh has improved, but that condition is not satisfactory stage considerably compared to many other developing nations. However, for cultural and economic reasons, puerperal maternal health care has not received much attention when compared to the care provided during pregnancy. This may be attributed to the fact that although, the pregnant female is cared for, the attention is focused basically on the child, which the mother carries, rather than the mother. Therefore, when mother and child become two separate beings, the mother gets attention only when she develops symptoms of serious physical or psychological pathology. Even though such conditions could be fatal, many mothers manage to survive with lasting health consequences for the rest of their lives (Bhatia and Cleland, 1996). In the backdrop of the above mentioned, it is observed that the maternal health is alarming situation in Bangladesh.

The purpose of this study is to provide a database for maternal health care services in Bangladesh.

MATERIALS AND METHODS

This study is based on secondary data from the BDHS (1994, 1997, 2001, 2004). The study also used data from the BMMS (2001). We have performed univariate classification analysis in order to find the percentage of occurrences.

RESULTS AND DISCUSSION

Trends of antenatal care services: In this study, we examine the trends the use of antenatal care among ever-married who had at least one live birth preceding 5 years surveys (1993, 1996, 1999 and 2004) and 3 year survey (2001). Although, an exclusive focus on care during pregnancy has not been shown to direct impact on maternal mortality, antenatal care provides an important

entry point for women to the health care system. It presents an opportunity to access the future mother's overall condition, diagnose and recent infections, screen for anaemia and HIV/AIDS, enroll women in programmes to prevent transmission of HIV to infant and child and prevent low birth weight. Women who get antenatal care are also more likely to have skilled attendant prevent during childbirth. Women's use of antenatal care may give some indication of service coverage (Bulatao and Ross, 2000). Antenatal care is important to both mother and child health. It is also most effective, if the visits are started from early in pregnancy and continue at regular throughout the pregnancy. Table 1 shows the trends of percentage distribution of source of antenatal care by Health Professional (HP) and Non-Health Professional (NHP) persons. The survey in 1993, the percentage of receiving Antenatal Care (ANC) from anyone source is 27.5% respondents who had at least one live birth in 5 years preceding the survey. According to the recent survey (BDHS, 2004), the rate of receiving anyone ANC ranges between 46 and 61% in regional levels and the national (59.9%) level is also fall that same ranges. The percentage of receiving anyone ANC is increasing trends gradually for both national and regional levels. The percentage of receiving Antenatal Care (ANC) from qualified doctors has increased all over the country and also regional levels. In 1993, only 18.6% respondents (ever married women) received antenatal care from qualified doctors during their pregnancy period at national level and 25.7% respondents received their ANC from health professional persons at regional level. After one decade the rate of receiving antenatal care has increased from qualified doctors (31.4% in 2004) and the same result (48.8% in 2004) are observed in case of receiving ANC from health professional persons. The largest absolute increase of receiving antenatal care from qualified doctor are observed in both Khulna and Sylhet divisions (35.2%) are same and the lowest increase are observed in Rajshahi and Barisal divisions (25.9 and 27%, respectively). But in case of receiving any one antenatal care, the largest increases are observed in Khulna and Rajshahi divisions (61.4 and 59.1%, respectively). Therefore, we may conclude that the trends of receiving ANC from any one, qualified doctors and HP are significantly increased over time at both country level and regional levels.

Trends of health facilities use at delivery period: The high level of maternal mortality in developing countries has been attributed partly to the non-availability of services and partly to the poor utilization of these

Table 1: Percentage distribution of the respondent according to the source of antenatal care by national and regional levels

Regions	Years	Health professional			Non-health professional			Any one	No one
		Doctor	Nurse/midwife	Total HP	TBA	Other HW	Total Non HP		
Bangladesh	1993	18.6	7.0	25.7	0.3	1.4	1.7	27.5	72.5
	1996	19.6	6.8	26.4	0.2	2.0	2.2	28.6	71.5
	1999	23.7	9.6	33.3	0.4	3.2	3.6	36.9	63.1
	2001	27.9	11.2	40.9	0.4	5.1	5.5	46.4	53.6
	2004	31.4	17.4	48.8	0.2	6.7	6.9	59.9	41.1
Barisal	1993	18.3	7.9	26.2	0.0	1.3	2.1	28.6	72.5
	1996	19.2	7.2	26.4	0.3	1.8	3.2	27.5	71.4
	1999	25.2	8.6	33.8	0.4	2.8	8.8	36.9	63.1
	2001	18.0	4.1	22.1	0.1	8.7	7.3	30.4	69.0
	2004	27.0	12.5	39.5	0.2	7.1	0.8	46.8	53.2
Chittagong	1993	16.6	6.8	23.4	0.2	0.6	1.8	24.1	75.9
	1996	22.7	8.3	31.0	0.4	1.4	1.5	32.8	67.2
	1999	24.9	5.7	30.6	0.3	1.2	10.4	32.1	67.9
	2001	24.9	5.4	30.3	0.5	9.9	5.6	40.7	59.3
	2004	32.7	14.4	47.4	0.6	5.0	2.0	54.3	45.7
Dhaka	1993	25.3	7.5	32.8	0.5	1.5	1.5	34.7	65.3
	1996	21.1	5.0	26.1	0.0	1.5	3.2	27.7	72.3
	1999	25.0	7.5	32.5	0.2	3.0	21.1	35.8	64.2
	2001	25.9	4.2	30.1	0.2	20.9	7.5	51.3	48.7
	2004	32.9	15.7	48.6	0.1	7.4	2.5	56.1	43.9
Khulna	1993	17.6	7.9	25.5	0.2	2.3	3.1	28.0	72.0
	1996	20.1	7.0	27.1	0.4	2.7	4.8	30.2	69.8
	1999	27.7	16.0	43.7	0.3	4.5	24.7	48.4	51.6
	2001	27.3	4.3	31.6	0.1	24.6	4.9	56.2	43.8
	2004	35.2	19.6	54.8	0.3	4.6	2.4	61.4	38.6
Rajshahi	1993	13.3	5.9	19.2	0.3	2.1	3.3	21.6	78.4
	1996	14.2	8.6	23.8	0.2	3.1	5.2	27.1	72.9
	1999	20.0	13.5	33.5	0.1	5.1	15.5	39.4	60.6
	2001	17.7	9.4	27.1	0.1	15.4	7.6	42.5	57.5
	2004	25.9	25.2	51.1	0.1	7.5	2.5	59.1	40.9
Sylhet	1993	-	-	-	-	-	-	-	-
	1996	15.0	2.8	17.8	0.0	2.5	2.5	20.3	79.7
	1999	19.9	7.5	27.4	0.8	2.1	2.9	29.4	70.6
	2001	27.7	2.7	30.4	0.2	21.7	21.9	52.3	47.7
	2004	35.2	8.4	43.8	0.1	4.3	4.4	48.2	51.8

HP: Health Professional; HW: Health Worker; TBA: Traditional Birth Attended

services when they are available. The immediate medical causes of maternal deaths are similar for women all over the world for pregnancy complication such as postpartum hemorrhage, infection, toxemia, obstructed labour and septic abortions. Those pregnancy complications do not proper diagnostics for the lack of qualified health care services and the logistic problems of providing emergency obstetric care where and when it is needed (Figa-Talamanca, 1996). The trends of percentage distribution of the respondents to receive their health facility at child delivery period are shown in Table 2. The percentage of receiving health facility at delivery period is 3.8 in 1993. According to the recent survey (BDHS, 2004), the rate of receiving health facility at delivery period ranges between 6 and 16% in regional levels and the national (10%) level is also fall that same ranges. The percentage of receiving health facility is increasing trends gradually for both national and regional levels. According to the most recent surveys, the percentage of deliveries in health facilities is highest in Khulna (16%) and lowest in Barisal and Sylhet (6%). The

percentage of deliveries occurring in health facilities increased in Bangladesh over time, with the absolute increase of 6.2% point. In 1993, only 3.8% of delivery were took place with health facility, but according to the last BDHS (2004), about 10% mothers received health facility during their last delivery. The largest absolute increase is observed in Khulna (11.5% points) and the lowest absolute increase observed in Sylhet (4% points). However, the increases were less in three divisions such as Sylhet, Barisal and Chittagong than that of others three divisions. The increasing points of health facility during delivery are significant level in Dhaka, Rajshahi and Barisal. Although, the absolute rise in institutional deliveries in Bangladesh was small (5% points) this represented a relative increase of over 150% between 1993 and 2004.

Social factors such as low amenity score, primary and lower education, physical factors, as for example a long distance to the maternity hospital and obstetric factors as not having antenatal care and multi-parity were all are responsible for the increased risk of home delivery.

Table 2: Percentage distribution of the respondents according to place of delivery over time by national and regional levels

Regions	Years	Health facility*	Home
Bangladesh	1993	3.8	96.2
	1996	4.1	95.9
	1999	7.9	92.1
	2001	7.9	92.1
	2004	10.0	90.0
Barisal	1993	1.5	98.5
	1996	3.5	96.5
	1999	4.3	95.7
	2001	4.6	95.4
	2004	6.0	94.0
Chittagong	1993	2.0	98.0
	1996	2.5	97.5
	1999	6.2	93.8
	2001	7.5	92.5
	2004	7.0	93.0
Dhaka	1993	5.7	94.3
	1996	6.5	93.5
	1999	8.6	91.4
	2001	9.6	90.4
	2004	12.0	88.0
Khulna	1993	4.5	95.5
	1996	6.2	93.8
	1999	14.4	85.6
	2001	10.7	89.3
	2004	16.0	84.0
Rajshahi	1993	2.4	97.6
	1996	2.3	97.7
	1999	7.3	92.7
	2001	7.4	92.6
	2004	9.0	91.0
Sylhet	1993	-	-
	1996	2.0	98.0
	1999	6.3	93.7
	2001	4.6	95.2
	2004	6.0	94.0

*Respondents deliver their baby at government hospital, government health center, private hospital/centre/clinic and non-government health sectors etc.

Trends of delivery assistance: The majority of maternal deaths are due to unexpected complications. But birth attendants with skills to respond are present at only about half of deliveries. Health professional attendants for all births are the only way to ensure emergency obstetric care for all those with complications.

Table 3 shows trends of the percentage of deliveries that were attended by a health professional, by the type of attendants. The survey 1993, the percentage assistance during delivery by health professional persons is 9.5% respondents who had at least one live birth in 5 years preceding the survey. According to the recent survey (BDHS, 2004), the rate of assistance during delivery by health professional persons ranges between 10.3 and 16.5% in regional levels and the national (13.2%) level is also fall that same ranges. The percentage of assistance during delivery by health professional persons is increasing trends gradually for both national and regional levels. The lowest absolute increase of assistance during delivery by health professional personnel are observed in Dhaka division (3.2% point) and the largest absolute

Table 3: Percentage distribution of the respondents according to delivery attended by national and regional levels

Regions	Years	Health professional			Non-health professional		
		Doctors	Nurse/ Midwife	Total HP	TBA	Other HW	Total Non-HP
Bangladesh	1993	4.2	5.3	9.5	60.3	30.2	90.5
	1996	5.1	2.8	8.0	64.7	27.3	92.0
	1999	7.1	5.0	13.1	63.7	23.2	86.9
	2001	6.1	4.2	10.3	76.7	12.9	89.6
	2004	7.5	5.7	13.2	76.8	10.0	86.8
Barisal	1993	2.7	4.5	7.2	63.1	29.7	92.8
	1996	5.7	2.8	8.5	71.8	19.7	91.5
	1999	5.2	5.3	10.5	68.3	20.1	89.5
	2001	3.6	3.6	7.2	81.5	11.2	92.7
	2004	4.4	6.7	11.1	81.4	7.5	88.9
Chittagong	1993	2.3	5.9	8.2	72.6	19.2	91.8
	1996	2.9	4.9	7.8	75.4	16.8	92.2
	1999	5.8	6.0	11.8	74.1	14.1	88.2
	2001	6.3	4.3	7.6	81.4	8.1	89.5
	2004	6.4	5.1	11.5	82.9	5.6	88.5
Dhaka	1993	6.4	6.7	13.1	59.2	27.7	86.9
	1996	7.2	1.9	9.1	62.0	28.9	90.9
	1999	8.1	4.2	13.3	66.6	21.1	86.7
	2001	7.4	4.1	11.9	76.2	11.9	88.1
	2004	9.4	5.3	14.7	75.7	9.6	85.3
Khulna	1993	4.3	7.5	11.8	59.3	28.9	88.2
	1996	10.2	4.0	14.3	60.0	25.8	85.7
	1999	11.3	7.9	19.2	52.1	28.7	80.8
	2001	7.4	6.4	13.8	73.7	12.4	86.1
	2004	12.1	8.4	16.5	69.0	14.5	83.5
Rajshahi	1993	4.2	1.8	6.0	43.9	50.1	94.0
	1996	3.2	1.7	4.9	53.3	41.2	95.1
	1999	5.7	4.6	10.3	51.4	38.4	89.7
	2001	4.5	4.1	8.6	68.9	22.5	91.4
	2004	5.4	5.2	10.3	74.7	14.7	89.4
Sylhet	1993	-	-	-	-	-	-
	1996	3.6	1.6	5.2	70.5	24.3	94.8
	1999	6.5	2.8	9.3	71.8	19.1	90.7
	2001	4.8	2.9	7.7	81.0	11.3	92.3
	2004	5.4	5.7	11.1	76.5	12.4	88.9

HP: Health Professional; HW: Health Worker; TBA: Traditional Birth Attended

increase of assistance during delivery by health professional personnel are observed in Sylhet division (5.9% point). The increases of assistance during delivery by medically trained person are not statistically significant in Bangladesh and all administrative division. Only Dhaka division, this result is shown as significant from 1996-2004. The birth attendants by health professional person in Bangladesh exhibit a complex pattern. The same patterns are shown in all divisional regions. In 1996-97 periods, the rate of birth attendant by health professional person was decreased compared to the period of 1993 by 1.5% but in 1999-2000 survey, the result shows an increasing pattern of birth attendant by medically trained persons. Again according to BMMS (2001), we observed a decreasing pattern and further the recent BDHS (2004) exhibits that birth attendant by health professional person has been increased. But considering first and last survey, the small upward trend has occurred primarily because of a small increase in deliveries by qualified doctors, but overall, professional attendance at deliveries remains

extremely low. The increases of skills birth attendance are not significant except Chittagong. Chittagong division exhibits a medical model of delivery care by significant use of doctor, while use of nurse and midwife appears to have a complex model except Sylhet. In all division, delivery with a non-health professional attendant or no attendant has correspondingly decreased as professional attendance has increased considering the last and the recent BDHS (2004). However, there are a couple of interesting pattern regarding the use of trained and untrained Traditional Birth Attendant (TBAs). There has been a large relative increase in the use of TBAs alongside the smaller increase in professional attendance.

CONCLUSION AND RECOMMENDATIONS

Maternal health and health seeking behavior of mothers have a huge impact not only on the lives of women, but also on the lives of their children. Perhaps unsurprisingly therefore, there is a substantial body of health seeking behaviour work directed specifically at women. This typically highlights the difficulty women face in many developing countries where they rely on the male head of household to secure access to medical treatment, financially and practically (Manhart *et al.*, 2000; Rahman, 2000). To reduce maternal deaths dramatically, all women need access to high-quality delivery care with at least three key elements: skilled care at birth, emergency obstetric care in case of complications and a functioning referral system, which ensures access to emergency care if needed. Another key solution is helping women to avoid unwanted pregnancies and births. A systematic identification of the critical individual factors, which may facilitate or impede the effective use of maternal health care services may help us to identify those who may be particularly disadvantaged and hence provide information that policymakers can use to target services to those in greatest need. This will also enable health educators to design better intervention programs to ensure that the momentum that has been generated in improving maternal will not only be sustained for the long-term success of these strategies, but will also provide the basis for a more comprehensive primary health care system in the future. Trends of maternal health care over the last decade of the 20th century shows an increase antenatal care, delivery care in Bangladesh are analyzed here, although, the increase is not optimum level. In Bangladesh, the recent increase in professionally attended deliveries reflects a move towards professional delivery in a health facility; while professional delivery at home actually declined slightly between 1993 and 1997 (both these changes are significant).

Improvement in care of obstetric emergencies, strengthening of the health care system and improved coverage of skilled attendance at birth, require also long term planning to reduce the challenges of the problems of mortality and morbidity require (Liljestrand, 2000). Efforts should be taken to improve maternal health have that the double benefit of improving the outcome of the woman and ensuring the best possible start in life for the infant(s). Healthy babies start with healthy mothers and we know that maternal health can be improved with intervention. Interventions to improve client satisfaction with antenatal and delivery care have focused on increasing women's sense of control and morale during pregnancy and childbirth. It is hoped that the result of this study will improve policymakers' understanding of the determinants of maternal mortality and morbidity in the country and serve as an important tool for any possible intervention aimed at improving the low utilization of maternity care services in Bangladesh.

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