

Working Paper No. 155

**Determinants of Safe-delivery  
Practices in Rural Bangladesh:  
Evidence from the Bangladesh  
Demographic and Health  
Survey 1996-1997**

**Md. Mafizur Rahman  
Barkat-e-Khuda  
Md. Masud Reza**



**CENTRE**  
FOR HEALTH AND  
POPULATION RESEARCH

*Operations Research Project  
Health and Population Extension Division*

1999



## The Centre

The Centre is a unique global resource dedicated to the highest attainable level of scientific research concerning the problems of health, population and development from a multi-disciplinary perspective. The Centre is an exceptional position to conduct research within the socio-geographical environment of Bangladesh, where the problems of poverty, mortality from readily preventable or treatable causes, and rapid population growth are well-documented and similar to those in many other developing countries of the world. The Centre currently has over 200 researchers and medical staff from 10 countries participating in research activities. The Centre's staff also provide care at its hospital facilities in Dhaka and Matlab to more than 100,000 patients a year and community-based maternal/child health and family planning services for a population of 100,000 in the rural Matlab area of Bangladesh. In addition, the Centre works closely with the Government of Bangladesh in both urban and rural extension projects, which aim at improving the planning and implementation of reproductive and child health services.

The Centre is an independent, non-profit international organization, funded by donor governments, multilateral organizations and international private agencies, all of which share a concern for the health problems of developing countries. The Centre has a rich tradition of research on topics relating to diarrhoea, nutrition, maternal and child health, family planning and population problems. Recently, the Centre has become involved in the broader social, economic and environmental dimensions of health and development, particularly with respect to women's reproductive health, sexually transmitted diseases, and community involvement in rural and urban health care.

The Centre is governed by a distinguished multinational Board of Trustees. *The research activities of the Centre are undertaken by four scientific divisions:* Clinical Sciences Division, Public Health Sciences Division, Laboratory Science Division, and Health and Population Extension Division. Administrative functions are undertaken by Finance, Administration and Personnel offices within the Director's Division.

# **Determinants of Safe-delivery Practices in Rural Bangladesh: Evidence from the Bangladesh Demographic and Health Survey 1996-1997**

**Md. Mafizur Rahman  
Barkat-e-Khuda  
Md. Masud Reza**



**ICDDR,B: Centre for Health and Population Research  
Mohakhali, Dhaka 1212, Bangladesh**

**1999**

**ICDDR,B Working Paper No. 123**

**Edited by:** M. Shamsul Islam Khan

**Layout Design and Desktop Publishing:** Jatindra Nath Sarker  
Subash Chandra Saha

**ISBN 984-551-192-9**

**Operations Research Project Working Paper No. 155**  
**ICDDR,B Working Paper No. 123**

© 1999. ICDDR,B: Centre for Health and Population Research

**Published by:**

**ICDDR,B: Centre for Health and Population Research**

GPO Box 128, Dhaka 1000, Bangladesh

Telephone: (880-2) 871751-60 (10 lines); Cable: CHOLERA, Dhaka

Fax: 880-2-871568, 880-2-883116

URL: <http://www.icddrb.org> and <http://www.icddrb.org.sg>

---

**Printed by: Sheba Printing Press, Dhaka**

*d*

## Acknowledgements

The Operations Research Project (ORP) is a project of the ICDDR,B: Centre for Health and Population Research that works in collaboration with the Ministry of Health and Family Welfare of the Government of the People's Republic of Bangladesh, supported by the United States Agency for International Development (USAID).

This publication is funded by the USAID under the Co-operative Agreement No. 388-A-00-97-00032-00 with ICDDR,B: Centre for Health and Population Research. The Centre is supported by the following countries, donor agencies and others which share its concern for the health and population problems of developing countries:

- Aid agencies of governments of: Australia, Bangladesh, Belgium, Canada, European Union, Japan, Norway, Saudi Arabia, Sri Lanka, Sweden, Switzerland, the United Kingdom, and the United States of America;
- UN agencies: International Atomic Energy Agency (IAEA), UNAIDS, UNICEF, World Bank, and WHO;
- International organizations: CARE Bangladesh, International Centre for Research on Women (ICRW), International Development Research Centre (IDRC), Population Council, Swiss Red Cross;
- Foundations: Aga Khan Foundation, Ford Foundation, George Mason Foundation, Novartis Foundation, Rockefeller Foundation, and Thrasher Research Foundation;
- Medical research organizations: International Life Sciences Institute (ILSI), National Institutes of Health (NIH), New England Medical Center (NEMC), Northfield Laboratories, and Walter Reed Army Institute for Research-USA;
- Universities: Johns Hopkins University, Karolinska Institute, Loughborough University, London School of Hygiene and Tropical Medicine (LSHTM), University of Alabama at Birmingham, University of Goteborg, University of Maryland, University of Newcastle, University of Pennsylvania, and University of Virginia;
- Others: Abt. Associates Inc., ALICO Bangladesh, Arab Gulf Fund, American Express Bank, ANZ Grindlays Bank, British Geological Survey (BGS), Cairns Energy PLC, Cytos Pharmaceuticals LLC, Department of Defence-USA, Family Health International, Helen Keller International, Macro International Inc., National Vaccine Programme-USA, Occidental Bangladesh Ltd., Procter and Gamble, The Rand Corporation, Rhone Poulenc Rorer, Save the Children Fund-USA, Shell Bangladesh, UCB Osmotics Ltd., Urban Family Health Programme (UFHP), UNOCAL Bangladesh, and Wander A.G.

## Contents

	Page
<b>Abstract</b> .....	iii
<b>Introduction</b> .....	1
<b>Objective</b> .....	2
<b>Materials and Methods</b> .....	2
<i>Data source</i> .....	2
<i>Data analysis</i> .....	2
<i>Limitations</i> .....	2
<b>Results</b> .....	3
<i>Background characteristics</i> .....	3
<i>Delivery practices</i> .....	4
<i>Regression results</i> .....	5
<b>Discussion and Conclusion</b> .....	7
<b>References</b> .....	9
<b>Table 1.</b> Background characteristics of the respondents (n = 6,160) .....	3
<b>Table 2.</b> Logistic regression odds ratios: demographic, socioeconomic and programmatic factors associated with delivery assisted by medically trained persons .....	6
<b>Fig. 1.</b> Distribution of places where deliveries took place .....	4
<b>Fig. 2.</b> Distribution of deliveries by types of attendant .....	5

## Abstract

This paper investigates the selected demographic, socioeconomic, cultural and programmatic factors associated with safe-delivery practices in rural Bangladesh. The paper is based on the national-level data drawn from the Bangladesh Demographic and Health Survey 1996-1997 with a sample of 6,160 ever-married women of reproductive age who had at least one delivery before they were interviewed. In this analysis, *safe-delivery practices* refer to a delivery assisted by a medically trained person, such as doctor, nurse, paramedic and trained traditional birth attendant (TBA). Descriptive statistics and multivariate regression methods were employed in analyzing data.

The data show that almost all the deliveries (95%) took place at the homes of the women, and most of them (84%) were assisted by untrained TBAs, relatives, or neighbours in unsafe and unhygienic conditions. Only 16 percent of the deliveries were assisted by the medically trained persons, such as registered physicians, nurses, paramedics and trained TBAs.

Multivariate regression results show that the uneducated women are less likely to have safe-deliveries. Exposure to television is positively associated with safe-delivery practices. Conservatism and religious taboos are likely to affect the delivery practices, since Muslim women are less likely to have safe-delivery practices compared to non-muslim women. The results suggest the need for behaviour change communication activities to be undertaken to educate the community people, particularly the uneducated and conservative women, about the benefits of safe-delivery practices.

## Introduction

Maternal mortality rates are very high in developing countries, and exceed 1000/1,00,000 live-births in approximately 21 developing countries [1]. The situation in South Asia is more precarious, which accounts for about half of the global maternal deaths [2]. Despite some improvement, maternal mortality rate in Bangladesh is still very high (4.5 per 1,000 live-births), even by the standards of other developing countries [3, 4].

Delivery-related complication is one of the leading causes of maternal mortality in Bangladesh [5]. Result of a study conducted in rural Bangladesh showed that one-third of the women experienced delivery-related complications during their last delivery [6]. Result of another study showed that prolonged labour was the most common delivery-related complication, followed by haemorrhage and retained placenta [7].

The high rate of maternal mortality in Bangladesh can partially be reduced through safe-delivery practices among rural women. Safe delivery reduces the probability of mortality of mother and her baby [8]. Some studies have shown that the probability of survival of the baby declines with the death of a mother. On the other hand, when a baby dies, the mother soon gets pregnant. Such repeated pregnancy taxes the health of the mother and threatens both her life and that of the foetus [9].

In many developing countries, the safe-delivery facilities are grossly underused [10]. In Bangladesh, a vast infrastructure exists to provide maternal healthcare, including delivery services, to rural women under the national health and family planning programme. The government health centres, such as Thana Health Complexes (THCs) and Health and Family Welfare Centres (HFWCs) at the union level, provide maternal health care including delivery services free of charge to the rural population<sup>1</sup>. However, the use rates of delivery services of these health centres are very low [11]. Most deliveries take place at homes, and are assisted by untrained traditional birth attendants (UTBAs) and relatives [4]. The deliveries which take place at homes and are assisted by untrained birth attendants are very often done in unsafe and unhygienic conditions, resulting in high risk of maternal and neonatal morbidity and mortality [12,9].

---

<sup>1</sup> In Bangladesh, medical colleges, district hospitals and maternal and child welfare centres (MCWC) work as comprehensive EOC facilities; THCs as basic EOC facilities; while union HFWCs provide first aid EOC services. Besides, comprehensive EOC services are also available in several THCs under special projects.

## **Objective**

The objective of this paper was to investigate the selected demographic, socioeconomic, cultural and programmatic factors associated with safe-delivery practices in rural Bangladesh.

## **Materials and Methods**

### ***Data source***

This paper is based on the secondary analysis of the national-level data drawn from the Bangladesh Demographic and Health Survey 1996-1997. (For details about sample design, see Mitra et al., 1997 [4]). The sample for this analysis consisted of 6,160 ever-married women aged 10-49 years who had at least one delivery before the interview. (The women who did not have any delivery before the interview were excluded from the analysis).

### ***Data analysis***

Descriptive statistics and multivariate regression methods were employed in analyzing data.

In our analysis, *safe-delivery practices* refer to a delivery assisted by a medically trained person, such as doctor, nurse, paramedic, and trained TBA. To examine the effects of selected demographic, socioeconomic, cultural and programmatic factors on the safe-delivery practices of rural women, a logistic regression model was used. In this model, the dependent variable was: delivery assisted by a medically trained person during last delivery (dichotomous variable). The independent variables were: age, education, employment status, religion, prior visit to healthcare facilities, e.g. visit to satellite clinic, and ownership of TV.

### ***Limitations***

Besides the selected demographic, socioeconomic, cultural and programmatic factors which have been included in this analysis, a host of other programmatic e.g. accessibility, quality and costs of delivery services, etc. and cultural factors e.g. religiosity, prejudices, women's role in decision making process, subordinate status of women, etc. are also likely to influence the delivery practices of rural women. However, due to lack of relevant data, the effects of these programmatic and cultural factors on the delivery practices could not be examined in this paper. Also, the available data did not permit us to examine all aspects of the delivery practices.

## Results

### *Background characteristics*

The background characteristics of the samples considered for analysis are shown in Table 1. The table shows that three quarters of the women were aged less than 30 years, and about half of the women had 3 or more children. Over half of the women were uneducated. Only one-quarter had 5 years or more of schooling. Most of the women were housewives, but one-fifth of them worked for earning.

**Table 1.** Background characteristics of the respondents (n = 6,160)

Variable	% of women	Variable	% of women
<b>Age in years</b>		<b>Parity</b>	
< 20	15.7	0-2	52.0
20-24	31.0	3-4	31.4
25-29	28.7	5+	16.6
30-34	14.4	<b>Religion</b>	
35-40	6.8	Muslim	91.7
40+	3.3	Hindu	8.3
<b>Education</b>		<b>Ownership of</b>	
None	59.4	TV	9.5
1-4 years	15.2	Radio	29.6
5 years+	25.4	None	60.9
<b>Employment</b>		<b>Visit to SC</b>	
Housewife	80.4	Ever visit	55.3
Work for earning	19.6	Never visit	44.7

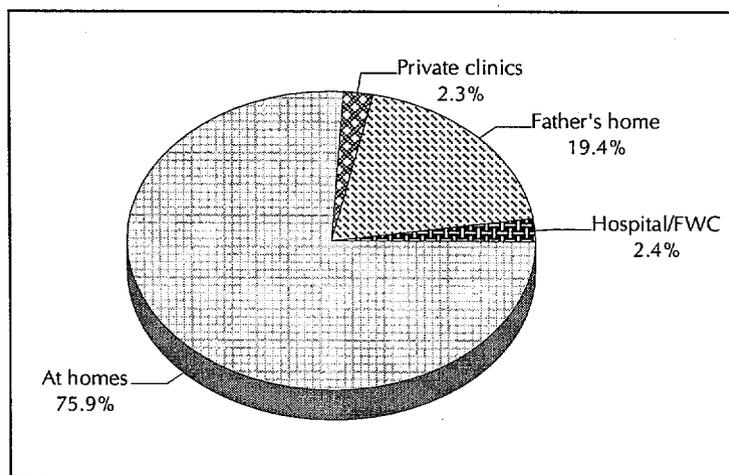
About one-third (29.6%) of the women reported that they owned a radio; however, only 9.5 percent reported to have owned a television.

Regarding prior exposure to the healthcare centre, over half (55.3%) of the women visited a satellite clinic (SC) before their last delivery.

### *Delivery practices*

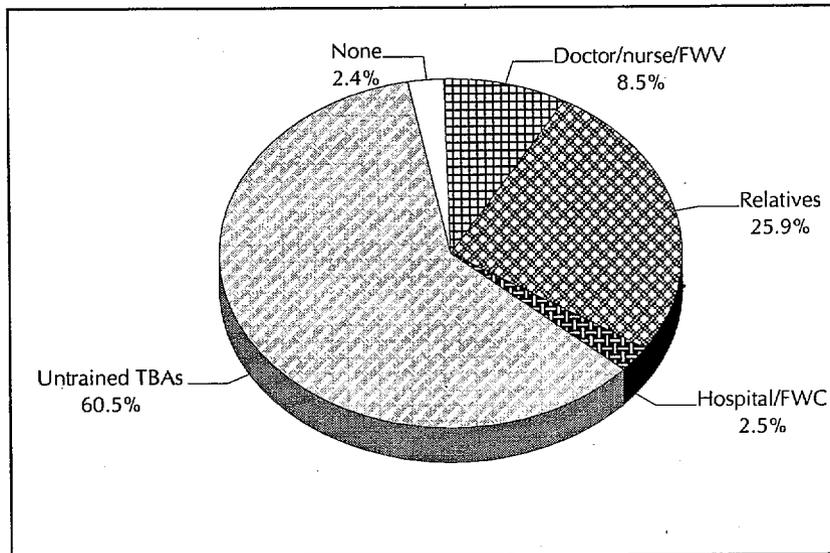
Almost all the deliveries (95%) took place at homes. Only 2.4 percent of the deliveries were conducted at the government healthcare facilities, such as hospitals, THCs and HFWCs. A similar percentage of the deliveries was also conducted at the private clinics. About three-quarters (75.9%) of the deliveries took place at the homes of the women; while one-fifth (19.4%) took place at their father's homes (Fig.1).

Fig. 1. Distribution of places where deliveries took place



Most deliveries were assisted by the untrained traditional birth attendants (TBAs) called *dais*, and relatives. Only eight percent of the deliveries were assisted by the doctors, nurses, and paramedics, while another eight percent by the trained traditional birth attendants (TTBAs) (Fig. 2).

Fig. 2. Distribution of deliveries by types of attendant



### *Regression results*

In rural Bangladesh, most deliveries take place at homes and are assisted by untrained TBAs, dais, relatives or neighbours generally in unsafe and unhygienic conditions. Only a small proportion (16%) of the deliveries is assisted by medically trained persons, such as doctors, nurses, paramedics, and trained TBAs. To investigate the selected demographic, socioeconomic, cultural and programmatic factors associated with delivery assisted by a medically trained person, a logistic regression analysis was done. In this analysis, the dependent variable was: delivery assisted by a medically trained person during last delivery (dichotomous variable). The independent variables included a number of selected demographic, socioeconomic, cultural and programmatic variables (see data analysis on page 2). The results of this analysis are presented in Table 2. It shows that the likelihood of delivery assisted by the medically trained persons increased with the increase of age up to 34 years, and then it declined in the same order. The 30-34-year age-group had the highest probability of having their deliveries assisted by medically trained persons.

As expected, the uneducated women were less likely to have their deliveries assisted by a medically trained person. The women with 5 or more years of schooling had 2.5 times higher probability of having their deliveries assisted by a medically trained person than the uneducated women.

**Table 2.** Logistic regression odds ratios: demographic, socioeconomic and programmatic factors associated with delivery assisted by medically trained persons

<b>Variable</b>	<b>Odds ratio</b>
<b>Age (in years)</b>	
< 20 (RC)†	1.00
20-24	1.28
25-29	1.32*
30-34	1.47**
35-39	1.16
40 years +	1.15
<b>Education</b>	
No education (RC)	1.00
1-4 years	1.68***
5 years +	3.53***
<b>Employment</b>	
Housewife (RC)	1.00
Work for earning	0.88
<b>Religion</b>	
Hindu (RC)	1.00
Muslim	0.52***
<b>Ownership of radio/TV</b>	
None (RC)	1.00
Radio	1.13
TV	4.77***
<b>Satellite Clinic visit</b>	
Never visited (RC)	1.00
Ever visited	0.92

†RC = Reference category; \*p<0.05; \*\* p<0.01; \*\*\* p<0.001.

Religion was significantly associated with the safe-delivery practices. The Hindu women had 50 percent higher probability of having their deliveries assisted by medically trained persons. There are two plausible explanations of this. The first one is that the Hindus are less conservative than the Muslims, which lead them to have their deliveries assisted by medically trained persons in a relatively higher proportion than the Muslims. The second explanation is that the Hindu women often come to health facilities to have their delivery not because they consider it safer, but to escape from rituals and difficulties arising out of their beliefs in "untouchable" state of parturient women. The Hindu common people consider it religiously binding to throw away or burn all the materials, dresses, clothes, mat, etc. used by and for the mother during delivery. This turns out to be expensive for poor families, and as such they go to a health facility for delivery. If the delivery is conducted at a health facility, they can save their clothes, dresses, mats/beds, etc., since these are provided by the health facility. However, we do not have any data to support either of the explanations.

Ownership of television (TV) was significantly associated with the safe-delivery practices. Those women who had TV had four times higher probability of having their deliveries assisted by a medically trained person. The possession of TV could be interpreted as a property indicator, and as such, the effects of exposure to TV could also be a function of high-economic status. However, due to lack of data on income or economic status, we could not examine the effects of economic status on safe-delivery practices.

## **Discussion and Conclusion**

For traditional and cultural reasons, many people in developing countries still prefer that births be attended by a TBA, rather than a medically trained person. As a result, delivery facilities, including comprehensive and basic EOC facilities, remain underused [10]. The findings of this analysis suggest a similar conclusion. Result of our analysis has shown that almost all the deliveries took place at homes, and 84 percent of these deliveries were assisted by the medically untrained persons, such as TBAs, relatives, or neighbours. The deliveries, which take place at homes and are assisted by medically untrained persons, are likely to be done in unsafe and unhygienic conditions, which often result in delivery-related complications leading to maternal and neonatal morbidity and mortality [12, 9].

To improve the delivery skills of the TBAs, the Government of Bangladesh undertook a huge training programme in 1980s. Under this programme, 68,000 TBAs, one from each village, have been trained on delivery and referral skills. The training was conducted for 21 days divided into three phases over a 3 months

period. Each of the trained TBAs was provided with a TBA kit containing necessary items to assist delivery in a hygienic condition [13]. However, the results indicate that these trained TBAs are grossly underused. The results of our analysis show that only 7.6 percent of the deliveries were assisted by the trained TBAs. This emphasizes the need for linking the trained TBAs with the health services systems to ensure maximum use of the services of the trained TBAs.

It appeared from our analysis that, like many developing countries, over half of the deliveries were assisted by the untrained TBAs. These untrained TBAs often play an important role in determining maternal and health outcomes by way of their practices and willingness to make referrals. Therefore, the untrained TBAs should also be given training to improve their delivery and referral skills and linked with the health services system.

Community is an important factor that affects safe-delivery practices in all settings. The regression results show that the uneducated women and the women aged less than 25 years or aged over 34 years are less likely to have their deliveries assisted by a medically trained person. This underscores the need for appropriate behaviour change communication (BCC) strategies to make the community people, particularly the uneducated women, and relatively younger or older women aware of the benefits of safe delivery by medically trained persons.

Religion is also significantly associated with the delivery practices. Muslim women are less likely to have their delivery assisted by medically trained persons probably because of their conservatism and religious taboos (which might be one of the plausible reasons). Appropriate BCC activities need to be undertaken to overcome conservatism and religious taboos against delivery.

Our study has shown that exposure to television was significantly associated with the safe-delivery practices. Due to lack of data on income or economic status, we could not measure precisely the effects of exposure to TV on the safe-delivery practices, controlling for economic status variables. (It might be a function of higher economic status, since possession of TV might be considered a property variable). However, it could be suggested that BCC activities through electronic media, such as television, should be intensified to reach the message of the benefits of safe-delivery practices to the community people.

Finally, there is a need for further investigation to examine the effects of some programmatic (e.g. accessibility, quality, and cost of delivery services) and cultural factors (e.g. religiosity, prejudices, women's role in the decision-making process, subordinate status of women, etc.) on the safe-delivery practices of the rural women.

## References

1. Maclean G. Safe motherhood: a basic right or a privilege of a few. *Modern midwives*, 1996; September 6(9).
2. World population data sheet, 1997. Washington, D.C. Population Reference Bureau, 1997.
3. World Health Organization. New estimates of maternal mortality. *Wkly Epidemiol Rec* 1991, Nov 22;66(47):345-8.
4. Mitra SN, Al-Sabir A, Cross AR, Jamil K. Bangladesh demographic and health survey 1996-1997. Dhaka and Calverton, Maryland: National Institute of Population Research and Training (NIPORT), Mitra and Associates, and Macro International Inc., 1997.
5. Ahmed S, Haque I, Barkat-e-Khuda, Hossain MB, Alam S. Abortion in rural Bangladesh: evidence from the MCH-FP Extension Project. Dhaka: MCH-FP Extension Project (Rural), International Centre for Diarrhoeal Disease Research, Bangladesh, 1996. (ICDDR,B working paper, 63; MCH-FP Extension Project (Rural) working paper, 121).
6. Rahman MM, Barkat-e-Khuda, Kane TT, Mozumder KA, Reza MM. Determinants of antenatal care-seeking behaviour in rural Bangladesh. Dhaka: MCH-FP Extension Project (Rural), International Centre for Diarrhoeal Disease Research, Bangladesh, 1997. (ICDDR,B working paper, 71; MCH-FP Extension Project (Rural) working paper, 126).
7. Ahmed S, Khanum PA, Islam A, Parveen SD, Sobhan F, Nessa F. Strengthening maternal and neonatal health: results from two rural areas of Bangladesh. Dhaka: MCH-FP Extension Project (Rural), International Centre for Diarrhoeal Disease Research, Bangladesh, 1997. (ICDDR,B working paper, 86; MCH-FP Extension Project (Rural) working paper, 137).
8. Ekwempu CC. The influence of antenatal care on pregnancy outcome. *Trop Obstet Gynaecol* 1988;1:667-71.
9. Chowdhury M. Safe delivery program in Bangladesh: the role of TBAs. *Health for the Millions*, 1996; Jan-Feb 22(1).

10. Hanson L, McKenzie S. Proceedings of the safe motherhood Asia 1997 workshop in rural areas of Bangladesh. International Centre for Diarrhoeal Disease Research, a ten-country consultation workshop on lessons learnt, held on April 6-11, 1997 in Ujung Pandang, Indonesia. 1997.
11. Juncker T. Clientele and topics of services at the family welfare centers and satellite clinics Bangladesh, 1994. MCH-FP Extension Project (Rural), working paper, 109 [unpublished].
12. Nandan D, Mitra SK. Delivery practices in West Uttar Pradesh. *Indian J Public Health*, 1996; Jan-Mar 40(1):20-1.
13. Nessa, S. Implementation and strategy in government sector TBA training program. *In Touch*, 1989; Mar 13(2).

## MCH-FP Extension Work at the Centre

An important lesson learned from the Matlab MCH-FP project is that a high CPR is attainable in a poor socioeconomic setting. In 1982, the MCH-FP Extension Project (Rural) with funding from USAID began to examine in rural areas how elements of the Matlab programme could be transferred to Bangladesh's national family planning programme. In its first year, the Extension Project set out to replicate workplans, and record-keeping and supervision systems, within the resource constraints of the government programme.

During 1986-89, the Centre helped the national programme to plan and implement recruitment and training, and ensure the integrity of the hiring process for an effective expansion of the work force of governmental Family Welfare Assistants.

Other successful programme strategies scaled up or in the process of being scaled up to the national programme include doorstep delivery of injectable contraceptives, management action to improve quality of care, management information systems, and strategies to deal with problems encountered in collaborative work with local area family planning officials. In 1994, this project started family planning initiatives in Chittagong, the lowest performing division in the country.

The Centre and USAID, in consultation with the government through the Project's National Steering Committees, concluded an agreement for new rural and urban Extension Projects for the period 1993-97. Salient features include: improving management, quality of care and sustainability of the MCH-FP programmes, and providing technical assistance to GoB and NGO partners. In 1994, the Centre began an MCH-FP Extension Project (Urban) in Dhaka (based on its decade long experience in urban health) to provide a coordinated, cost-effective and replicable system of delivering MCH-FP services for Dhaka urban population. This important event marked an expansion of the Centre's capacity to test interventions in both urban and rural settings. The urban and rural extension projects have both generated a wealth of research data and published papers in international scientific journals.

In August 1997 the Centre established the Operations Research Project (ORP) by merging the two former MCH-FP Extension Projects. The ORP research agenda is focussed on increasing the availability and use of the high impact services included in the national Essential Services Package (ESP). In this context, ORP has begun to work with partners in government and NGOs on interventions seeking to increase coverage in low performing areas and among underserved groups, improve quality, strengthen support systems, enhance financial sustainability and involve the commercial sector.

ORP has also established appropriate linkages with service delivery partners to ensure that research findings are promptly used to assist policy formulation and improve programme performance.

## The Division

The Health and Population Extension Division (HPED) has the primary mandate to conduct operations research, to disseminate research findings to program managers and policy makers and to provide technical assistance to GoB and NGOs in the process of scaling-up research findings to strengthen the national health and family planning programmes.

The Division has a long history of solid accomplishments in applied research which focuses on the application of simple, effective, appropriate and accessible health and family planning technologies to improve the health and well-being of underserved and population-in-need. There are various projects in the Division which specialize in operations research in health, family planning, environmental health and epidemic control measures. These cut across several Divisions and disciplines in the Centre. The Operation Research Project (ORP) is the result of merging the former MCH-FP Extension Project (Rural) and MCH-FP Extension Project (Urban). These projects built up a considerable body of research and constituted the established operations research element for child and reproductive health in the Centre. Together with the Environmental Health and Epidemic Control Programmes, the ORP provides the Division with a strong group of diverse expertise and disciplines to significantly consolidate and expand its operations research activities. There are several distinctive characteristics of these endeavors in relation to health services and policy research.

For one, the public health research activities of these Projects are focused on improving programme performance which has policy implications at the national level and lessons for the international audience also. Secondly, these Projects incorporate the full cycle of conducting applied programmatic and policy relevant research in actual GoB and NGO service delivery infrastructure, dissemination of research findings to the highest levels of policy makers as well as recipients of the services at the community level; application of research findings to improve program performance through systematic provision of technical assistance; and scaling-up of applicable findings from pilot phase to the national program at Thana, Ward, District and Zonal levels both in the urban and rural settings.

---



**CENTRE**  
FOR HEALTH AND  
POPULATION RESEARCH

### *Operations Research Project*

Health and Population Extension Division

ICDDR,B: Centre for Health and Population Research

GPO Box 128, Dhaka 1000, Bangladesh

Telephone: (880-2) 871751-60 (10 lines); Fax: (880-2) 871568 and 883116

URL: <http://www.icddrb.org> and <http://www.icddrb.org.sg>