

*Operations Research Project
Health and Population Extension Division*

Special Publication

Manual for the Use of Pictorial Card and Pregnant Women Register for Emergency Obstetric Care

Parveen A Khanum
Shameem Ahmed
Setara Rahman
Sadia D Parveen



CENTRE
FOR HEALTH AND
POPULATION RESEARCH

1998



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 multidisciplinary perspective. The Centre is in 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, Community Health Division, Laboratory Science Division, and Health and Population Extension Division. Administrative functions are undertaken by two divisions, namely Finance and Administration and Personnel.

Manual for the Use of Pictorial Card and Pregnant Women Register for Emergency Obstetric Care

**Parveen A Khanum
Shameem Ahmed
Setara Rahman
Sadia D Parveen**



**International Centre for Diarrhoeal Disease Research, Bangladesh
Mohakhali, Dhaka-1212, Bangladesh**

1998

ICDDR,B Special Publication No. 71

Editing: M. Shamsul Islam Khan

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

ISBN: 984-551-141-4

ICDDR,B Special Publication No. 71

©1998. International Centre for Diarrhoeal Disease Research, Bangladesh

Published by:

International Centre for Diarrhoeal Disease Research, Bangladesh

GPO Box 128, Dhaka-1000, Bangladesh

Telephone: 880-2-871751 (10 lines); Cable: CHOLERA, DHAKA; Telex: 675612 ICDD BJ

Fax: 880-2-871568, 880-2-883116 and 880-2-886050

Printed by: Impression Printing House, Dhaka.

Acknowledgements

The Operations Research Project (ORP) is a collaborative effort of the International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR,B) and the Ministry of Health and Family Welfare (MOHFW) 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 Cooperative Agreement No. 388-A-00-97-00032-00 with the ICDDR,B. ICDDR,B is supported by the aid agencies of the governments of Australia, Bangladesh, Belgium, Canada, Japan, the Netherlands, Norway, Saudi Arabia, Sri Lanka, Sweden, Switzerland, the United Kingdom, and the United States; international organizations, including Arab Gulf Fund, European Union, the United Nations Children's Fund (UNICEF), the United Nations Development Programme (UNDP), and the World Health Organization (WHO); private foundations, including Aga Khan Foundation, Child Health Foundation (CHF), Ford Foundation, Population Council, Rockefeller Foundation, Thrasher Research Foundation and the George Mason Foundation; and private organizations, including East West Center, Helen Keller International, International Atomic Energy Agency, International Centre for Research on Women, International Development Research Centre, International Life Sciences Institute, Karolinska Institute, London School of Hygiene and Tropical Medicine, Lederle Praxis, National Institute of Health (NIH), New England Medical Centre, Procter & Gamble, RAND Corporation, Social Development Center of Philippines, Swiss Red Cross, the Johns Hopkins University, the University of Alabama at Birmingham, the University of Iowa, University of Goteborg, UCB Osmotics Ltd., Wander A.G., and others.

The authors are grateful to Dr. Jafar Ahmad Hakim, Project Director (Clinical Services), Directorate of Family Planning, Dr. Fakir Anjuman Ara, Senior Training Physician, Training & Education Department, ICDDR,B, and Dr. Momena Khatun, Deputy Director (MCH), Directorate of Family Planning for reviewing this document and giving their valuable inputs. Special thanks goes to Prof. Barkat-e-Khuda, Project Director, Operations Research Project of ICDDR,B for his continuous encouragement and support to complete this manual.

Table of Contents

	Page
Summary	iv
1. Introduction	1
1.1. Why Referral is Important	1
1.2. The Existing Service-delivery System	2
1.3. Role of Referral and Linkages in EOC	2
1.4. Purpose of the Manual	2
2. Strategies to Improve Referral and Linkages for EOC ..	3
2.1. The Pictorial Card	3
2.1.1. Distribution of the pictorial card	5
2.1.2. Symptoms of complications shown in the pictorial card	5
2.1.3. Explaining the pictorial card	6
<i>Bleeding during pregnancy</i>	4
<i>Swelling of feet or face and/or severe</i> <i>headache/blurring of vision or convulsion</i>	6
<i>Fever during pregnancy and after delivery</i>	7
<i>Premature rupture of the membranes</i>	8
<i>Prolonged labour</i>	8
<i>Excessive bleeding during or after delivery</i>	9
<i>Prolapse/presentation of any foetal part other than the head</i> ..	10
3. Record Keeping for EOC	13
3.1. Rationale for the Register	16
3.2. The Pregnant Women Register	16
3.3. How to Fill up the Pregnant Women Register	17
<i>Instructions for the FWA and FWV</i>	21
4. Tasks of the FWA regarding Maternal Health	16
References	23
Appendix-1	24
Appendix-2	25

Tables and Figures

	Page
Table 1. Pregnant Women Register (For FWA/Fieldworker)	14
Table 2. Pregnant Women Register (For FWV/Paramedic)	15
Fig. 1. Pictorial Card	4
Fig. 1a. Bleeding during pregnancy	6
Fig. 1b. Swelling of legs, severe headache, blurring of vision or convulsion during pregnancy	7
Fig. 1c. Fever for more than 3 days during pregnancy or in the post-natal period	8
Fig. 1d. Premature rupture of membranes	8
Fig. 1e. Labour pain for more than one day or one night	9
Fig. 1f. Excessive bleeding during and after delivery or retention of placenta	9
Fig. 2. Abnormal presentations of the foetus during delivery . . .	10
Fig. 3. Thana Health Complex/Hospital	11

Summary

Maternal mortality ratio in Bangladesh at 4.5 per 1,000 live births is one of the highest in the world. Although Bangladesh has an extensive health and family planning service-delivery network starting from the community to higher levels, their utilisation is limited. Referral and linkages for emergency obstetric care (EOC) services is poor and most women with obstetric complications do not get the care they need in time. They either die at home or on the way to hospital. Many women are not aware of the complications that may occur during pregnancy and childbirth. Recognition of pregnancy and childbirth complications and timely referral for appropriate care are important for the reduction of maternal mortality and morbidity. Raising community awareness about obstetric complications is, therefore, essential for preventing maternal deaths. The Operations Research Project (ORP) of the ICDDR,B introduced a pictorial card in the Project field areas. This pictorial card is being used as a tool for raising community awareness regarding the complications of pregnancy and childbirth. It shows pictures of the symptoms of complications like bleeding during pregnancy, swelling of feet and face, severe headache, fever, premature rupture of membranes, prolonged labour, excessive bleeding and abnormal presentation of the foetus. A pregnant women register has also been developed by the Project for record-keeping and better follow-up of pregnant women.

This manual has been prepared to facilitate the use of the pictorial card and the pregnant women register by the field workers and paramedics for referral and linkage for EOC services. The manual can also be used by community mobilizers/depot holders and community volunteers. All pregnant women will be given a pictorial card either by the field worker or the community mobilizer or the paramedic. They will explain the symptoms of the complications of pregnancy and childbirth to the mothers as shown in the card. It is also expected that the card will be explained to the pregnant woman in presence of the husband and/or relatives. This manual will also enable the field workers and paramedics on record-keeping and linking pregnant women to different health service providers/facilities.

A detailed guideline on how to explain the pictorial card to pregnant women and maintain records on demographic information, and the current pregnancy have been presented in this manual.

This manual will help providers in using the pictorial card and the pregnant women register to raise community awareness about the danger signs of obstetric complications so that women will seek appropriate care leading to improved maternal health.

1. Introduction

Over half a million women die each year of maternity-related problems, and 99 percent of these deaths occur in the developing world [1]. In Bangladesh, maternal mortality is 4.5 per thousand live-births, and about 28,000 maternal deaths occur each year [2]. Haemorrhage, eclampsia, sepsis, obstructed labour, and abortion-related complications are the five major causes of maternal mortality in Bangladesh [3-5].

1.1. Why Referral is Important

The results of research show that: a) all pregnant women are at risk of developing serious complications, and b) maternal mortality cannot be substantially reduced unless women have access to emergency obstetric care (EOC). Despite the existence of a well-established service-delivery infrastructure, referral and linkages for EOC services in the country are poor. Women are not aware of the complications that may occur during pregnancy and childbirth. Even if they are, they do not know where to go for help. Most women with obstetric complications do not get the care they need in time and die at home or on the way to hospital due to **three types of delays**:

First, **delay in seeking care** which results from lack of, or delayed decision to seek care. Decision to seek care is again influenced by the perceived severity of the problem. In Bangladesh, most women and their relatives do not understand the severity of the complications that may occur during pregnancy and childbirth. As a result, the women either do not get to the facility, or reach there too late.

Second, **delay in reaching a health facility**, where adequate care is available, is due to distance, absence of transportation, or lack of preparation for emergencies.

Third, **delay in starting treatment at the facility**, is due to the non-availability of trained personnel, medicine, and equipment [6].

Maternal mortality can only be reduced when adequate care is available and used. Early detection of pregnancy and childbirth-related complications at the village or community level, and timely referral for appropriate care are important for the reduction of morbidity and mortality of women and neonates. Again, advice on referral may not be followed if the woman and her husband are not convinced of its importance, or if the complications are not recognized by them on time.

All members of the community should, therefore, be involved in becoming aware of the danger signs, making timely decisions, and taking action for referral. In addition, EOC services must be made available to all pregnant women with complications at the referred facilities.

1.2. The Existing Service-delivery System

Bangladesh has a well-established health service infrastructure, starting from the community to the district and above. At the community level, the Family Welfare Assistant (FWA) provides preventive services, i.e. they provide advice on maternal nutrition, antenatal care, safe delivery, breastfeeding, family planning, child care, etc. The Family Welfare Visitor (FWV) is the paramedic at the union level. She works at the Health and Family Welfare Centre (H&FWC) and the Satellite Clinic (SC). She provides curative and preventive health care to mother and child, and also gives family planning services. The Thana Health Complex (THC) is the first referral centre where basic EOC services are provided, while the Maternal and Child Welfare Centres (MCWCs) and district hospitals are responsible for providing maternal and child health and family planning (MCH-FP) services and for back-up support. However, in spite of the availability of these services, their use is still poor [7].

1.3. Role of Referral and Linkages in EOC

Maternity services in Bangladesh are delivered from different tiers of health service delivery by different cadres of service providers. For effective use of the EOC services, timely referral of patients to the appropriate higher level and maintaining linkages between different tiers of the health system are essential. Review of the existing referral and linkage facilities in the health system reveals that referral and functional linkages between the different levels of maternity services are weak [7]. In addition, women are often not aware of, and do not know, when and where to go for obstetric complications. So, raising community awareness and strengthening the linkages between different tiers of service delivery are important.

1.4. Purpose of the Manual

This manual has been prepared to facilitate the use of the Pictorial Card and the use of Pregnant Women Register by the field workers and

paramedics for referral and linkage for EOC services. In the government system the field worker is the FWA and the paramedic is the FWV. It is expected that the manual will enable the FWAs to explain to mothers, and their relatives and the community at large the danger signs of pregnancy and childbirth; it will also help motivate mothers to receive antenatal care (ANC), and seek help in case of complications. The details on record keeping, in the Pregnant Women Register, will enable the FWAs and the FWVs to use this tool as a means of linking the pregnant women to different health service providers/facilities.

This manual can also be used by community mobilizers/depot holders and community volunteers for the use of the Pictorial Card.

2. Strategies to Improve Referral and Linkages for EOC

Referral and linkage also includes raising community awareness about obstetric complications so that women can reach the appropriate facility on time. It also should ensure adequate services at the referral facilities.

Raising community awareness of obstetric complications is essential for preventing maternal deaths due to these complications. Therefore, mothers and family members, as well as the community, should be able to recognize the danger signs of complications of pregnancy and childbirth, should know when and where to seek care, and also be willing to do so. In addition, family members involved in the decision-making process should be oriented to take the right decision for the woman with complications.

2.1. The Pictorial Card

The pictorial card is an important tool for raising community awareness of the complications of pregnancy and childbirth. The **pictorial card** (Fig. 1) shows pictures of the symptoms of the common complications, i.e. bleeding during pregnancy, swelling of feet and face, severe headache, fever, premature rupture of the membranes, prolonged labour, excessive bleeding, and abnormal presentations of the foetus. This card should be introduced among all pregnant women and their family members.

Union:
Unit:

Sl. No.
Date:



Complications during pregnancy and childbirth

If any of the symptoms shown in the following pictures occur, please go to the nearest hospital immediately.

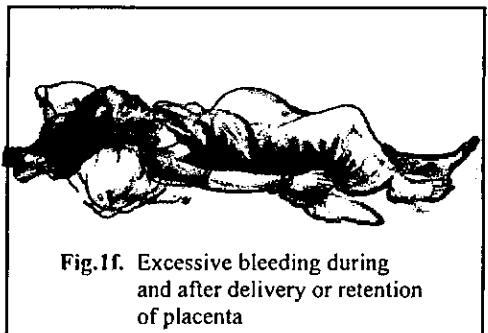
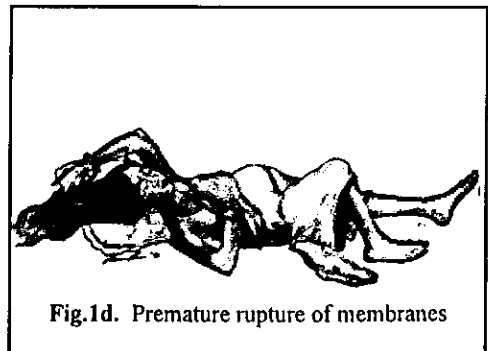
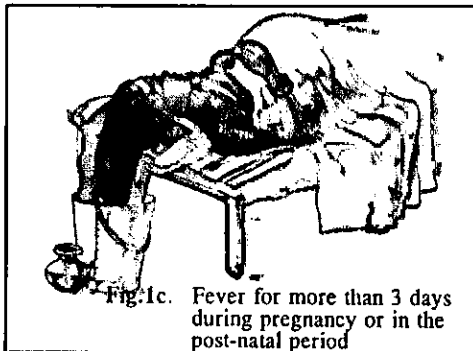
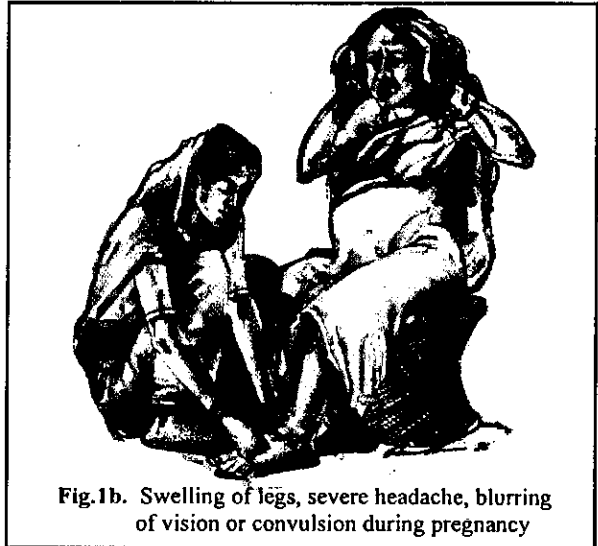


Fig. 1. Pictorial Card

2.1.1. Distribution of the pictorial card

The FWA, a female field worker, visits all married women of reproductive age in a defined area, comprising about 800 target women, once in two months. Each pregnant woman, when identified by the FWA during her routine home visits, can be given a pictorial card. The FWA explains the symptoms of complications of pregnancy and childbirth to the mothers, as shown in the card. It is expected that she will explain the card in presence of the husband and/or relatives of the woman, tell them about the consequences of complications and advise them to take her to the nearest facility immediately, should any complication(s) arise.

The pregnant woman should be given a pictorial card by the FWV at the H&FWC or SC if she has not already received one from the FWA. This card can also be given to mothers from cluster points or any other health facility by any type of worker.

2.1.2. Symptoms of complications shown in the pictorial card

a. During pregnancy:

- bleeding
- swollen feet or face, and/or severe headache/blurring of vision or convulsion
- high fever for more than three days
- premature rupture of the membranes

b. During delivery:

- labour pain lasting longer than a day or night
- excessive bleeding during delivery
- prolapse/presentation of any foetal part other than head

c. After delivery (within 42 days):

- delay in delivery of the placenta
- excessive vaginal bleeding
- high fever for more than three days

2.1.3. Explaining the pictorial card

The following gives a detailed description of what the field worker will explain to the pregnant woman when giving her the card. This should ideally be done in presence of the mother-in-law, husband, and other relatives in the house.

Bleeding during pregnancy

The first picture on the card shows **bleeding during pregnancy** (Fig. 1a). Show this to the pregnant woman, and ask her what she understands after seeing the picture. Then advise her to seek care immediately if it occurs, and explain it to her in the following manner:

Normally, a woman does not bleed during pregnancy, but can occur at any time during pregnancy, which is a sign of impending danger, both for the mother and foetus. Bleeding may be due to abortion, and can even lead to death. Thus, if the pregnant woman finds that she is bleeding even just a little, like spotting, and if this bleeding does not even necessitate the use of any cloth/sanitary pad, **she still must immediately go to the nearest FWV**. If a woman bleeds excessively with or without associated pain, and needs to use cloth/sanitary pad, **she should be taken to the nearest hospital/THC** without any delay. Convey this message to the mother-in-law, husband, and other relatives in the household, if possible.



Swelling of feet or face and/or severe headache/blurring of vision or convulsion

The second picture shows the symptoms of **pre-eclamptic toxæmia** (Fig. 1b). Show this to the mother, and ask her what she understands. Tell her that during pregnancy:

Some physiological changes occur in a woman's body that may result in little swelling of the feet. Demonstrate how to determine oedema: press your thumb on the bony part of your leg, just above the ankle joint,

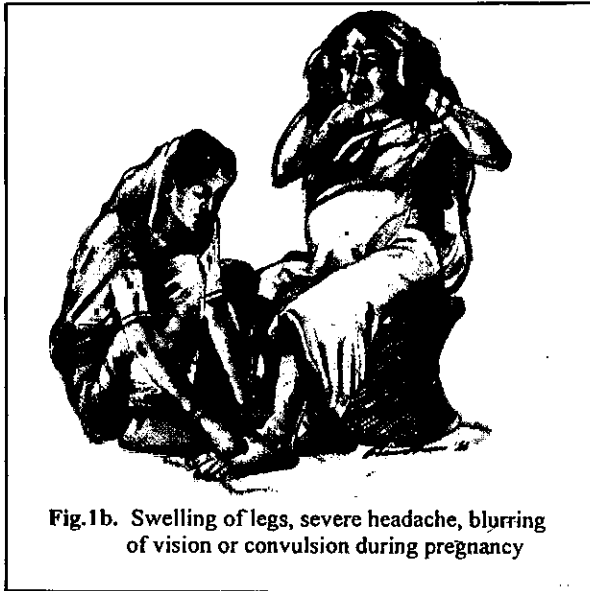


Fig. 1b. Swelling of legs, severe headache, blurring of vision or convulsion during pregnancy

keep it there for a few seconds while counting from 1 to 30 in your mind, and show the depressed skin to the pregnant woman. Tell her that if the depression disappears immediately it is normal, if it does not, she has oedema, which is a danger sign; **she must then go to the FWV, either at the H&FWC or the SC.**

She should also go to the FWV, if she has headache, dizziness, and/or blurring of vision, since these symptoms may cause

convulsion and premature labour, or the baby may die in the uterus. If the headache is severe and there is also blurring of vision, or if she develops convulsion, **she must immediately be taken to the hospital/THC.**

The symptoms mentioned above are not normal during pregnancy. Therefore, it should be emphasized that the mother should take proper care of herself, and she should also be advised to take rest, visit the FWV regularly, take no extra salt in her food, and take a diet rich in protein, like lentil, and also fish, eggs and milk, if possible.

Fever during pregnancy and after delivery

The third picture shows a **pregnant woman with fever** (Fig. 1c). Show the picture to the pregnant woman, and assess what she understands. Explain to her that:

Fever is a common illness and can occur any time during pregnancy. However, if the fever continues for more than three consecutive days, it may be the cause of other complications which may ultimately lead to foetal loss.

Fever may also be an indication of infection. So, the pregnant woman should be advised to **go to the FWV** for check-up, if she suffers from fever for more than three consecutive days or get medical help at home.

Inform the pregnant woman that fever may also occur within 42 days after delivery as well due to genital, urinary tract, breast, or chest infection. Thus, she should **be taken to the H&FWC or THC (nearest facilities)**, if she suffers from any fever. Also advise her to take plenty of water during fever.

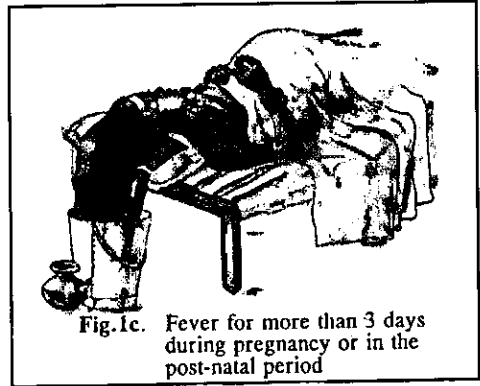


Fig.1c. Fever for more than 3 days during pregnancy or in the post-natal period

Premature rupture of the membranes

The picture shows the symptom of **premature rupture of the membranes** (Fig. 1d). Ask the pregnant woman whether she understands this, and then explain the picture. Tell her that:

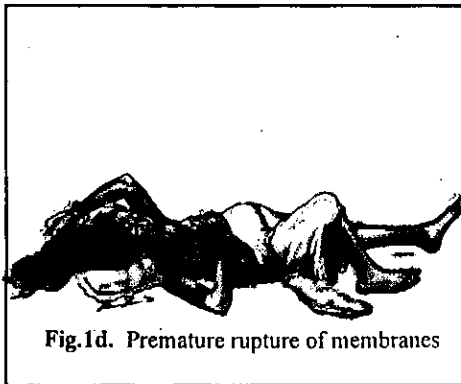


Fig.1d. Premature rupture of membranes

The membranes usually rupture at the time of delivery. However, rupture may occur at any time during pregnancy. Inform her that, in case of premature rupture of the membranes, there is a continuous loss of amniotic fluid from the uterus, and labour becomes prolonged and difficult, requiring surgical intervention. Without help from medically trained personnel, mother and/or the baby's life will

be at risk. That is why the mother **must go to the THC** for immediate care. In addition, there is a chance of premature delivery, infection of the uterus, and cord prolapse. Finally, emphasize that she should **be taken to the hospital/THC** without any delay, if there is rupture.

Prolonged labour

Show the picture (Fig. 1e) in the card with a pregnant woman sitting in a propped-up position and an elderly woman trying to comfort her. Ask the

mother what she understands from this picture. Explain to her that:

If labour is prolonged for 12 hours or more, i.e. one whole day and/or whole night in case of multi gravida and a six more hours, i.e. 18 hours or more in case of primi gravida, she should **be taken to the THC** for delivery. Inform the mother that any delay in seeking care for prolonged labour may cause severe complications, or even death of the mother, or the foetus. The mother



Fig.1e. Labour pain for more than one day or one night

may start bleeding profusely after delivery, or the baby may develop lack of oxygen in his/her blood and may ultimately die. Explain the picture and its significance, and ask her not to delay, if she has prolonged labour. Stress that she should **go directly to the THC**.

Excessive bleeding during or after delivery

The last picture shows **a woman during delivery who is bleeding profusely** (Fig. 1f). Ask the mother whether she understands this, and explain the picture. Tell her to go to the hospital/THC, if bleeding occurs any time during or after delivery. Explain to her the following:

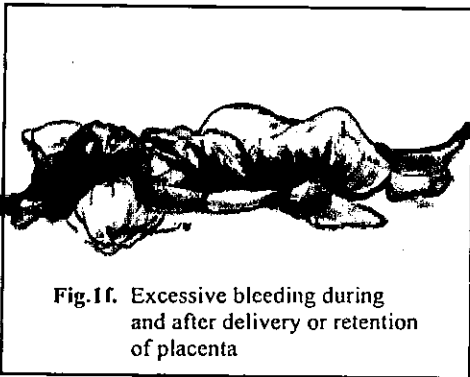


Fig.1f. Excessive bleeding during and after delivery or retention of placenta

Women normally bleed after delivery. If a woman in labour starts bleeding **excessively**, it is a sign of danger. In this case, she **must be taken to the hospital/THC for immediate medical attention**. You can tell her that, generally, the placenta is situated in the upper segment of the uterus. If it is accidentally situated in the lower part, the woman will start bleeding

before delivery. In such a case, immediate medical interference is essential to prevent further bleeding, otherwise it can even lead to maternal or neonatal death, or both.

Another cause of excessive bleeding is retained placenta. If the placenta is not expelled within 30 minutes after delivery, the woman must

be **taken to the hospital/THC** for proper management. The mother may die due to excessive loss of blood, if she is not treated on time. If a woman bleeds excessively, i.e. if a woman using five or more menstrual pads in a day or changes her menstrual cloth at any time within 42 days of delivery frequently, she should be told that this is abnormal and may have fatal consequences, if care is not sought on time.

Finally, inform the mother that many women in our country die due to excessive bleeding during pregnancy and/or delivery. This is a life-threatening complication, and women should be fully aware of it. Also, inform the mother-in-law, the husband or other relatives about the consequences of bleeding during pregnancy and delivery if left untreated.

Prolapse/presentation of any foetal part other than the head

These pictures at the back of the card show abnormal presentation of the foetus during delivery (Fig. 2), i.e.

- cord around the neck
- face presentation
- breech presentation
- hand prolapse
- leg prolapse
- cord prolapse

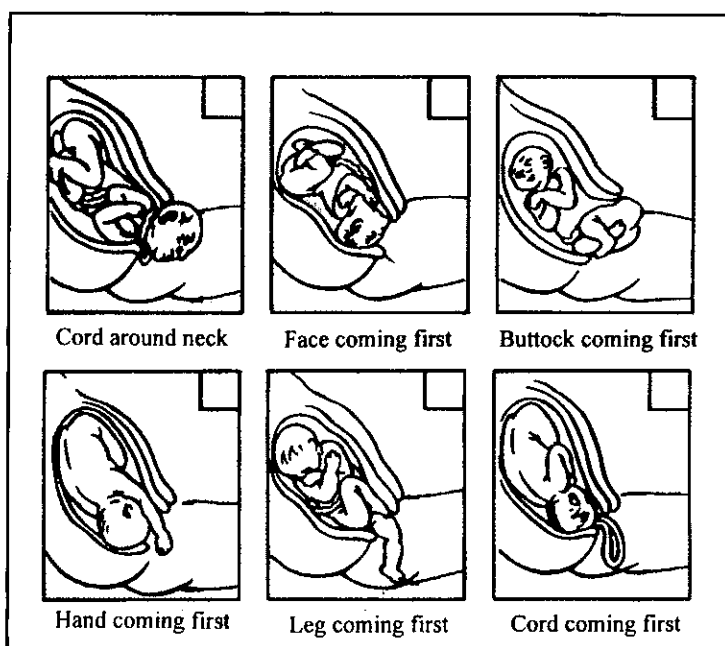


Fig.2. Abnormal presentations of the foetus during delivery

Ask the mother what she understands from this, and explain to her each of the pictures. Tell her that she must be taken to the THC in case of any abnormal presentation during delivery. Explain to her the following:

In 96 percent of the cases, women deliver normally, by head presentation, i.e. the baby's head comes out first. If presentation is other than head, there is an impending danger, and the patient must be taken to the hospital/THC without any delay.

Inform the mother that certain harmful traditional practices (like putting the prolapsed part back into the uterus by massaging oil, etc.) exist in the community, which may endanger the life of mothers or foetuses, or both. Tell the mother and her relatives that they should not allow anyone other than medically trained personnel, i.e. FWV, nurse, or doctor, to handle when there is abnormal presentation of the foetus during delivery as shown in the picture.

The FWA must remember that all women are at risk of developing pregnancy-related complications at any time during pregnancy, labour, or puerperium. Even under the best of circumstances, when a woman's nutritional status is good, and she has regular antenatal check-ups, she may develop complications which cannot be predicted or prevented. Therefore, all deliveries must be conducted under the supervision of medically trained personnel, like doctors, nurses, midwives, FWVs, or trained TBAs, even in case of home delivery.

The back of the card also shows the picture of a THC (Fig. 3). Show the mother this picture, and ask her if she knows what it is. Explain to her that she must go to a hospital or THC in case of any complication(s).

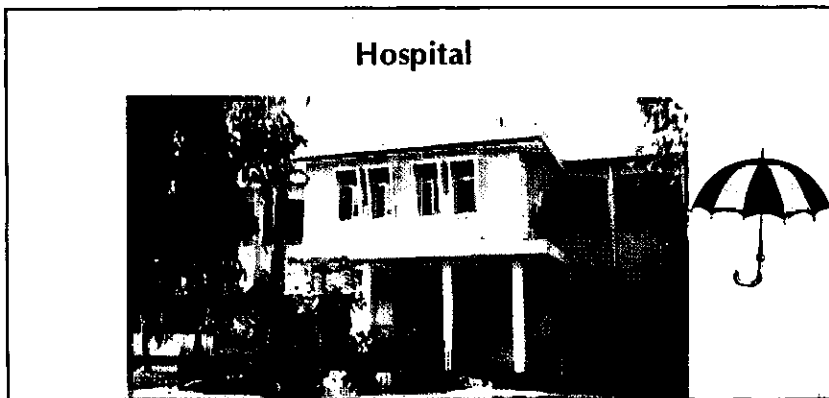


Fig. 3. Thana Health Complex/Hospital

The following messages are also included on the back of the card:

- The pregnant woman must go to the nearest H&FWC/SC at least three times during her pregnancy for ANC.
- The pregnant woman must go to the nearest hospital for any complication(s) during pregnancy, delivery, or puerperium.
- The pregnant woman should go to the nearest hospital, if she appears pale and if her eyes look yellow.
- During delivery at home, call the trained TBA.
- The mother should take postnatal care services from the FWV at the H&FWC/SC within one and half months of delivery.

These messages should be clearly conveyed to the pregnant woman by the FWA at the time of explaining the pictorial card to her. After completing the explanation, the FWA should ask feedback from the woman to see whether she clearly understood each picture in the card, and what to do if any of these occurs. The FWA can also get the feedback after explaining each picture in the card. Feedback may be obtained by asking the following questions:

- Do you understand the pictures here?
- Can you tell me what you would do, if you had any of these problems?
- Do you understand what this means? (point to a picture and ask this question).
- Can you tell me where this place is? (show the picture of the THC).

The FWA will also advise the pregnant woman and her family members to save some money from their daily expenditure for transport and drugs that may be required during obstetric emergencies [8-9].

3. Record keeping for EOC

During the FWA's routine household visits at the community level, she records the reproductive and contraceptive history of all eligible couples of her area in the FWA Register. She also updates each record, i.e. contraceptive history, identification of pregnancy, and referral to the FWV for ANC. The FWA also records the names and addresses of the pregnant women on a piece of paper and gives it to the FWV. This often gets lost; as a result, no records of the pregnant women exist, anywhere. Therefore, to monitor referral and linkages for EOC, a **Pregnant Women Register** has been developed for both the FWA and FWV. At present, two copies of almost the same Registers for pregnant women are used. One is kept by the FWA (Table 1) and the other one by the FWV (Table 2). It is a thin register and can easily be carried to the field, H&FWC and the SC.

Table 1. Pregnant Women Register
(For Family Welfare Assistant(FWA)/Fieldworker)

THANA: _____

FWA/Field Worker's Name: _____ Unit No.: _____

Union: _____

1	2	3	4	5	6	7	8	9	10	11	12
Sl no.	Date of first visit	Women's and husband's names	Village and para	Household no.	Couple no.	Age of pregnant woman	LMP	EDD	Total no. of pregnancy	Antenatal and pictorial cards given by FWV, MA, and FWA and date	Name of trained TBA of that area
	1 2 3 >3										1 2 3 >3

13	14	15	16	17	18	19	20	21
FWV's visiting date	Card shown to FWV/MA Yes/No	High-risk pregnancy (specify the problem)* Yes/No	Date of delivery/ pregnancy outcome	Delivery attended by **	Place of delivery: home, FWC, THC, DH, MCWC, other	Date of postnatal care received	Referral ***	Comments
1 2 3 >3	1 2 3 >3							

* Only to be filled up by FWV by using high-risk code from the code list

** TTBA, Dai, relative, FWV, midwife, nurse, doctor, others

*** Please mention where and who referred to by and date

Table 2: Pregnant Women Register
(For Family Welfare Visitor(FWV)/Paramedic)

THANA: _____

Family Welfare Visitor's Name: _____

Unit No.: _____

Union: _____

1	2	3	4	5	6	7	8	9	10	11	12
Sl. no.	Date of first visit	Women's and husband's names	Village and para	Household no.	Couple no.	Age of pregnant woman	LMP	EDD	Total no. of pregnancy	Antenatal and pictorial cards given by FWV, MA, and FWA and date	Referred by ****
	1 2 3 >3										1 2 3 >3

13	14	15	16	17	18	19	20	21
FWV's visiting date	Card shown to FWV/MA Yes/No	High-risk pregnancy (specify the problem)* Yes/No	Date of delivery/ pregnancy outcome	Delivery attended by **	Place of delivery: home, FWC, THC, DH, MCWC, other	Date of postnatal care received	Referral ***	Comments
1 2 3 >3	1 2 3 >3							

* Only to be filled up by FWV by using high-risk code from the code list

** TTBA, Dai, relative, FWV, midwife, nurse, doctor, others

*** Please mention where and who referred to and date

**** TBA, FWA, Relative, self, HA, quack, other for ANC

3.1. Rationale for the Register

Although the FWA Register records information similar to that in the Pregnant Women Register, some additional columns have been incorporated in the latter. The FWA Register does not have provision to record whether the referred pregnant women had actually visited the referral centre, or whether they received any antenatal or postnatal care. Similarly, it was impossible for the FWV to determine whether a particular pregnant woman had actually received services. It is also necessary for the FWV to have a copy of the list of pregnant women at the H&FWC. From this copy, both the FWA and FWV can identify those women who had not attended the centre for ANC and other maternity-related services, and can then take necessary steps. During subsequent visits, the FWA can follow-up those women and report back to the H&FWC, where she goes for updating the FWV's register.

3.2. The Pregnant Women Register

This Register records the pregnancy- and delivery-related information of all pregnant women in an FWA's area, and contains information on current pregnancy and the services provided, including background information of women, maternal health care services provided, and delivery-related information, such as type of birth attendant, place of delivery, outcome of last pregnancy, postnatal care, and referral. The distribution of the pictorial cards used for raising community awareness is also monitored in this Register.

The FWA will enlist a pregnant woman in the Register identified during her routine rounds, and give her an identification (ID) number. She will also give the pregnant woman a pictorial card bearing the same ID number, and will update the register on subsequent visits. As part of her duties, the FWA will enter the information, recorded in her Register, into the corresponding Register kept at the H&FWC, and update it accordingly.

The FWV will record information on the services provided to each pregnant woman in the Register, and will also enquire whether the women seeking services at the H&FWC have the pictorial cards. The information on services provided to a particular pregnant woman by the FWV is also updated in the FWA's Pregnant Women Register (from the H&FWC Registers).

When a pregnant woman without a pictorial card visits the FWV for ANC, she will give her a card and explain it in detail. The FWV will record this on a separate page (the back pages of the Register can be used for the purpose) and will pass it on to the FWA. This can be done during the fortnightly and monthly meetings at the H&FWC, and also at those service-delivery points jointly attended by the FWV and the FWA.

3.3. How to Fill up the Pregnant Women Register

The Pregnant Women Register has 21 columns. Each field worker has a separate register in which she records information about the pregnant women identified in her catchment area. Background information and reproductive history of the women are recorded in column 1-10.

- Each pregnant woman will get an ID number, which is to be entered in column 1. Each FWA will start with ID number 1.
- The field worker's visitation date will be recorded in column 2.
- The names of the pregnant women and their husbands, including their address, will be recorded in column 3 and 4.
- The pregnant woman's household and the couple numbers will be copied from the FWA Register for recording in column 5 and 6.
- The woman's age will be calculated and recorded in column 7.
- The field worker will define the date of the last menstrual period (LMP), and will then calculate the expected date of delivery (EDD, i.e. date of LMP and add 9 months and 7 days). She will enter these information in column 8 and 9.
- The total number of pregnancies experienced by the woman will be recorded in column 10.
- Column 11 is reserved for recording information on monitoring of the pictorial card, i.e. whether the woman received it and, if she did, who gave it to her. The FWA, FWV, or the MA may distribute the pictorial cards either at the clients' homes or at the H&FWC/SCs. Therefore, this column is only to record the date and designation of the particular provider who gave the pictorial card.

The information recorded in the column 12-15 on the Register kept at the H&FWC (Table 2) is actually the responsibility of the FWV. These are the records of services provided to the pregnant women by the FWV, i.e.

- Who referred for antenatal care (column 12).
- Dates of visit to the FWV (column 13).
- Whether showed the card to the FWV (column 14).
- Whether pregnancy is at high risk (column 15).

(The code list for the symptoms for identifying high-risk pregnancy will be used in column 15 by the FWV is appended in Appendix-1)

12	13	14	15
Referred by	FWV's visiting date	Card shown to FWV/MA Yes/No	High-risk pregnancy (specify the problem) Yes/No
1	1	1	
2	2	2	
3	3	3	
>3	>3	>3	

While updating the FWV's register, the FWA will also update the column 13-15 of her register with information recorded in the FWV's register.

Column 16-18 will be completed by the FWA. The FWA will collect this information like date of delivery, pregnancy outcome, birth attendant and place of delivery from the mother or her relatives during her routine home visits. The FWA will also update the column 16-18 of the Register kept at the H&FWC when she attends any meeting at the H&FWC.

- In column 16, two types of information to be collected and recorded: the date of delivery and outcome of current pregnancy, i.e. live-birth, still-birth, abortion, or miscarriage.
- The types of persons who attended the delivery, i.e. TTBA, dai, relation/neighbour, FWV, doctor, nurse, midwife or anyone at the THC, will be recorded in column 17. If the delivery attendant is anyone else, that should be specified as well. This information will be collected by the FWA during her routine visit after the childbirth.

In column 18, the place of the delivery will be recorded, e.g. at home, at H&FWC or THC, MCWC or district hospital or any other hospital or clinic.

Column 19-21 can be filled up by either the FWA or the FWV in their register, whoever serves the woman first, and this can be updated subsequently.

Any visits made by the woman to the FWV or any other trained provider or any visits made by the provider to the woman at home within 42 days of delivery are to be referred to as postnatal visits, and will be recorded in column 19. The date of visit and the type of provider who gave the service will also be recorded here.

- Column 20 is to record whether a particular pregnant woman is referred to for pregnancy- or delivery-related complications and the date of referral. This referral could be made by the FWA to the H&FWC, or by the FWV to the THC.
- Finally, if there is any comment for any particular pregnancy or delivery, it can be recorded in the last column 21.

16	17	18	19	20	21
Date of delivery/ pregnancy outcome	Delivery attended by **	Place of delivery: home, FWC, THC, DH, MCWC, other	Date of postnatal care received	Referral ***	Comments

Instructions for the FWA and FWV

- a. During the first visit of the FWA to a pregnant woman, she will complete the column (1-12) mentioned above in her Register.
- b. The FWV will complete column 12-15, if a pregnant woman visits her with a pictorial card. If she comes without a card, the FWV will keep records of the services provided in the last page of that register, and will inform that particular FWA about this when she comes to the H&FWC for attending meetings.
- c. At the time of filling up the Register kept at the H&FWC, the FWA will only complete the column 1-11. If the pregnant woman visits the FWV prior to the FWA's visit, it is expected that she will have a pictorial card and an antenatal card, along with the records of services received. In that case, when the FWA visits the pregnant woman, she will complete the column 1-11 and 13 (ref.13 antenatal card) and will update the FWV's record accordingly.
- d. When the FWA updates the Pregnant Women Register at the H&FWC, she will also update her Register (column 13-15) for follow-up of the woman, if she is a high-risk mother.
- e. The FWA will also update the columns 16-18 at the register kept at the H&FWC when she attends in a meeting.

4. Tasks of the FWA regarding Maternal Health

After the identification of a pregnant woman, the FWA is required to do the following:

- a. Record the woman's name, address and other relevant information in the Pregnant Women Register.
- b. Ask about the date of the last menstrual period (LMP), calculate the expected date of delivery (EDD), and record these dates in the Register.
- c. Advise the pregnant woman to go to the FWV either at the H&FWC or the SC for at least three antenatal check-ups, and follow them up during subsequent visits.

- d. Advise the pregnant woman to have extra food and take frequent small meals during pregnancy and lactation.
- e. Inform about the day (date) and the time of the nearest SC.
- f. Give her the pictorial card and explain the symptoms of complications during pregnancy, delivery, and puerperium as shown in the card, and advise her to go to the FWV or the nearest hospital, if any complications occur.
- g. Ask the pregnant woman to take the pictorial card with her when visiting the FWV, MA, or the THC.
- h. Advise about tetanus toxoid (TT) immunization.
- i. Inform the pregnant woman about the trained TBA in her area, and also advise the pregnant woman to call the trained TBA for normal delivery.
- j. Inform and educate the pregnant women on safe delivery, i.e. use of sterile blade, thread, clean clothes, etc.
- k. Advise the pregnant woman about postnatal care, breastfeeding and postpartum family planning (at visit during third trimester). The pregnant woman should be told to take the newborn to the THC, if he/she is reluctant to feed, is lethargic, has fever or impetigo, or has an umbilical infection.
- l. Update the FWV's Pregnant Women Register at the H&FWC regarding new pregnancies and outcome of the pregnancies listed in the FWA's Register. This should be done during the regular monthly meetings.

The FWAs will also contact the trained TBAs of the respective areas during their routine visits, and inform them about the pregnant women in the locality. They will also request the trained TBAs to keep contact with the mothers.

All the tasks mentioned above are routine works and are mandatory for the FWA, except "f", "g", and "l". The FWAs will, however, no longer be responsible for screening the pregnant women for identifying high-risk pregnancy [10].

References

1. International Conference on Population and Development (ICPD) Program for action. Cairo: United Nations, 1994.
2. Bangladesh Bureau of Statistics. Bangladesh health and demographic survey: summary findings, 1994 and 1995. Dhaka: Bureau of Statistics, 1996.
3. Akhter HH. Situation analysis of maternal health in Bangladesh. Paper presented at the National Conference on Safe Motherhood. Dhaka: December, 1994.
4. Rahman F, Whittaker M, Hossain B, et al. Maternal mortality in rural Bangladesh, 1982-1990: data from verbal autopsies. Dhaka: MCH-FP Extension Project, ICDDR,B, 1991. (Working paper, 81)
5. Koenig M, Fauveau V, Chowdhury AI, et al. Maternal mortality in Matlab, Bangladesh: 1975-85. *Stud in Fam Plan* 1988;19(2):69-80.
6. United Nations Children's Fund (UNICEF). Emergency obstetric care, intervention for the reduction of maternal mortality. Dhaka: Obstetrical and Gynecological Society of Bangladesh, 1993.
7. Ahmed HY, Rahman HM, Chowdhury KF, et al. Baseline survey for assessment of emergency obstetric care services in Bangladesh. Dhaka: Bangladesh Institute of Research for Promotion of Essential & Reproductive Health and Technologies, 1995.
8. Dawn CS. Textbook of obstetric and neonatology. 12th ed. Calcutta: Sreemoti Aroti Dawn, 1992.
9. Dutta DC. Textbook of obstetrics. 3rd ed. Calcutta: New Central Book Agency (Pvt) Ltd. 1994.
10. Role and responsibility of thana, union, ward and unit level officer/worker. Dhaka: Directorate of Family Planning, Ministry of Health and Family Welfare, 1991.

Code List for Identifying High-Risk Pregnant Women

If a pregnant woman has one or more of the following symptoms, she will be identified as a high-risk pregnant woman by the FWV. The FWV will use the following code numbers at the Pregnant Women Register kept at the H&FWC .

Code number	Symptom
1	Primi
2	Woman aged less than 20 years
3	Woman aged more than 35 years
4	Mother's height less than 4'-10" or 145 cm
5	Birth interval between two pregnancies is less than two years

History of previous pregnancy

6	Bleeding during pregnancy and or during and after delivery
7	Labour for more than 24 hours
8	Obstructed labour
9	Caesarian section
10	Retained placenta
11	Still-birth
12	Death of a newborn within 48 hours of delivery
13	Swelling of legs or body
14	Repeated fits with convulsion
15	Postpartum repair of fistula

Current pregnancy

16	Severe anaemia (+ + or more)
17	High blood pressure (140/90 or more)
18	Albumin in urine (+ + or more)
19	Any of the complications shown in the pictorial card, specify

Practice for filling up of the Pregnant Women Register

1. A woman named Hasina Begum is living at Sirajkathi village of Rajghat union. She is 24 years old, and has two daughters. She had her last menstruation three months back. She tried to recall the date and said it was 25 June 1997. Her husband Kudrat Ali is a Rickshaw puller. The FWA gave her a pictorial card on 5 August, and asked her to see the FWV. Accordingly, the pregnant woman visited the FWV on 15 August.
2. A woman named Rehana Begum is living at Iktherpur village of Rajghat union. She is 19 years old. She had her last menstruation three months back. She tried to recall the date and said it was 12 August 1997. Her husband Rajib Ali is an industrial worker. The FWA gave her a pictorial card on 5 September, and asked her to see the FWV. The pregnant woman had vaginal bleeding on 15 September and went to the FWV. The FWV referred her to the THC, where she had a D&C the next day.
3. Rabiya Begum and her husband Hasan Ali, who is a riskshaw puller, are from Sirajkathi village of Rajghat union. Rabiya is 21 years old, and has one daughter. She had her last menstruation three months back. She tried to recall the date and said it was 25 August 1997. She had found a little vaginal bleeding and came to the H&FWC on 2 October for management. The FWA visited her on 5 October as part of her schedule.
4. The FWA visited the above-mentioned women on 10 December. She updated the Pregnant Women Register, and advised them to see the FWV at the SC at Mullah's house on Tuesday (13 December).
5. The FWA also visited those women after their delivery on 30 July 1998. The first woman had her delivery at her mother's house, and one of her sisters attended her delivery. She delivered a baby, and her husband was very happy. The second woman had her delivery at the THC.

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. The MCH-FP Extension Project (Rural) began in 1982 in two rural areas with funding from USAID to examine how elements of the Matlab programme could be transferred to Bangladesh's national family planning programme. In its first years, the Extension Project set out to replicate workplans, record-keeping and supervision, 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, a management information system, and developing 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 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 Operations 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.



Operations Research Project (ORP)

Health and Population Extension Division (HPED)

International Centre for Diarrhoeal Disease Research, Bangladesh

GPO Box 128, Dhaka 1000, Bangladesh

Telephone: 871751-871760 (10 lines)

Fax: 880-2-871568 and 880-2-883116