

PRACTICE GUIDANCE

Antenatal Care Counseling Pamphlet and Emergency Obstetric Care

¹Ferdousi Begum, ²AB Bhuiyan

¹Associate Professor, Department of Obstetrics and Gynecology, BIRDEM, Dhaka, Bangladesh

²Rtd. Professor of Gyne and Obs, and Project Director, OGSB Maternity Hospital Dhaka, Bangladesh

Correspondence: Ferdousi Begum, 1/14, Block B, Humayun Road, Mohammadpur, Dhaka-1207, Bangladesh

Tel: 0088-02-9132295, 0088-02-8114510, Mobile: 0088-0189223221, 0088-02-01714008166, e-mail: fbegum@aitlbd.net

Abstract: A prospective longitudinal study with experimental design was undertaken among the MCH providers and antenatal mothers in 2 zones of Dhaka city, between July 1997 to June 1998. One of the objective of the study was to find out the effect of using antenatal care counselling pamphlet by the MCH service providers on quality of their antenatal care delivery and change in awareness of pregnant mother's on emergency obstetric care (EOC). A colored pamphlet on antenatal care counselling was developed and finalized after focal group discussion, pretesting and general discussion among professionals. Different category of MCH care providers were trained on why and how to use such pamphlet. Service providers (n-307) who used ANC pamphlet discussed various obstetric emergencies more frequently ($p < .05$ to $p < .001$) with the pregnant mothers in comparison to those who did not use such card. Similarly, knowledge among the service providers on place and person of referral for different obstetric complications also increased significantly ($p < .04$ to $p < .001$) after orientation on use of ANC pamphlet. Pregnant mothers who received at least 2 ANC session were interviewed during antenatal care, before (n-172) and after (n-300) the use of ANC pamphlet. Scoring on recognizing the pictures as obstetric emergency and being able to mention places and person of contact if such emergency arise (self referral) increased significantly ($p < .001$). Use of ANC pamphlet increased quality of ANC counselling and the knowledge of pregnant mothers on obstetric complications and self referral.

Keyword: Antenatal care pamphlet, Emergency obstetric care, MCH care.

INTRODUCTION

It is now universally accepted that all women remain at potential risk of complications during pregnancy, labor or pregnancy termination, and puerperium. Many of these complications cannot be predicted in advance and availability of quality case management is the key to reduce maternal mortality and morbidity significantly.^{1,2} Therefore, every women should have access to emergency obstetric care if she needs it for any pregnancy related problem.

Maternal mortality is a serious public health concern in Bangladesh. The current level is 4.5 maternal deaths per 1000 live births.² Country's relatively high fertility rate places women of Bangladesh at even a greater risk. As a signatory of goals of world summit, Bangladesh is committed to reduce maternal mortality to 3/1000 live births (half of 1990 rate) by the year 2000.³

Early recognition and timely referral of women with obstetric complication is important. Pregnant mothers and her family members should be able to identify such complications and should know where to go if such complication develops. While providing antenatal care service providers should explain these to them. Use of pictorial ANC pamphlet helps to better understanding of such conditions. It can also help them to remember these conditions and to show these to their family members and relatives.

One of the objectives of the study was to develop an antenatal care counseling pamphlet and to find out the effect of using the pamphlet on quality of ANC counseling by service providers and knowledge of pregnant mothers on different obstetric emergencies.

METHODOLOGY

A prospective longitudinal study with experimental research design⁵ was undertaken in greater Mirpur area of Dhaka city between July '97 and June '98. A baseline survey was conducted from the MCH service providers (n = 625). There was random assignment of cases (service providers) into experimental (O₁) and control (O₂) group by simple random sampling. The experimental group (O₁) received a program intervention (x = orientation training on EOC). Followed by measurement observation (O₂) to measure changes overtime. This measurement is then compared against a second observation

(O₄) from the control group that did not receive the program intervention. For gathering information from their clients pre-intervention exit survey was conducted on pregnant mothers during their antenatal visits (n = 172). The second phase of the study was training of MCH service providers. Fifty doctors, 50 nurses, 50 paramedics, 100 field workers and 100 Traditional Birth Attendants (TBAs) received training on ANC pamphlet (methods: lecture, discussion, case study and role play) during orientation training on EOC. The training was conducted between August '97 to January '98. After an interval, evaluation was done in April '98. In the evaluation phase 307 trained (43 were lost to follow-up), 200 untrained service providers and 300 antenatal mothers were interviewed. Data were analyzed in computer using SPSS package. Pre- and postintervention quantitative data were analyzed through t-test, test of significance was done for bivariate contingency data through χ^2 test and for proportions analysis through z test.

DEVELOPING ANTENATAL CARE PAMPHLET

A colored, printed, folded paper with pictures and information on pregnancy, delivery and puerperium (which is to be used during antenatal care counseling) was developed to ensure the quality of antenatal care. Existing ANC counseling pamphlets were reviewed. A new one was developed with technical assistance from Bangladesh Centre for Communication Program (BCCP). Focus group discussion and pretesting of ANC pamphlet was done among MCH service providers, pregnant mothers and their relatives. It was finalized in a joint meeting comprising of members of Obstetrical and Gynecological Society of Bangladesh, service providers of Government, NGO and private organizations of Mirpur area and representatives from various govt. and non-govt organizations.

CONTENTS OF THE ANTENATAL CARE COUNSELING PAMPHLET

- A. What are to be done by mothers during pregnancy
 1. Check-up your health by doctor or family welfare visitor regularly
 2. Take at least one iron table daily
 3. Take nutritious diet and increased amount of food
 4. Take at least one hour's rest daily at daytime
 5. Immunize yourself against tetanus
 6. Take help of trained birth attendant during delivery.
- B. Problems those may arise during antenatal period and what to do then.
 1. Anemia and general weakness
 2. Swelling of feet and hands

3. High blood pressure
4. Excessive headache or vomiting
5. Convulsion during pregnancy
6. Unusual pain in abdomen
7. Fever
8. Excessive bleeding or watery discharge without labor pain
9. Abnormal presentation of the baby
10. Spotting

Please contact Thana Health Complex or Hospital if any of these complications/emergencies arise.

C. Problems during delivery and what to do then

1. Labor pain more than 12 hours
2. Excessive bleeding
3. Abnormal presentation of the baby
 - i. Cord presentation
 - ii. Hand or foot prolapse
 - iii. Breech presentation
 - iv. Convulsion
 - v. Retained placenta

Please contact Thana Health Complex or Hospital if any of these complications/emergencies arise.

D. Problems after delivery and what to do then

1. Fever
2. Excessive bleeding
3. Excessive pain in abdomen

Please contact Thana Health Complex or Hospital if any of these complications/emergencies arise.

4. Anemia and weakness
 - i. Take balanced diet
 - ii. Take at least one iron tablet daily

E. Postnatal advice and care of mother and baby

1. Breastfeed the baby
2. Immunize the baby
3. Adopt family planning methods

Guideline for ANC pamphlet in Bangla was developed by OGSB with the technical help of BCCP.

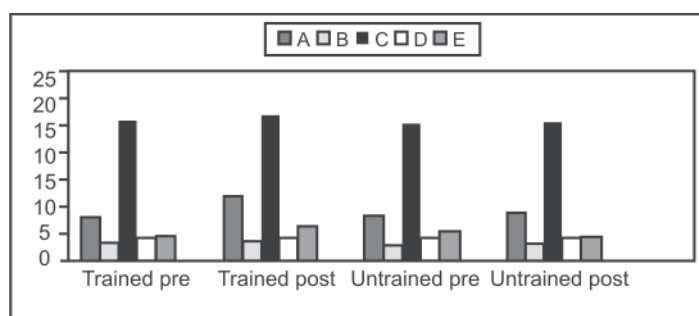
RESULTS AND DISCUSSION

To measure the change in performance in antenatal care delivery by the service providers after introduction of ANC pamphlet and training, a number of scoring systems were developed. Trained (Cases/experimental group) untrained (control group) service providers were compared to analyse whether the changes observed were actually due to intervention it self or due to some other reasons (changes overtime/national program/media/other training program).

- A. *Service providers discussed obstetric complication during ANC (scale 0-12):* A scoring system was developed on counseling antenatal mothers on different obstetric complications such as, anemia, edema, high blood pressure, headache, convulsion, abnormal pain in abdomen, fever, excessive bleeding, premature rupture of membrane, abnormal presentation, prolonged labor and importance of hospital delivery. Score of one (1) was allotted for discussing each point and zero (0) for not discussing the subject at all (scale 0-12). The difference in score between trained and untrained service providers before and after training were statistically significant, (Table 1, Fig. 1). Establishing the fact that the intervention positively increased the knowledge, skill and attitude of service provides for counseling on different obstetric complications during antenatal care. Making the pregnant women and their relatives/in laws aware about the obstetric complications especially the major killers of our mothers is one of the few important first steps to decrease the delay in seeking EOC.
- B. *Service providers discussed place of delivery (scale 0-6):* Discussion on selection of proper place/person for delivery by the service providers with the antenatal mother was also scored. Those who encouraged hospital/clinic delivery, delivery by trained TBA and discouraged home delivery, delivery at service providers home or delivery by relatives got one (1) for each point and those who did the opposite received zero (0), scale 0-6. The score was more in case of trained service providers and was statistically significant (Table 1, Fig. 1).
- C. *Place of referral in obstetric emergency (scale 0-22):* Service providers, both trained and untrained were asked where did they refer patient with different obstetric complications and where did they ask the pregnant mothers to go in case of an emergency. The complications mentioned

Table 1: Change in discussing different obstetric emergency with the patients by service providers (effect of introduction of ANC pamphlet and training)

	Trained			Untrained		
	Pre	Post	P value	Pre	Post	P value
Discussed obstetric complication during ANC (scale 0-12)	5.74	8.75	0.0001	5.91	6.21	0.091
Discussed place of delivery (scale 0-6)	2.00	2.54	0.0001	2.0	2.2	0.069
Place of referral in obstetric emergency (scale 0-22)	3.1	4.66	0.0001	3.9	4.2	0.057
Quality of antenatal care (scale 0-5)	2.88	3.11	0.003	3.09	3.12	0.633
Place of delivery according to category of pregnant women (scale 0-5)	18.42	19.19	0.0001	17.91	18.26	0.096



- A = Discussed obstetric complication during ANC (scale 0-12)
 B = Discussed place of delivery (scale 0-6)
 C = Place of delivery according to category of pregnancy women (scale 0-5).
 D = Quality of antenatal care (scale 0-5)
 E = Place of referral in obstetric emergency (scale 0-22)

Fig. 1: Change in discussing different obstetric emergency with the patients by service providers (Effect of using the ANC pamphlet by service providers during ANC counseling)

were: severe anemia, swelling of legs, high blood pressure, headache, convulsion, abnormal pain in abdomen, fever, excessive vaginal bleeding, rupture of membrane, abnormal presentation, prolonged labor and puerperal sepsis. A score of 2 was allotted who answered hospital/clinic; a score of 1 was allotted to those who answered doctor and the rest received zero '0' (Nurse, FWV, FWA, TBA and relatives) scale 0-22. Their was higher score in trained group and was statistically significant, ($p < .001$) (Table 1, Fig.1). As these are common emergencies service providers used to discuss these problems with the clients during ANC. But the training and especially the ANC pamphlet improved the situation. Significantly increased percentage of all categories of service providers had discussed the obstetric complication is a reflection of that.

- D. *Content of antenatal care (scale 0-5)*: Five important aspects of content of the antenatal counseling was also scored. The content includes: nutrition during pregnancy, colostrum and breastfeeding, postnatal care, care of the newborn and family planning. Scale used was between 0-5. Positive response scored 1 and negative response 0. The score is significantly higher ($p < .001$) among the trained service providers (Table 1, Fig.1).
- E. *Place of delivery according to category of pregnancy women (scale 0-5)*. In addition to scoring on referral of the patient with obstetric complications scoring was done on referral place/person for different category of antenatal patients such as: (i) Routine antenatal care, (ii) Normal pregnancy/low-risk mother, (iii) High-risk mother, (iv) Mother going to need blood transfusion and (v) postnatal care.

For antenatal care score 1 meant availing ANC and postnatal care from Doctors, Nurses, FWVs and hospital. For delivery of low-risk mother those mentioned above service providers and TBA got 1. For high-risk pregnancy and mothers who may

need blood transfusion only hospital got 1. For other responses score was 0. Scale of 0-5 was the measuring stick. The scoring was high for trained service providers in comparison to the untrained.

Discussion on selection of proper place/person for delivery by the service providers with the antenatal mother was also scored. Those who encouraged hospital/clinic delivery and delivery by trained TBA and discourages home delivery, delivery at service providers home or delivery by relatives got one (1) for each point and those who did the opposite received zero (0). The scale was 0-5. The score was more in case of trained service providers and was statistically significant (Table 1, Fig. 1).

To assess the change brought out by training of the MCH care providers the clients were assessed in addition to assessing the service providers themselves. Both antenatal and postnatal mothers were interviewed before and after intervention.

On hundred and seventy-two pregnant women with more than 6 months pregnancy were interviewed in the pre-intervention phase and 300 in postintervention phase using a preformed structured questionnaire just after receiving ANC from MCH service providers. Though they were not the same patients but they received similar service. Their socio-demographic characteristics were similar. Mean age, years of education, monthly income, parity, number of antenatal care received, duration of pregnancy, birth interval did not differ statistically.

A number of variables were scored giving marks according to the importance and a scale was developed. Whether antenatal mothers understood the pictures which depict different obstetric emergencies had a score of 0-12. Similar to B described above. Score of antenatal mothers in postintervention exit survey was higher and the difference was statistically significant ($p < .001$, Fig. 2, Table 2).

Table 2: Change in knowledge about EOC among pregnant mothers and quality of ANC received by them

<i>Knowledge about EOC</i>	<i>Preintervention (n = 172) Mean ± SD</i>	<i>Postintervention (n = 300) Mean ± SD</i>
Can understand pictures of different obstetric emergencies (scale 0-12)	6.5 ± 2.4	9.2 ± 3.3*
Where to go for different obstetric emergencies (scale 0-22)	11.2 ± 5.2	18.4 ± 5.0*
Quality of antenatal care		
Quality of service received (scale 0-5)	4.57 ± 0.89	4.89 ± 0.45*
Content of ANC services (scale 0-6)	5.14 ± 1.3	5.78 ± 0.75*

* $p > .0001$ t test

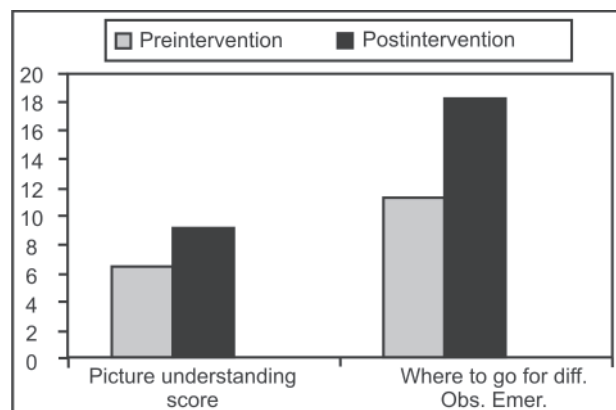


Fig. 2: Change in knowledge about obstetric emergency and antenatal care among antenatal mothers before and after intervention

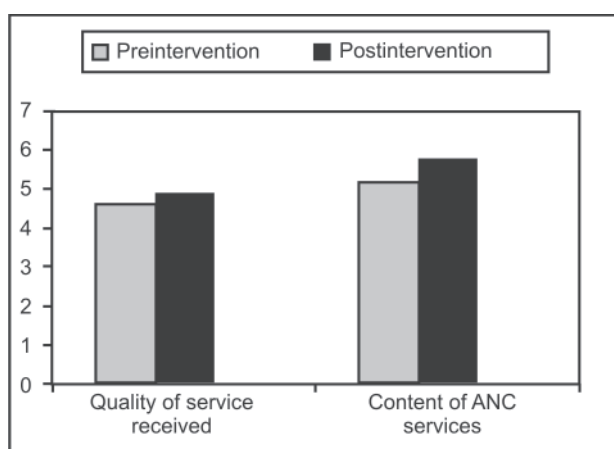


Fig. 3: Quality of ANC provided by MCH services provider to antenatal mothers before and after intervention

Scoring of where and whom to go (self referral/reporting to health centre directly) for different emergencies were also done like E = Place of referral in obstetric emergency (scale 0-22). Score of antenatal mothers in postintervention exit survey was higher and the difference was statistically significant ($p < .001$, Figs 2 and Table 2).

Quality of service received by the antenatal mothers was scored against a scale of 0-5. The points were giving adequate attention to the client, service providers listening to her question, the client got satisfactory answer, explaining the procedure

before examination, explaining the result of examination satisfactory. For positive reasons score was 1 and for negative response score was 0.

The content of the service received by the antenatal mother after intervention was much improved than the quality of service before intervention (D Content of antenatal care, scale 0-5). The improvement was statistically significant (Fig. 3 and Table 2).

The scale was 0-6. Discussion on each point during ANC scored 1. The trained service providers served significantly better quality service to the antenatal mothers (Fig. 3 and Table 2).

Change in ability to identify correctly different complications depicted in the ANC pamphlet among antenatal clients is shown in Tables 1 and 2. It revealed that after getting explanation by the trained service providers, the client understood the pictures better, most of which were statistically significantly.

CONCLUSION

Use of ANC pamphlet improved quality of ANC counseling by the MCH service providers, knowledge of pregnant mothers on different obstetric emergency and awareness about where to go if such emergency arise.

REFERENCES

1. Maine D. Reduction of maternal mortality in Bangladesh during 1995-2000; a concept paper, UNICEF, Dhaka, 1993:3.
2. Emergency Obstetric Care: Intervention for reduction of maternal mortality, OGSB and UNICEF, Dhaka, 1993:4.
3. Progotir Pathey. Published by Bangladesh Bureau of Statistic, Ministry of Planning, Govt. of People's Republic of Bangladesh and UNICEF, January 1996:4.
4. Ahmed YH, Rahman MH, Chowdhury FK, Khan YA, Akhter HH. A report on baseline survey for assessment of emergency obstetric care services in Bangladesh, (BIRPERHT), Dhaka, Bangladesh, March 1995, 5.
5. Internal Evaluation Report of strengthening of EOC in 11 district in Bangladesh, Dhaka 1997:6.
6. Fisher AA, Laing JE, Stockel JE, Townseed SJ. Handbook of family planning operations research design. Population council, New York, 1998:34.
7. Milla R, et al. The situation analysis approach to assessing family planning and reproductive health services: a handbook population council, New York, 1997:1-50.
8. Towards a safer motherhood for the women of Bangladesh: The power of partnership. Country paper, technical consultation of safe motherhood, Colombo 12-23, actuation 1997, MOHFW, Govt. of Peoples Republic of Bangladesh, 5.