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**A REVIEW OF MATERNAL CARE
MESSAGES AND CURRICULA
USED IN PVO CHILD SURVIVAL
PROJECTS**

The Johns Hopkins University
Child Survival Support Program

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A REVIEW OF MATERNAL CARE MESSAGES AND CURRICULA USED IN PVO CHILD SURVIVAL PROJECTS

Executive Summary

In 1994, the United States Agency for International Development (USAID) requested that 1992 and 1993 centrally funded Private Voluntary Organizations (PVO) Child Survival projects with maternal care and/or family planning activities submit copies of any maternal care training and educational materials for review with the project's Annual Report. The intent of the review process was to provide PVO projects with guidance towards a more effective and comprehensive maternal care program that will address those maternal health issues that have the greatest potential to impact on maternal morbidity and mortality and on the health of neonates. Sixteen out of 35 PVO projects with maternal care and/or family planning components submitted curricula and messages for review.

The three person review team consisted of technical experts from the Department of Obstetrics and Gynecology, The Johns Hopkins Hospital, and the PVO Child Survival Support Program at the Johns Hopkins School of Hygiene and Public Health and of an independent reviewer. All the reviewers have backgrounds in maternal health and family planning training and programming. The review was funded by USAID/Bureau for Humanitarian Response/Office of Private and Voluntary Cooperation.

In preparation for the review, "up to date" technical information on maternal care and family planning was gathered and evaluated for relevance in relation to the work carried out by PVOs. To the degree possible and feasible, the review team then generated content areas considered to be essential in (1) the education of mothers, and (2) the training of village level health care workers - both voluntary and minimally remunerated, such as TBAs and (3) professional health personnel, including mid-wives and nurses in order to impact on maternal and neonatal health. The reviewers then developed assessment forms based on content areas to evaluate the training or educational materials for each of these groups.

Findings of the review revealed that the maternal care activities that have been integrated in child survival projects for some time, such as immunizations are the strongest component of the materials submitted. However, mothers' messages, and the curricula for training TBAs and CHWs in maternal care, remain weak in other important areas. In particular, the lack of distinction between danger signs and risk conditions and concrete follow-up actions when problems are identified, are major areas of concern, and require further assessment and attention. Furthermore, care of the newborn and postnatal care, and a mechanism to evaluate maternal care training programs or the quality and content of mothers' messages are areas that are generally very weak or not addressed at all. The reviewers recommend that PVOs reassess the maternal care activities of Child Survival projects in terms of the functions and roles of project personnel in relation to maternal and neonatal health, the effectiveness of their training curriculum relative to the training needs of project personnel and based on sound maternal and neonate health care priorities, and evaluate the content of messages for mothers in terms of technical quality and cultural appropriateness.

Review of Maternal Care Messages and Curricula Used in PVO Child Survival Projects

Introduction

In 1994, the United States Agency for International Development (USAID) requested that 1992 and 1993 centrally funded Private Voluntary Organizations (PVO) Child Survival projects with maternal care and/or family planning activities submit copies of any maternal care training and educational materials for review with the project's Annual Report. The purpose of the review was to assess the quality of maternal care and family planning training curricula and the messages passed on to mothers by PVO field personnel, and to make recommendations to improve their content. A total of 16 out of 34 PVO projects with maternal care and/or family planning components submitted curricula and messages for review.

Maternal Care and Family Planning

Since the inception of USAID's Child Survival Program, the focus of maternal care activities within the realm of child survival has evolved considerably. In the early phases of the program, the title used by USAID for maternal care was "child spacing" and "high risk births". In 1991 this title became "maternal care and family planning", thus broadening the potential scope of maternal care interventions beyond improvement in chances for the neonate's survival to also include enhancement of maternal outcomes.

Despite this expanded approach, an extensive review of the maternal component of detailed implementation plans (DIPs), carried out in 1994, revealed that although PVOs carry out a wide range of maternal care and family planning activities, some common weaknesses are apparent. One of the apparent weaknesses was the difficulty PVOs have in linking activities, such as maternal weight monitoring and blood pressure measurements with plans to address the problems once they are identified. For example, there is little evidence of referring and transporting women with obstetrical complications to appropriate health facilities, or of the importance of viable follow-up for women identified as being at "high risk". The DIP review also revealed that PVOs are involved in many educational and training activities and that the messages they use address a wide range of important maternal health concerns.

In many instances, PVO training and educational programs focus on teaching TBAs how to manage clean and safe births and how to care for the cord. These interventions are very important for neonatal health, but have very little impact on reducing maternal mortality. It is certainly possible to teach TBAs "safer" delivery practices, however, in general this group cannot perform many of the obstetric functions that can save the life of a mother with obstetrical complications. In addition to TBAs, a variety of other people assist with the births of infants in project areas. The list of key persons involved include midwives, who are present at relatively

few births, and fathers and other family members who are, at times, the preferred birth attendant. The DIP review revealed that this mix of birth attendants are rarely targeted for training programs carried out in PVO Child Survival projects.

The findings of the DIP review were presented to the PVOs who attended a July 1994 one and a half day Safe Motherhood workshop organized by MotherCare of John Snow, Inc., and the Johns Hopkins University, Child Survival Support Program. The 32 representatives from 16 PVOs learned about the strategies that are likely to have an impact on pregnancy outcomes, in terms of both the mother's health and the well-being of the neonate. Participants were led on the pathway to maternal death that included signposts on pre-pregnancy, pregnancy, labor and delivery, and post-partum and neonatal problems, and the care, services and supplies that are required at each level of maternal care to prevent, reduce severity of, or adequately deal with the problems.

One of the outcomes of the meeting was a commitment on the part of the PVO representatives to share information learned during the workshop with their field staff and to reevaluate maternal care objectives of Child Survival projects.

It was with this background in mind that the reviewers of the maternal care curricula developed the framework for determining the important components of a maternal care training curriculum and, consequently, a criteria on which a maternal care curriculum could be evaluated.

The Review Process

The three person review team consisted of technical experts from the Department of Obstetrics and Gynecology, The Johns Hopkins Hospital, and the PVO Child Survival Support Program at the Johns Hopkins School of Hygiene and Public Health and of an independent reviewer. All the reviewers have backgrounds in maternal health and family planning training and programming. The review was funded by USAID/Bureau for Humanitarian Response/Office of Private and Voluntary Cooperation.

In preparation for the review, "up to date" technical information on maternal care and family planning was gathered and evaluated for relevance in relation to the work carried out by PVOs (Appendix I). To the degree possible and feasible, the review team then generated content areas considered to be essential in the training or education of (1) mothers, and, (2) village level health care workers - both voluntary and minimally remunerated, such as TBAs and (3) health personnel, e.g., mid-wives and nurses in order to impact on maternal and neonatal health. The reviewers then developed assessment forms based on content areas to evaluate the training or educational materials for each of these groups.

The forms were extensively pilot tested on actual curricula, and then revised. The review process included the following reliability check: each member reviewed at least one of each of the two other members' completed forms, and discrepancies were then discussed. The maternal care

section of project's DIP was used to determine the relevance of the training materials in relation to the objectives as stated in the DIP

The reviewers recognize that the materials submitted may represent only a small portion of a project's total training package. Many of the documents were translated broad outlines of local training materials or the listing of topics covered by a training program. Such brevity limited the ability of reviewers to adequately assess the training curriculum. Other projects sent detailed curricula enabling the reviewers to better understand training and education activities and offer suggestions for improvements.

The Reviews' Intent

The area of maternal care is rapidly changing, and the review process is intended to provide PVO projects with guidance towards a more effective and comprehensive maternal care program that will address those maternal health issues that have the greatest potential to impact on maternal morbidity and mortality and on the health of neonates.

Rating Criteria

The findings of the curricula review are based on the "gold standards" of content areas considered by the reviewers to be essential for any maternal care program. The reviewers rated the curricula and mothers' messages into four categories: (1) adequate, that is, the gold standard was met, (2) needs improvement, that is, an essential piece of information was missing, (such as - TBAs will be knowledgeable about the "risks" of pregnancy), (3) inadequate - the information was inappropriate, inadequate or not included when it should have been, and (4) not included, for example, the curriculum only covered family planning topics. Two points were given for a topic if the information was adequate, one point if the topic needed improvement, no points were given for the inadequate category, and the denominator was reduced for categories not included.

The reviewers had intended to include on the scoring form a category for evaluation, supervision and monitoring. In adequately developed curricula such information is generally included. However, the vast majority of materials received for the review lacked any reference to either an evaluation mechanism to assess learner progress or a mechanism to assess the adequacy of the training or educational material.

Overall Performance of Submitted Curricula in Percentages

Table 1

PVO/Country	Educating Mothers	Training TBAs	Training CHWS
PVO A/Country 8	83		
PVO B/Country 3	32		58
PVO C/Country 11	100	88	
PVO D/Country 1	50		
PVO D/Country 4	85		
PVO E/Country 2			81
PVO F/Country 1	70		61
PVO F/Country 3	33		
PVO F/Country 5	43	38	
PVO F/Country 7	18	50	
PVO F/Country 8	48		
PVO G/Country 5	67		
PVO G/Country 6	62	56	
PVO G/Country 9	75	68	
PVO G/Country 10	60	80	
Average Percentage Score	59%	63%	67%

Educating Mothers

Fourteen documents were submitted that contained lists of educational messages for mothers. Of these, three included family planning messages only.

Table 2

Average Scores of Submitted Curricula Materials					
Category	Documents	Possible Score	Range	Score	Percent (%)
A Antenatal care	10	12	3 - 12	71	71
B Labor and delivery	11	6	0 - 6	32	53
C Care of the newborn	7	6	0 - 6	29	48
D Postnatal	9	10	0 - 7	36	36
E Family planning	13	6	2 - 6	45	74
Total	14	52		283	54%

Findings - Messages For Mothers About Antenatal Care

The reviewers considered the following major topics as "gold standards" for antenatal care: contacting a health care provider early in pregnancy, nutritional advice, including adequate weight gain and iron-rich foods, taking prophylactic medications as needed - iron/folate and if appropriate anti-malarial, receiving tetanus toxoid immunizations, recognizing danger signs, such as bleeding, excessive tiredness, swollen face, hands, feet, fever, labor pains lasting longer than 12 hours, and planning for possible emergencies.

5 of the 11 lists adequately mentioned contacting a health provider early in pregnancy,
 6/11 adequately mentioned weight gain,
 3/11 mentioned iron-rich foods under nutritional advice,
 3/11 mentioned taking iron/folate,
 2/5 mentioned anti-malarial medications - tabulated only for malaria endemic areas,
 8/11 lists included a message on the need for tetanus toxoid immunizations,
 In terms of recognizing danger signs
 3/11 list included bleeding,
 0/11 mentioned excessive tiredness,
 2/11 listed swollen face, hands, feet,
 1/11 included fever,
 1/11 list stated labor pains lasting longer than 12 hours,
 0/11 mentioned planning for possible emergencies

Discussions - Messages For Mothers About Antenatal Care

Antenatal care programs are varied throughout the world, and the messages reflect this variation both in content and in approach. The content of prenatal care is a hotly debated issue in many countries, and the determination of effective components of prenatal care continues to be a challenge. Each project needs to examine the content of its prenatal care program and differentiate those that will impact on women from those that will benefit the newborn. In this way, a prenatal care program can be developed that will address both the woman and the neonate adequately.

Studies have shown that prenatal care is associated with better overall pregnancy outcomes for both the mother and the infant, including decreased incidence of prematurity, low birth weight, surgical interventions, and post-partum hemorrhage. Thus contacting a health care provider early in the pregnancy is an important educational message for mothers. Although in some areas, this may be considered taboo, it remains an important component of maternal care.

Adequate nutritional status both before pregnancy and during pregnancy is essential for healthy mother and the newborn outcomes. Educational messages should include information about adequate weight gain during pregnancy and the consumption of foods rich in iron and vitamin A.

PVO nutritional advice messages discuss quantity of food more than quality or micro-nutrient value. For example, messages frequently state that "pregnant women should eat more", or that she should "eat frequently" without giving reasons why this action might be important for her and/or for her baby health. Thus, the message may not necessarily be educating the mother by increasing her knowledge, thereby decreasing the potential effectiveness of health education.

Frequently, prenatal care programs include the provision of medications such as iron, vitamins and folate. In areas where malaria is a problem, anti-malarials are often provided. Messages for mothers should include information that educates them as to the benefits of these supplements and encourages their usage.

Tetanus toxoid administration is a common intervention in many prenatal care programs. Tetanus immunization prevents neonatal tetanus and may have an effect on maternal mortality. PVO projects frequently include messages related to the need for mothers to receive tetanus toxoid immunizations to protect herself and her baby, reflecting the effort by PVOs to increase immunization coverage and to educate mothers about the benefits of receiving this immunization.

During the antenatal care period, women should be advised about the danger signs of pregnancy and what they should do when the signs occur. It is now known that the best way to prevent maternal mortality is through the early recognition of danger signs and rapid referral and transport to a health facility capable of handling obstetric emergencies. Danger signs that should be

emphasized are vaginal bleeding anytime during pregnancy, and especially after 5 months. Excessive tiredness and or paleness may signify severe anemia, which when treated and reversed can significantly improve maternal and neonatal outcomes. Swelling of the hands and face are warning signs for preeclampsia, however, swelling of the legs and ankles is common in most pregnancies and unless massive, has a low predictive value for preeclampsia. Fever during pregnancy can indicate a dangerous condition, especially if the women's "water has broken" and should alert a woman to seek care.

A major area for concern relates to informing mothers of these danger signs and planning for possible emergencies. PVO projects use messages covering a wide variety of conditions and symptoms, and largely fail to differentiate the danger signs of a potential obstetrical emergency, from a condition that may simply require increased surveillance. For example, mothers are told that they are at "risk" if they have "children with birth defects", "deformed pelvis", "numbness of extremities", or if they are "very fat", "extremely thin", or "primigravida", among many others.

It is important for PVO projects to realize the difference between the danger signs of pregnancy and conditions that may put a pregnant woman "at risk". For the former group, rapid realization that a complication has occurred, timely transport and referral, and access to well supplied and equipped health facilities where trained health personnel are capable of carrying out the necessary interventions is of utmost importance to save the life of a mother.

Conditions that may put a woman at risk, are often neither life threatening nor "risky". Mothers need to be aware of risk conditions that require her to seek care from a health care provider, so that these conditions can be evaluated. The analysis and evaluation of "risk factors" requires a different approach and emphasis than does the identification and response to danger signs.

None of the messages included information on planning for possible emergencies. Obstetrical complications are always emergencies, and if a mother knows what the signs of those emergencies are and has the awareness that with adequate planning she will have a chance to reach an adequate facility in a timely fashion, her life and that of her baby may well be saved.

Findings - Messages For Mothers About Labor and Delivery

The reviewers considered the following major topics as "gold standards" for messages to mothers about labor and delivery: seeking care promptly or referral based on danger signs, delivering with a trained attendant, and delivering under hygienic conditions.

6/11 lists adequately included seeking care promptly or referral based on danger signs, 7/11 mentioned delivering with a trained attendant, 3/11 mentioned delivering under hygienic conditions.

Discussions - Messages For Mothers About Labor and Delivery

Many PVO projects work in areas where women deliver their babies either with a TBA in attendance or with the support of a family member. Even in project areas where women deliver their own babies or deliver babies with the support of a family member, it is very important for them to know the danger signs of labor and delivery and the need to seek very prompt care if these complications occur. One of the benefits of delivering with a trained attendant, is that the person can identify complications and assist the woman to obtain appropriate and timely care.

Especially, where women deliver at home, the message that the delivery should take place under hygienic conditions is important for both the baby's and the mother's health. It appears from the curricula review that messages to educate mothers do not reflect data from the baseline survey, in that the information regarding who cut the umbilical cord is not used as an indicator of who to target for messages. In many instances, mothers themselves or a family member was mentioned, yet the messages do not reflect this important finding.

Women should be taught that premature contractions may be a sign of premature labor, putting the fetus at risk for early delivery. Women can be taught to palpate contractions and increase fluid intake when contractions occur more than every 15 minutes. If the contractions persist, she should be instructed as to where a health care provider can be located.

In preparation for labor and delivery, a woman should know that ruptured membranes without labor or rupture of the membrane early in the pregnancy, or hard labor that has lasted for longer than 12 hours, or pushing for more than 2 hours may indicate a problem that requires the assistance of trained personnel. The use of a partograph in areas where personnel are trained to perform cervical examinations is invaluable for this purpose. In order for these educational messages to be effective, women must be educated as to what to do if these conditions occur, where to go for help and how to plan ahead for possible emergencies that would require transport.

Findings - Messages for Mothers About Care of the Newborn

The reviewers considered the following major topics as "gold standards" for care of the newborn: breastfeeding the baby immediately after birth or at least within one hour, keeping the baby warm and dry, care of the cord.

6/11 lists included a message on breastfeeding the baby immediately after birth or at least within one hour;

2/11 had a message on keeping the baby warm and dry,

3/11 mentioned caring for the cord.

Discussion - Messages for Mothers About Care of the Newborn

Educational messages about the care of the newborn are a key component of any maternal care.

program As described earlier, the mother and newborn can be considered a dyad, and it makes sense that immediate care of the newborn should be addressed when discussing issues concerning labor and delivery

The vast majority of mothers in PVO project areas either are assisted in delivery by a family member or by a person other than an health professional, such as a TBA - trained or untrained This implies that the majority of births take place at home and that the mother is largely responsible for the immediate care of the newborn Even those mothers who deliver in a health facility are unlikely to stay longer than 12 hours after giving birth It is, therefore, important that PVO project include in the education of mothers, messages that address the care of the newborn

The first important message pertains to the immediate post delivery care of the infant Mothers or family members or attendants should be taught to clear the airway of the newborn and stimulate breathing and crying They should be taught to dry off the baby immediately and keep her/him warm and dry

They should also be taught about immediate breastfeeding Newborns should be breastfed immediately or within one hour of delivery This action causes the release of pitocin that will stimulate uterine contractions, thus potentially reducing the risk of post partum hemorrhage Additionally, mothers and family members should be taught about caring properly for the umbilical cord

Findings - Messages for Mothers About Postnatal Care

The reviewers considered the following major topics as "gold standards" for postnatal care breastfeeding exclusively for six months, recognizing and seeking care and referral for postpartum complications, such as infection and bleeding, need for appropriate rest, adequate nutritional practices, and postpartum check-up with a trained provider Only four of the eleven lists addressed postnatal care Of these

4/11 lists mentioned breastfeeding exclusively for six months,
2/11 lists mentioned postpartum complications but were not specific in recognizing and seeking care and referral for postpartum complications, such as infection and bleeding,
2/11 mentioned the need for appropriate rest,
4/11 included adequate nutritional practices, and
2/11 advised mothers on the need for a postpartum check-up with a trained provider

Discussion - Messages for Mothers About Postnatal Care

Fewer women receive care after delivery than any other type of maternal care Yet, most maternal

death from sepsis occurs within 42 days after childbirth. The post partum period can be divided into the immediate post partum period and the later period, which is up to 6 weeks after delivery. During the immediate post partum period, mothers and families can be taught to recognize and seek care for the post partum complications of infection, bleeding and retained placenta. Post partum checkups, also allow for the detection of maternal problems such as infection, give the mother an opportunity to discuss breastfeeding and family planning issues.

7/11 lists completely failed to address any postnatal care issues. This is an essential component of maternal care and should be adequately addressed in mothers' education.

Findings - Messages for Mothers About Family Planning

The reviewers considered the following major topics as "gold standards" for family planning: planning future pregnancies, procuring contraceptives, and timing, spacing and other factors that impact on reproductive health.

13/13 lists of mothers' messages included topics that dealt with planning future pregnancies or birth spacing,

5/13 addressed messages on procuring contraceptives, and

12/13 addressed timing, spacing and other factors that impact on reproductive health.

Discussion - Messages for Mothers About Family Planning

PVO Child Survival projects have been involved in educating mothers about family planning since the inception of the program and this experience is reflected in the material submitted. Nevertheless, one curriculum stated that family planning is the best way to prevent maternal mortality, and although this is correct, a message of this type certainly does not help women who desire to become pregnant and would like to learn about what they can do to remain healthy. A serious omission in family planning messages was advising mothers on where they can go to receive family planning services and obtain the contraceptives, but otherwise, the messages on family planning were comprehensive.

Curriculum Design and Content

The reviewers identified four elements essential to an adequate curriculum: (1) that learning objectives of each training session be clearly stated, (2) that the methodology for conducting the training session contain teaching approaches, (3) that the amount of time required to teach the session be included, and (4) the curriculum define the functions of the trainees.

Table 3

Design and Content of Curricula			
Area	N	Yes	No
<i>Does the curricula include</i>			
• Learning objectives?	16	12	4
• Teaching methodology?	16	10	5
• Time needed for the training?	16	6	8
• Functions of trainees defined?	16	8	5

- 3 sets of curricula did not include any of the listed areas
- 2 sets of curricula contained one of the four areas
- 4 sets of curricula contained two of the four areas
- 3 sets of curricula contained three of the four areas
- 4 sets of curricula contained all four areas

Content for Training TBAs and Community Health Workers (CHWs)

The reviewers were able to assess six TBA training curricula and six curricula for training CHWs, three of which included only family planning topics. The three CHW curricula were assessed using the same "gold standards" as the TBA curriculum except for content regarding actual labor and delivery techniques.

The reviewers considered the following major topics as "gold standards" for training TBAs and Community Health Workers in antenatal care:

- identifying pregnancy,
- counselling pregnant women on appropriate prenatal care, immunizations, nutrition,
- identifying common pregnancy discomforts and how to relieve discomforts,
- identifying/detecting complications or danger signs, including
 - excessive bleeding with or without pain, convulsions, passing fluid other than urine,
 - blurred vision, swollen hands, face and feet, and headaches,
- screening for and referring "risk conditions", including
 - 1st pregnancy at <15 years or > 35 years,
 - > 5 pregnancies,

preexisting medical conditions,
short stature < 150 cm,
poor previous obstetric history, and
pregnancy spaced < 2 years,

- assessing nutritional status and referring undernourished women,
- providing iron and malaria prophylaxis,
- linking with and referral to health unit,
- assessing traditional practices and,
- maintaining and using safe birth kits

"Gold standards" for labor and delivery included

- using hygienic practices during delivery,
- managing normal labor and delivery,
- identifying problems during labor and delivered excessive bleeding, convulsions, fever and chills, no progress during 12 hours,
- managing first aid during labor and delivery, and
- referring women with complications

"Gold standards" for care of the newborn included

- establishing airway, cord care and ensuring that the baby is dry and warm,
- monitoring mother immediately after delivery,
- examining the newborn for congenital defects and low-birth weight and referring, and
- counselling mothers on breastfeeding

"Gold standards" for postnatal care addressed

- counselling mothers on, hygiene, nutrition, cord care, breastfeeding, postpartum check-up, and
- identifying postpartum complications, such as infection and hemorrhage and referring

"Gold standards" for family planning included

- counselling mothers on pregnancy spacing and modern methods of contraception, referring mothers to health unit for counselling and contraceptives,
- replenishing contraceptives, and
- counselling on unsafe abortion and referral for abortion complications

Findings - Training of TBAs and CHWs in Antenatal Care

3/6 of the TBA curricula and 2/3 CHW curricula mentioned identifying pregnancy;
4/6 of the TBA curricula and 3/3 CHW curricula either adequately discussed prenatal care or mentioned counselling pregnant women on appropriate prenatal care,
4/6 and 2/3 curricula mentioned counselling on immunizations, and
4/6 and 3/3 mentioned nutrition counselling,
2/6 and 1/3 curricula addressed identifying common pregnancy discomforts and how to relieve discomforts

Addressing identification/detection of complications or danger signs

4/6 and 1/3 mentioned excessive bleeding with or without pain,
 2/6 and 1/6 mentioned convulsions,
 2/6 and 0/3 mentioned passing fluid other than urine,
 3/6 and 1/3 discussed blurred vision,
 4/6 and 2/3 addressed swollen hands, face and feet,
 3/6 and 1/3 mentioned headaches as a danger sign

Addressing screening for "risk conditions"

4/6 and 1/3 included 1st pregnancy at <15 years or > 35 years,
 3/6 and 2/3 curricula listed > 5 pregnancies as a "risk condition",
 2/6 and 0/3 included preexisting medical conditions as risk factors,
 3/6 and 1/3 mentioned short stature < 150 cm,
 5/6 and 2/3 discussed poor previous obstetric history, and
 2/6 and 1/3 mentioned pregnancy spaced < 2 years

In terms of assessing nutritional status and referring undernourished women, the topic was mentioned in 2/6 and 0/3 adequately in the curricula

3/6 and 2/3 curricula included providing iron folate,
 3/4 and 1/1 mentioned malaria prophylaxis - tabulated only for malaria endemic areas, ,
 4/6 and 2/3 adequately mentioned linking with and referral to health unit,
 1/6 and 2/3 discussed assessing traditional practices,
 5/6 and 1/3 curricula mentioned the need for maintaining and using safe birthing kits

Table 4

Average Scores of TBA Training Materials Submitted					
Category	N	Possible Score	Range	Score	Percent (%)
A. Antenatal care	6	20	4 - 19	12 1	61
B Labor and delivery	6	10	5 - 10	6 8	68
C Care of the newborn	4	8	4 - 8	6 5	81
D Postnatal	6	4	1 - 4	2 5	63
E Family planning	4	8	4 - 6	5 0	63
Total Score		56		36 7	67%

Table 5

Average Scores of CHW Training Materials Submitted					
Category	N	Possible Score	Range	Score	Percent (%)
A Antenatal care	3	20	13 - 14	13 3	67
B Labor and delivery	2	10	5 - 10	7 5	75
C Care of the newborn	1	8	8	8	100
D Postnatal	2	4	1 - 3	2	50
E Family planning	2	8	3 - 6	4 5	56
Total Score		50		35 3	70%

Discussion - Training of TBAs and CHWs in Antenatal Care

The training of TBAs varies throughout the world. There are many skill levels among TBAs, and the political climate in the area will determine what a TBA is actually allowed to do. A key component in the training of TBAs is to realize what effects the training of TBAs will have on the mother, and what effects the training will have on the child. By differentiating the interventions in this way, training components can be developed that address both mother and child.

According to UNICEF's Safe Motherhood training manual, timely planned use of trained birth assistance in the community can reduce the incidence, improve the outcome or allow earlier recognition and referral of certain complications of childbirth. Although, no specific component of prenatal care has been sufficiently proven to reduce maternal deaths, prenatal care is associated with better overall pregnancy outcome for both mothers and newborns.

As with the messages for mothers, a major area for concern relates to the identification of danger signs and screening for "risk conditions". PVO projects use a wide variety of danger signs and risk conditions in their curricula, and largely fail to differentiate the danger signs of a potential obstetrical emergency, from risk conditions. Among "risks" mentioned are women not immunized with tetanus toxoid, varicose veins, excessive weight gain, children with birth defects, twins, hemoglobin less than 8gm, asthma and low socio-economic status, among many others. Risk screening has poor predictive power even under the best of circumstances. Furthermore, understanding and implementing risk screening criteria requires specially trained health workers, whether modern or traditional. Risk screening is resource intensive, and unless supported by and inclusive of a well functioning health facility with a referral and transport system is of questionable value.

TBAs should be trained to identify common pregnancy discomforts and learn how to relieve those

discomforts. Oftentimes, local or traditional practices can be incorporated into training as long as they are not considered harmful.

The identification of complications and danger signs during the antepartum period is an extremely important component of TBA training. A TBA should be trained to know when vaginal bleeding is significant, when convulsions have occurred, when she has passed fluid uncontrollable that is not urine. She should be able to recognize signs and symptoms of preeclampsia, such as swollen face and hands, and headaches.

The training curriculum for TBAs and CHWs needs to stress those interventions that are known to impact on maternal and neonate outcome, such as early contact with pregnant mothers, recognition of danger signs, planning for emergencies, linking with a referral unit and ensuring that a transport system is available if complications arise.

Only one of the TBA curricula adequately addressed assessing traditional practices. This is an important component of all TBA training, as it is well known that some of the traditional practices carried out by TBAs are very harmful to both the mother and the newborn.

Findings - Training of TBAs and CHWs in Labor and Delivery

4/6 TBA curricula and 0/3 CHWs curricula mentioned using hygienic practices during delivery,
5/6 and 1/3 discussed managing normal labor and delivery.

In terms of identifying problems during labor and delivered
3/6 and 1/3 addressed excessive bleeding,
1/6 and 0/3 mentioned convulsions,
1/6 and 0/3 addressed fever and chills, and
3/6 and 1/3 mentioned no progress during 12 hours.

Relative to managing first aid during labor and delivery
0/6 and 1/3 mentioned nipple stimulation,
3/6 discussed abdominal massage,
1/6 external bimanual compression of the uterus, and
1/6 manual removal of the placenta.

4/6 and 1/3 included referring women with complications in their curriculum.

Discussion - Training of TBAs and CHWs in Labor and Delivery

Concentration in TBA training is on "normal" labor and delivery, with very little emphasis on what to do when complications arise. Although many of the outlines lacked details necessary to make an adequate assessment of all training content, it appears that identifying complications during labor and delivery and teaching TBAs first aid techniques is not stressed in the curricula reviewed. The greatest potential impact of routine childbirth care is prevention of sepsis and postpartum hemorrhage, thus adequate recognition danger signs and first aid care of hemorrhage, where and whenever appropriate would be important components of any TBA training program. Furthermore, linking with a health unit and referring women who are already in labor and present with complications, demand special emphasis in TBA training because of the time factor.

Findings - Training of TBAs and CHWs in Care of the Newborn

3/6 and 1/3 curricula discussed establishing airway, cord care and ensuring that the baby is dry and warm,
4/6 and 1/3 mentioned monitoring mother immediately after delivery,
3/6 and 1/3 described examining the newborn for congenital defects and low-birth weight and referring, and
4/6 and 1/3 included counselling mothers on breastfeeding

Discussion - Training of TBAs and CHWs in Care of the Newborn

Most curricula did not emphasize care of the newborn, but mentioned it in the curriculum without providing details. Newborn care is an essential component of maternal care and would benefit from greater emphasis in the training of TBAs and CHWs.

TBAs should be trained to establish the airway of the infant as soon as he/she is born, and to keep the baby warm and dry. She should be trained to monitor the mother immediately after delivery for signs of excessive bleeding. The TBA should be trained to examine the newborn and refer if there are problems. Additionally, they should be taught to counsel mothers on breastfeeding.

Findings - Training of TBAs and CHWs in Postnatal Care

In terms of counselling mothers

3/6 and 0/3 curricula mentioned hygiene,
2/6 and 1/3 adequately mentioned nutrition,
3/6 and 1/3 discussed cord care,
4/6 and 2/3 included breastfeeding, and
2/6 and 0/3 mentioned postpartum check-up

2/6 and 1/3 adequately included identifying postpartum complications in their curriculum

Discussion - Training of TBAs and CHWs in Postnatal Care

TBAs and CHWs are community members who often serve an important function as educators. Yet, few of the curricula adequately addressed their role in counselling. Rather, objectives were stated in terms of what the TBA or CHW should do for or to the mother, and not how this health care worker can contribute to increasing a mother's knowledge about her pregnancy and reinforce a mother's healthy behavioral practices or discourage unhealthy ones. As mentioned earlier, postpartum hemorrhage and sepsis are primary contributors to maternal mortality, thus the identification of those complications needs to be an integral part of TBA and CHW training.

Findings - Training of TBAs and CHWs in Family Planning

4/6 TBA and 5/6 CHW training curricula mentioned counselling mothers on pregnancy spacing and modern methods of contraception,
3/6 and 4/6 discussed referring mothers to health unit for counselling and contraceptives,
2/6 and 4/6 included replenishing contraceptives, and
0/6 and 0/0 mentioned anything on counselling on unsafe abortion and referral for abortion complications.

Discussion - Training of TBAs and CHWs in Family Planning

Sepsis due to abortions is a major contributing factor to maternal mortality, yet none of the curricula directly mentioned counselling on unsafe abortions or referral for complications from abortions. The reviewers recognize that this is a very sensitive topic, however, in the training of health workers, such issues should be addressed.

Conclusions

Maternal care activities that have been integrated in child survival projects for some time, such as immunizations and family planning are the strongest component of the materials submitted. However, mothers' messages and the curricula for training TBAs and CHWs in maternal care, remain weak in other important areas. In particular, lack of distinction between danger signs and risk conditions and the necessary follow-up required to impact on mothers' and neonates' well-being is an important area that needs to be reevaluated in terms of program effectiveness. Furthermore, care of the newborn and postnatal care are areas that are particularly very weak or not addressed at all.

Finally, findings from the review revealed that PVOs do not appear to have a mechanism to evaluate their maternal care training programs or the quality and content of mothers' messages, as none of the material submitted included such information.

Recommendations

The reviewers recommend the following for PVOs: that all PVOs with maternal care activities use the tools developed for this review to reassess their maternal and neonatal care training and educational program in light of data from their DIP and to make the necessary adjustments. Furthermore, data from the DIP and baseline KPC should also be used to reassess who to target for training. Data of baseline surveys clearly indicates that family members are often the preferred

birth attendants, thus targeting this group for educational programs makes sense. In addition, PVOs should regularly evaluate the content and quality of their educational and training programs and make the necessary adjustments. For CSSP, the reviewers recommend that the tools be refined where necessary and to distribute them as widely as possible. CSSP should also further assist PVOs with their maternal and neonatal care programs by developing and testing useful maternal care indicators that not only measure the effectiveness of maternal care interventions, but also their quality.

Assessing Maternal and Peri-Neonatal Health Tools and Methods 1994 Arlington VA. MotherCare

Alexander, S and Keirse, M J *Formal Risk Scoring During Pregnancy*

Kwast, B , Miller, S , and Conroy C 1993 *Management of Life Threatening Obstetrical Emergencies* Arlington VA MotherCare

Howard-Grabman, L , Seoane, G and Davenport, C 1993 *The Warmi Project A Participatory Approach to Improve Maternal and Neonatal Health - An Implementor's Manual* Bolivia Save the Children

Maine, D 1993 *Safe Motherhood Programs Options and Issues* New York, Center for Polation and Family Health

Management of Obstetric and Neonatal Emergencies in Community Health Centers 1993 Guatemala Institute of Nutrition of Central America and Panama

Marshall, M. and Buffington, S 1991 *Life-Saving Skills Manual for Midwives* Washington, DC American College of Nurse-Midwives

Obstetric Management Protocols for Regional - Departmental Hospitals 1993 Guatemala Institute of Nutrition of Central America and Panama

Rooney, C 1992 *Antenatal Care and Maternal Health How Effective is it?* Geneva World Health Organization - Division of Family Health

Tinker, A. and Koblinsky, M A 1993 *Making Motherhood Safe* Washington The World Bank.

Training Manual for Trainers of Traditional Birth Attendants 1993 Guatemala Institute of Nutrition of Central America and Panama

UNICEF 1994 *Safe Motherhood - A UNICEF Training Package* New York UNICEF

Appendix II

Nature of Materials Submitted for Evaluation				
Complete training/ education manual	Outline	TOT Manual	Other training	Educational promotional plan (IEC)
<ul style="list-style-type: none"> • curriculum for training of health promoters in maternal care and family planning and health messages to teach mothers • TBA training manual • curriculum for training CHWs • training for CHWs lesson plans for family planning and maternal health 	<ul style="list-style-type: none"> • 2 pg outline with topic headings • maternal health curriculum (2) • training curriculum for health workers (a 25hr generic course) • family planning and prenatal consultations • three training curricula for family planning agents, family trainers and health supervisors, and TBAs • curriculum for training health workers (2) • curriculum for training TBAs • health messages to train health workers • basic health messages to teach mothers about MCFP 		<ul style="list-style-type: none"> • safe motherhood flip chart 	<ul style="list-style-type: none"> • Complementary messages - 11 pgs • list of messages - 2 pgs • information about health & sexuality • maternal health educational messages • maternal care messages (2) list of messages for mothers (2) • birth spacing poster

Appendix IV

Training and education target population			
Category	*#	*N	Specifics
TBAs (10-12 births/yr)	4	16	None
Nurse/Midwives	0	16	None
CHWs/VHWs	7	16	<ul style="list-style-type: none"> • 5 projects targeted CHWs/VHWs • 1 project targeted health promoters • 1 project targeted volunteer health promoters
Family	10	16	<ul style="list-style-type: none"> • 1 project targeted families • 7 projects targeted mothers • 1 project targeted pregnant women • 1 project targeted mothers and fathers
Others	10	16	<ul style="list-style-type: none"> • 2 projects targeted health workers • 1 project targeted family planning agents • 1 project targeted family trainers • 1 project targeted health counselors • 1 project targeted health volunteers • 1 project targeted health assistants • 1 project targeted family welfare assistants • 1 project targeted family community health volunteers • 1 projects did not specify target population

- * Where # is the number of projects targeting the respective population
- * Where N equals number of projects reviewed