
All traditional societies have evolved systems for home- or community-based delivery care. This paper describes technologies that are particularly relevant at the family and community levels. When not attended by their close relatives, women delivering in the community are attended by traditional birth attendants (TBAs) who have a particular interest in providing delivery care. Three principles should be followed in evaluating indigenous technologies: (1) the technology should be scientifically sound and beneficial; (2) if it is neither beneficial nor harmful, it should not be undermined; and (3) if it is clearly harmful, it should be eliminated.

The appropriateness of traditional practices that involve topical application of substances to the umbilical stump or the birth canal can be evaluated in terms of the risk of infection and the antiseptic, desiccate, or anti-bleeding properties of the substance. Traditional practices should be evaluated in terms of: (1) the effects, (2) the adaptability of the technology, and (3) possible socio-cultural side-effects of its eradication or modification. TBAs can be taught to cut the cord only after cord pulsations have ceased. A marked reduction in the incidence of neonatal tetanus and sepsis occurs when TBAs have been instructed in the proper management of the cord, even in the absence of a tetanus immunization program. For temperature control of newborns, in addition to immediate drying and placing the infant in skin-to-skin contact with immediate starting of breast-feeding, other simple sources of temperature control can be provided by the family and community. The most effective referral is that which is anticipatory. Families, TBAs, and the community need to understand the concept of risk and the requirement of different skill levels in delivery and postpartum care. Communities can and should participate in the process of referral with the timely provision of transport for the woman or infant in need of higher skill levels and facilities than those locally available.


This guide discusses the most common practices and procedures used during labor and delivery and makes recommendations as to which are most beneficial to both mother and child and should continue. These practices and procedures are used in a wide range of settings and levels of care, and the recommendations for their use or elimination are not specific to regions or countries. The guide is divided into four sections: (1) routine procedures during labor, (2) care during the first stage of labor, (3) care during the second stage of labor, and (4) care during the third stage of labor. Practices and procedures in each section are then classified according to the following categories: (1) practices that are useful
and should be encouraged; (2) practices that are harmful/ineffective and should be eliminated; (3) practices in which insufficient evidence exists to either recommend or discourage and should, therefore, be used with caution; or (4) practices that are used inappropriately.

**Chowdhury M. The role of traditional birth attendants in a safe delivery programme in Bangladesh. *Tropical Doctor* 28:104-6, 1998.**

This article emphasizes the importance of training programs—run by community health workers—for TBAs in a variety of areas such as diagnosis and treatment, aseptic and atraumatic deliveries, breastfeeding, and available health care services. These programs allow TBAs and community health workers to establish intimate working partnerships and personal relationships. This results in the formation of a team for each pregnant woman and creates a bridge between the expectant mother and organized health care. A TBA training program that is linked to an effective referral system and supported by midwives can reduce maternal and child mortality.

**Crook B. Using qualitative research in the development of delivery kits in Nepal. *Health for the Millions* p. 20-4, July-August 1995.**

This articles describes the qualitative research that was conducted during the needs assessment phase to development a delivery kit in Nepal. Through focus group discussions with traditional birth attendants and women who had given birth to at least one child, and in-depth interviews with consumers and small shop owners, information was obtained regarding current beliefs and childbirth practices as well as possible kit packaging, labeling, contents, and the instructional insert. The results of the study allowed for the initial and continued production of a delivery kit which met local needs and for which sales have far exceeded the original target.


This KAP study was undertaken to evaluate the potential of trained birth attendants, who have access to a wide range of health resources, to reduce maternal mortality. It was carried out in the Danfa Comprehensive Rural Health Project in Ghana and involved the administration of a questionnaire to 35 traditional birth attendants who had received training from a community health nurse-midwife, including refresher courses and supervisory visits to their villages every couple of months. The questionnaire was designed to capture TBAs’ experiences with high-risk births and reasons women with high-risk pregnancies choose not to give birth in hospitals. It also asked about TBA practices and supplies used to assist with delivery. Results showed that women chose not to follow the TBA’s recommendation to deliver in a hospital due to financial limitations, lack of transportation, and fear of disrespectful or painful treatment by medical personnel. The study concluded that the TBA’s role in lowering maternal mortality rates might lie more with health promotion than with disease intervention.

In 1982, training guidelines based on knowledge and perceptions of TBAs were developed in preparation for TBA training in Manicaland, Zimbabwe. Training sessions were held at all health facilities that provide delivery care and were led by nurses working at the facilities. Six areas of training were emphasized: hygiene, pregnancy, normal delivery, high-risk deliveries (that cannot take place at home), postpartum care, and traditional practices. It was recommended that the following items be present at all deliveries: pots, bowls, soap, clean cloths, sheets of plastic, a new and unused razor blade, and boiled sisal or cotton thread for use as a cord tie. It was suggested that mothers prepare these items, but it was also recommended that TBAs have them available in a special bag for unexpected deliveries. As part of a campaign to prevent neonatal tetanus, many clinics and hospitals are offering “cord packs,” containing a razor blade, three cord ties, cotton wool, and a small bottle of spirits to all pregnant women who present for antenatal care. Upon completion of the training course, follow-up meetings were held to discuss problems that arose and to give details on births that had been attended. The TBA training has been well-received. Though the effects on TBA training can be difficult to measure, a reduction in neonatal tetanus seems to have occurred, along with a decrease in the number of cases of women in obstructed labor being referred to hospitals following hours or even days of attempting delivery at home.


This document provides recommendations for health planners and program managers in developing countries to assist in the improvement of newborn health at health centers and district hospitals and in planning information, education, and communication (IEC) activities at the community level. The authors list essential newborn care interventions, including cleanliness, breast feeding, immunization, and care of preterm and/or low birthweight newborns. The use of disposable delivery kits can help in achieving cleanliness. The minimum contents that should be included in delivery kits are a nail cleaning stick, small piece of soap, plastic sheet measuring 1 x 1 meter, sterile razor blade, ties, and gauze. The authors also provide the reader with explanations to be included in the kit instructions.


The first systematic evaluation of 313 of the 631 trained traditional birth attendants in Sierra Leone was conducted in 1982, five years after initiation of the 3-week courses. In addition to the government courses, there were 16 TBAs trained by mission hospital staff in Serabu for two hours weekly for 12 weeks in their villages. The goals of the evaluation were to assess: selection of supervisors, adequacy of supervision, site and timing, TBAs’ knowledge retention, performance, use of equipment, working relationship with the health team, and acceptability in the community. Separate questionnaires were designed for TBAs, community leaders, mothers, trainers, and supervisors. All of the mission-trained and the majority of the
government-trained TBAs were satisfied with the course. Twenty percent lacked a UNICEF delivery kit. Results of questioning TBAs on knowledge of each item in the kit are presented. Opinions and suggestions from the questionnaires are tabulated and discussed. Seventeen recommendations were compiled from these data, including such ideas as paying TBAs for expenses incurred by referral, higher reimbursements for training time, and salaries from local funds for deliveries; resupply of delivery kits as needed; and enhancement of cooperation between TBAs and other health services.


Postpartum infections and hemorrhage are the outcomes of the interaction of several pregnancy and childbirth related factors. These include biological factors like age, number of pregnancies, nutritional status of the pregnant woman, and factors which have sociocultural origin like religion, social conditions, and birth practices. This study examined the incidence of postpartum infection and hemorrhage and some associated risk factors in four rural areas of Bangladesh. A cohort of 6,513 pregnant women were registered at the beginning of their pregnancy and followed until six weeks post-delivery during 1985-86. Relative risks for postpartum infection and hemorrhage were separately calculated on serial univariate analysis. Population-attributable risk percent of each of the risk factors were also calculated. More than 1.2 (54.1%) of the women were within the age group of 20-29 years, illiterate (77.1%), and belonged to the Islamic faith (92.2%). Primiparous women comprised 21.7% of the group and had a mean parity of 3.3. The post partum infection rate was 14.5%, and the postpartum bleeding rate was 17.9%. Most of the women (99%) delivered at home where unhygienic conditions prevailed. The majority of delivery attendants (87%) were untrained personnel—TBAs, relatives, neighbors, and the mother herself. Risk factors significantly associated with postpartum infection and hemorrhage were primiparity, more than 48 hours of labor, abnormal delivery, and the assistance of a trained delivery attendant. The association with trained delivery attendants may be due to referral practices or reporting biases. For postpartum infection, the highest population-attributable risk percent was the use of old cloth as a pad for lochial discharge (21%); and for postpartum hemorrhage, it was abnormal delivery (15.65%). Future studies should be designed and conducted using a risk approach to develop, implement, and evaluate interventions to lower maternal morbidity and mortality.


This article reviews progress to date in the effort to eradicate neonatal tetanus (NT). It references the target date of 1995 for elimination of NT, as defined by the occurrence of less than one case of NT per 1,000 live births after active surveillance. The author cites three primary strategies to achieve this goal:

- Delivery of TT vaccine in the manner most effective for protecting all newborns against NT.
- Provision of clean delivery services to all pregnant women.
- Effective surveillance aimed at detecting and reacting to every NT case.
As of August 1994, 83 countries had reached the goal of one case per 1,000 live births. Fifty seven countries had the rate of one to five per 1,000, and 24 countries remained with a rate of more than five per 1,000 live births. The obstacles to reaching the 1995 goal are outlined as well, including the difficulties in reaching women in remote areas and the risks of increasing infections in areas with high rates of bloodborne diseases. In response, the article defines a new set of more achievable expectations in reference to NT, including less than one case of NT per 1,000 live births globally and the elimination of NT in all urban areas. The article stresses that a concomitant of these efforts must be implementation of appropriate strategies to increase access to clean delivery practices.


This is a study that was conducted in the East Sepik Province of Papua New Guinea. The study examined the effects of improving umbilical cord care on neonatal morbidity through the distribution of acriflavine spirits, new razor blades, and umbilical cord clamps. Results showed that health education, combined with the use of umbilical cord care packs, was associated with a significant reduction in serious neonatal illness.


These guidelines, developed by a WHO working group, are intended to assist district level managers of MCH/FP programs with the introduction of simple delivery kits where appropriate. Included in this report is a description of simple delivery kits and who should use them, recommended contents and how to assemble a kit, organizing a supply of kits, promoting the use of kits, and ways of evaluating the success of a delivery kit program.


This is a KAP study in which 242 TBAs were interviewed. The objectives were to learn more about the skill levels of TBAs, to identify causes of maternal and child mortality, and to determine an appropriate curriculum for training TBAs. The TBAs were asked questions pertaining to the antenatal period (identification and length of pregnancy, problems during pregnancy, dietary restrictions, septic abortion); labor and delivery (signs of childbirth, preparations for delivery, complications during delivery, and birth and care of newborn); and the postnatal care (care of mother, food and other restrictions, care of newborn, breastfeeding, and the main cause of neonatal and maternal deaths). Results showed that the birth practices used by TBAs were often crude and unscientific. The causes of maternal and child morbidity and mortality resulted in some way from illiteracy, superstitions, and a lack of training given to TBAs. It can be concluded that both mothers and their newborns would benefit greatly from improved training of rural TBAs.

The risk factors of tetanus and the efficacy of tetanus toxoid vaccine are examined in this article outlining a 1990 case-control study. Bangladesh has one of the highest rates of neonatal tetanus in the world. The government has addressed this problem through a vigorous program of vaccination, training of traditional birth attendants, and promotion of safe-delivery kits. This study was an additional effort to examine this topic. Neonatal tetanus can be totally prevented both by two injections of tetanus toxoid vaccine to the mother and by sterile cord care. Risk was substantially reduced by the birth attendant washing hands and using a clean cord-cutting tool. The study found that the tetanus toxoid vaccine failed to provide the expected high level of protection throughout Bangladesh. These results, the article asserts, must also serve as a reminder that such high-technology interventions are not always effectively implemented and should not be relied upon solely, especially where simple measures such as hand washing and cleaning of the cord cutting tool has proven effective and reliable.


Test marketing of 20,000 safe delivery kits was conducted by the Social Marketing Project in Bangladesh. The objective was to gain insight into the concept of hygiene, the need for the delivery kit, and reactions to its price. The kit was advertised in newspapers and then via radio. Following this, sales of the kit increased. It was concluded that social marketing may be a useful means to improving widespread awareness and practice of hygiene, in addition to expanding contraceptive use.


The objective of this study was to identify causes and factors of neonatal and postneonatal mortality and to identify the population most at risk. This study was carried out in the Teknaf Dysentery Project in Bangladesh and involved 1,351 infants, born between July 1976 and June 1977, who were followed for one year. Households were visited regularly by a field assistant to obtain information about the infants. Results showed the main cause of both total infant deaths and neonatal deaths (1/6 of infant deaths and 1/3 of neonatal deaths) to be tetanus toxoid (TT) infection. Since neonatal TT is mainly associated with the use of unsterile instruments for cutting the umbilical cord, unsanitary surroundings, and use of contaminated substances to dress the cord stump, it was concluded that improved delivery practices could lower infant mortality rates.

The goal of this study was to measure cases of neonatal tetanus (NNT) in an intensive care unit to support and inform specific intervention strategies. The researchers studied trends in number of admissions with NNT between 1983 and 1993. The number of admissions decreased fairly consistently until 1992, then increased slightly in 1993. The overall decrease was attributed to the maternal tetanus immunization campaign, while the slight rise in 1993 was thought to be related to a failure to vaccinate a subset of women in the study. The results of this study suggest that unsterile instrumentation to sever the cord, and contaminated applications to the cord, appear to be less important than high rates of immunization. However, as universal immunization is not yet a realized goal, cost-effective, reusable delivery and neonatal kits continue to be recommended. The kits referred to in this article consist of plastic sheet, cord tie, clean razor, blanket, and two cotton wool swabs. Clean water is also listed as essential. The article also stresses the importance of adequate training for birth attendants, as well as regular quality checks of vaccine potency and handling.


Experience in the control of tetanus neonatorum (TN) in a rural area is presented. TN was reduced by training of dais, increasing the coverage of tetanus toxoid vaccine to pregnant women, and distribution of pre-sterilized delivery kits to pregnant women for use by birth attendants. The problems of untrained birth attendants, effectiveness of tetanus toxoid vaccine coverage, and place of delivery are discussed.


This article discusses four different delivery care models—(1) delivery at home with a community member, (2) delivery at home with a professional, (3) delivery in a basic obstetric care facility with a professional, and (4) delivery in a comprehensive obstetric care facility with a professional—and examines which models provide the most effective scenarios for reducing maternal mortality. Data from developing countries with maternal mortality rates of 100/100,000 or lower were reviewed. It was concluded that maternal mortality rates could not be reduced to below 100/100,000 using model 1. With the introduction of a professional birth attendant and a strong referral system (models 2-4), maternal mortality rates could be reduced to 50/100,000 or lower. No one model is best for all communities. Which is most effective will be determined by the availability of financial, educational, and training resources and cultural acceptability.

In rural communities in Africa, Asia, and Latin America, traditional birth attendants (TBAs) are the main source of assistance for maternal and child care and close to 50% of births in developing countries are attended by these women. Given a scarcity of health services in remote rural regions and the respect accorded TBAs within their communities, the training and integration of TBAs into the primary health care system is receiving increasing attention as a necessary strategy. Supervision comprises the key link between the formal health care system and TBAs. However, factors such as a lack of technical and administrative support, dispersed and isolated communities, a lack of rapport and trust between TBAs and health professionals, low involvement of communities in TBA training programs, and limited financial support for training and supervision have impeded this process. Progress has been substantial in Africa where TBAs are trained to identify and refer women at risk; care for mothers before, during, and after delivery; and practice hand washing and sterile cord-cutting procedures. Of utmost importance has been the selection of trainers who are able to adapt the training material to illiterate or semi-literate groups and are familiar with the TBAs’ roles and status in their communities. Small-scale studies have suggested that trained TBAs have been effective in reducing mortality from neonatal tetanus. Although the role of TBAs has been extended beyond midwifery in many areas to include oral rehydration and immunization, strategies to articulate TBAs to the formal primary health care system remain lacking. In the long run, the goal is to replace TBAs with professionalized village midwives.


Most births in East Africa take place in the home under the supervision of traditional birth attendants (TBAs). Neonatal mortality tends to be high, and some of the procedures followed by the TBAs may increase the risk of infection for the newborn. The practice of instructing the mother to push violently during delivery may result in the rupture of tissues in the birth canal and expose the infant to infection. The delivery is frequently performed on the floor, and the floor may be contaminated with tetanus spores. Most TBAs wear soiled clothing and do not wash prior to performing deliveries; they are more likely to bathe and put on clean clothing after delivering a baby. The umbilical cord is often cut with tools used for other purposes, and cow dung, as well as other substances, are used as umbilical dressings. Many infectious diseases are not recognized by the TBAs, and some of the diseases with which the TBAs are familiar are treated with ineffectual cures. A training program should be developed for teaching TBAs simple hygienic procedures and for helping the TBA recognize conditions which call for further treatment.

This article discusses studies conducted by the Christian Commission for Development in Bangladesh to aid in the design and marketing of birth kits aimed at reducing neonatal tetanus mortality. Women of childbearing age and men’s groups were interviewed to help determine the most appropriate design, contents, and logo for the kits. Field trials were then conducted in which kits were given to women in their last month of pregnancy. They were then interviewed within one month of delivery. In addition, 3,000 prototype kits were test marketed. The results were applied to decisions made about kit contents, cost of the kit, and the most effective marketing strategies.


This report contains results from the second phase of a two-phase project conducted by the Christian Commission for Development in Bangladesh and by PATH, to develop and field test a delivery kit in Bangladesh and provide UNICEF with recommendations about design, manufacturing procedures, and distribution and promotion strategies. The second phase of the project involved field trials and test marketing of a prototype delivery kit. Information from the field trials was obtained from questionnaires completed by women who were given the delivery kits to use. The questionnaires addressed package design, kit name, logo, contents, pictorial instructions, and kit distribution and promotion. These results were then tested in the market by selling and promoting the kits. The number of kits sold in different areas, types of people buying the kit, and place of purchase were tracked. The promotional materials used were also assessed by talking with shopkeepers, pharmacists, men’s groups, and women’s groups. The study concluded that the kit will continue to be modified as the market expands and the demand for the kit increases. It is strongly recommended that the kits be locally produced as this will not only minimize costs but will also provide employment for low-income women within the communities.


This collection of articles gives a thorough overview of the issues related to maternal health on a global level. It examines the medical, social, and economic factors contributing to maternal mortality within developing countries. The collection closes with a comprehensive section on Training for Better Maternal Health Care, which includes a number of paragraphs related to delivery kits. The article points out that almost all TBA training programs give participants delivery kits when they graduate but stresses that TBAs may not use their kits for a variety of reasons. TBAs may not know what to do with all the supplies contained in the kits, supplies may run out, or they may consider the kits symbols of their training, to be displayed rather than use. The article references WHO Guidelines that were prepared to assist countries interested in creating their own delivery kits locally. The Guidelines suggest that TBAs have at least:
1. soap and sticks to clean their fingernails and hands;
2. a sterile razor blade, cotton balls, and cotton tape to cut, clean, and tie the umbilical cord;
3. a sheet, towel, or cloth for a clean delivery surface; and
4. another cloth, towel, or blanket to dry and wrap the baby.
(These guidelines have since been revised by UNFPA. See page ____ of the Basic Delivery Kit Guide.) The article continues on to discuss at length the training that should be available for TBAs, as well as for midwives, nurses, auxiliaries, and doctors. In addition, it contains a lengthy bibliography of 400 references.


This study was conducted in a rural community in Tamil Nadu, India, from January 1990-March 1991. The objective was to determine the feasibility of developing simple delivery kits using WHO Guidelines to ensure the “3 cleans” through local women’s groups versus individuals assembling them at home, effective ways to ensure use of the kit, and the health impact of its use on women and their newborns. The study found that for local women’s groups, the WHO Guidelines for the development of a simple delivery kit were easy to use and understand. It also found that assembly of the kit by local groups rather than by women individually was a much better way to ensure its availability and use. Results showed that use of the delivery kit increased hospital deliveries—particularly, complicated deliveries. This was probably due to the distribution of WHO Guidelines for kit assembly and to increased contact of pregnant women with community workers, both of which heightened the women’s awareness of the special care needed during pregnancy and in preparation for delivery.


This report examines maternal mortality and identifies ways in which governmental and nongovernmental organizations can address the issue. It is meant to serve as a tool in designing programs that meet the needs of specific countries or situations and in making the most effective use of resources. Specifically, the report defines maternal mortality and describes how it is measured, where it occurs, and by what it is caused. The authors then discuss actions that can be taken to ensure safe motherhood—legislative and policy actions, societal and community interventions, and health-sector actions. Finally, ways in which progress can be measured are described. The report emphasizes that a commitment to improve rates of maternal mortality must come from both decision-makers and community members.


This study was conducted to identify midwives’ knowledge of harmful birthing practices. Two hundred forty-two midwives were selected to participate in a midwifery training program in Bangladesh. They were asked about their beliefs regarding signs of pregnancy,
treatment of the umbilical cord, aiding the expulsion of the placenta, causes of neonatal morbidity and mortality, postpartum dietary restrictions, and infant nutrition. Results showed that a significant number of midwives held beliefs that could result in harm to both mother and baby. Due to the lack of financial and medical resources in Bangladesh, it was concluded that training midwives about harmful childbirth practices and unnecessary complications would help improve maternal and child health care.


This report presents data from the field trial (second) phase of the “Safe Home Delivery Kit Social Marketing Project.” Data from the first phase was used to develop two prototype delivery kits that were used in real birth situations in Nepal to gather data on the kit’s acceptability, value, and market potential. Information from 131 kit users was obtained using questionnaires and observation forms. Specific information included uses of kit contents, common delivery practices, attitudes toward the kit, and suggestions for improving the kit and increasing its marketing. It was determined that the majority of users found the delivery kit to be useful, convenient, and safe. They were interested in purchasing it again for subsequent deliveries and will recommend the kit to relatives and neighbors. It was also determined that large-scale marketing and promotion will be required in order to maintain sales of the kit.


This is a report of the market test (third) phase of the “Safe Home Delivery Kit Social Marketing Project.” Its objective was to analyze the choice of retail outlets used to sell the delivery kit and to analyze the design of promotional materials and the channels used to disseminate kit information. Interviews with community members and retailers were conducted about their perceptions of the delivery kit and its promotional materials. The study concluded that there is a very strong market demand for the nationwide expansion of the delivery kit. It was also found that the kit needs to be promoted via radio and newspaper advertisements. Finally, a variety of outlets for future sales of the kit were identified.


This KAP study represents the first part of a four-part study called the “Safe Home Delivery Kit Social Marketing Project” and was conducted in order to develop and test market a clean delivery kit to be locally produced, marketed, and sold in rural and semi-rural areas of Nepal, with the goal being to decrease maternal and neonatal morbidity and mortality. Ninety-eight trained and untrained TBAs were selected to participate in focus group discussions and in-depth interviews. They were asked questions regarding their general birth practices, preparations made for pre-delivery, materials used for delivery, pain management, care of the mother and baby after delivery, and cord cutting and tying. They were also asked about their feelings regarding delivery kits and general marketing considerations. The results provided
recommendations on kit contents, price range, accessibility, and the need to make the kits appear new and special. They also emphasized the need for TBA training sessions on how to use the delivery kits.


This is an evaluation of the short-term impacts and changes in knowledge and behavior resulting from delivery kit introduction and use in Nepal. The study took place in three districts in Terai where 1,660 new mothers were interviewed and the infants’ umbilicus’ were inspected 7-28 days following delivery. The women were either kit users or non-users who had a trained or untrained attendant or no attendant present during delivery. Information concerning the type of blade and surface used for cord cutting, handwashing practices, treatment of the umbilical cord, infection rates, kit disposal practices, and kit satisfaction were obtained from the interviews. The results showed that where unhygienic practices are common, such as using an unclean blade and cutting surface to cut the umbilical cord, use of a clean delivery kit can contribute to a reduction of infection. The kit may also promote better handwashing practices. If clean cutting implements and surfaces are already being used, delivery kits may not add significant benefit. (Ed. Note: this study is summarized in the Delivery Kit Evaluation section of this Appendix.)


This article examines a variety of technologies for use during pregnancy, delivery, and postpartum that can help prevent maternal and neonatal mortality. The authors address antenatal care, delivery care, record keeping and support materials, and program management. The use of delivery kits is discussed as a way to help ensure a safe, hygienic delivery, and to manage complications until further assistance is available. Since settings vary, seven points are presented for consideration when deciding on the most appropriate presentation and components of the kits. Examples are an awareness of existing traditional practices and technologies, the training that is needed to ensure correct use of kit contacts, and a means for evaluating kit use. The article also discusses the advantages, disadvantages, and medical indications for use of a variety of supplies that may be included in the kits. The most basic items for inclusion include soap, a brush (or other tool with which to clean nails), and clean water. Other possible items include a protective covering for the delivery area, cord ties, a cutting instrument, various drugs and medications, and a weighing scale. Even in areas with limited resources, a few basic antenatal-care measures, combined with a simple delivery kit, can have an impact on maternal and perinatal mortality.


This is a report about the outcomes of a consultation, organized by UNICEF, that was held to discuss the role of providers including TBAs, family and community members, and
midwives. The participants concluded that there is a need for a simple, standardized delivery kit with contents that can be recommended by all agencies and used by not only TBAs and family members but by medical personnel as well. The report contains an annex, *Birth Kits, An Assessment*, which examines the impact of delivery kits on maternal and neonatal infections and discusses issues surrounding manufacturing and distribution. The authors conclude that because delivery kits are almost always used in conjunction with other interventions and because their impact has rarely been systematically evaluated, it is extremely difficult to determine the extent to which delivery kits have impacted maternal and neonatal infections. Despite this, the report recommends continued use of delivery kits by TBAs and recommends that they be assembled and distributed locally whenever possible, as this will reduce the cost of the kit and promote sustainability.

**Utilization of trained traditional birth attendants. International Centre for Diarrhoeal Disease Research, Bangladesh. In Touch, 13(131):5-6, July 1994.**

Focus group discussions and personal interviews were conducted among community members, family planning workers, and traditional birth attendants (TBAs) trained in 1978 at an extension site in Sirajgonj and Abhoynagar, Bangladesh. The aim was to assess knowledge, performance, and quality of care. Summary results indicated that TBAs were primarily aged 30 years and older and had been attending births for more than five years. Work load averaged 2-3 deliveries per month, or 60-93% of all births. Data from mothers delivering showed that TBAs delivered only 6% of all births in 1991; this fact was confirmed in focus group discussions. Most deliveries were performed by untrained family members or friends. An assessment of TBA practices indicated that 74% asked questions about frequency of labor pains and continuity and intensity of pains. Vaginal discharge was checked, and urine and stool patterns were assessed. Determination of the stage of labor did not involve abdominal examination. About 50% of TBAs practiced recommended hygiene of washing hands and cleaning nails. Most used boiled blades and thread to cut and tie the umbilical cord. Sixty-two percent reported that patients with complications were referred to female paramedics at the Family Welfare Center, and 38% referred patients to the Thana Health Complex (THC). TBAs do not demand payment but are usually offered money, food, saris, or invitations to birthing ceremonies. Many TBAs expressed the idea that TBAs were viewed by the community as government workers and, thus, avoided. However, community members did not corroborate this view. Recommendations were to provide information about the availability and desirability of using trained TBAs during home visits, and to train TBAs periodically in risk assessment, hygiene, and abdominal examination procedures. Obstetric services at the THC should be upgraded and TBAs encouraged to refer complicated cases to these centers. TBAs should have a working relationship with the staff at THC. Monetary incentives for TBAs could be a strategy for better outreach. Money-making activities could include the sale of birthing kits to expectant mothers. TBAs identified for training should be selected based on government-established criteria. Further research is needed to determine the best way of increasing coverage of safe births.

This article is a comprehensive review of appropriate technologies for improved MCH care during the perinatal period (which includes the antenatal period, delivery, and postpartum) and during infancy. Examples of appropriate technologies discussed are teaching materials, cord care kits, and weighing scales for adults and children. The article emphasizes that use of simple, inexpensive, and culturally acceptable technologies by trained health workers can significantly reduce infant and maternal mortality rates.


The practices of untrained traditional birth attendants (TBAs) and support for their training and utilization in Sierra Leone are reviewed. Discussion is directed to the following: background of the TBA training program (the societal institutions within which TBAs practice, characteristics of untrained TBAs, antenatal beliefs and practices of untrained TBAs, and delivery beliefs and practices of untrained TBAs); health status of women and children (infant and child mortality, morbidity of infants and children under age 5, maternal mortality and morbidity among women ages 15-45); maternal and child health facilities, personnel, and care; policies and legislation concerning maternal and child health, including family planning; support for TBA training and utilization—political, financial, and technical; inventory of TBAs; recruitment of TBAs for training; the training program (planning of the training program, trainers of TBAs, various aspects of the TBA training-program course content, evaluation of teaching/learning); administrative arrangements for using trained TBAs; and the performance of trained TBAs. Data presented are largely those that were obtained while conducting a research study on the role and practices of TBAs in the Southern and Eastern provinces of Sierra Leone. Possibly the most serious consequence of the TBAs' nonscientific understanding of childbirth and the care of the newborn, and the most compelling reason for training them, is seen in the cutting and dressing of the umbilical cord. Neonatal tetanus accounts for about 27% of all infant deaths and is the main cause of perinatal death. Due to the rural nature of the population of Sierra Leone, the shortages of staff within the Maternal and Child Health Division of the Ministry of Health, the lack of adequate medical facilities, and the inadequate transport system, there is little question that the objective of improved maternal and child health care can most realistically be achieved by the use of appropriately trained and supervised workers at the village level. The overall objective of the TBA training program is to reduce mortality rates by providing TBAs with the skills and knowledge to meet basic maternal and child health needs at the village level and to function as independent collaborators within the Maternal and Child Health Division. Specific objectives are the following: (1) to teach TBAs simple antenatal care, safety, and cleanliness at all times; (2) to teach the care of the umbilical cord to prevent neonatal tetanus; and (3) to recognize abnormalities during pregnancy and labor and to refer such cases early for more skilled supervision. The Maternal and Child Health Division is responsible for nationwide TBA training and trained 247 TBAs from November 1974 to November 1976.
WHO. “Care of the Umbilical Cord: A Review of Evidence.”

This document discusses in detail the importance of clean cord care in reducing cord infections and neonatal tetanus toxoid, both of which contribute significantly to high rates of neonatal mortality in developing countries. The document is divided in three main areas: cord care practices (traditional and medical), evidence on cord care practices, and implementation of clean cord care practices. Recommendations include proper timing of cord cutting, clean cord care during birth and postnatally, and indications for use of antimicrobials. Recommendations are tailored to both home and institutional deliveries.


This article discusses ways to ensure the health of newborns, in addition to their proper growth and development. These include a clean and safe delivery, establishing breathing, keeping the baby warm, and breast-feeding. Clean and safe delivery helps reduce the chance of infection (from tetanus toxoid and other agents) and long-term disability. When birth takes place at home, clean delivery kits can help ensure aseptic delivery and umbilical cord care. Basic delivery kit contents should include soap, sterilized cord ties, a razor blade or other instrument for clean cutting, a piece of cloth or gauze pads, and a plastic envelope, box, or cloth bag in which to store the kit. Other items that could also be included are a plastic sheet, a sharpened stick, antiseptic solution or desiccant powder, and pictorial instructions.


This study was conducted in order to evaluate the acceptance, use, and health benefits of three different, simple delivery kit prototypes in three districts of India. Changes in home delivery practices—specifically cleanliness—were monitored. Case studies were compiled based on experiences with the delivery kits. The article discussed in detail the preparatory phase and the implementation phase of the study. The authors made clear that, even though the results appeared to show the delivery kits as having positively influenced maternal morbidity and neonatal mortality, it is hard to know whether this was actually the case, due to unaccounted-for factors. The study does illustrate the importance of registering births and deaths and presents the possibility that the presence of trained TBAs, clean birthing practices, weighing newborns, and enlisting the help of household members to care for the mother and newborn could help lower maternal and neonatal morbidity and mortality rates.